informs Institute for Operations Research and the Management Sciences

2012 ISMS Marketing Science Conference



June 7-9, 2012

Westin Copley Place
Boston, Massachusetts
management.bu.edu

Boston University School of Management

BOSTON UNIVERSITY



35th INFORMS
Marketing Science Conference
Swissôtel The Bosphorus Istanbul
July 11-13, 2013

Conference Co-Chairs: Erhan Erkut, Tulin Erdem, and Koen Pauwels

Hosted by ÖZYEĞİN UNIVERSITY

ISMS Doctoral Consortium July 10, 2013.
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From the 2012 Conference Organizing Committee:

A Warm Welcome to the 2012 INFORMS Marketing Science Conference



Shuba Srinivasan
Conference Co-Chair



Patrick Kaufmann
Conference Co-Chair

Dear Colleagues,

A warm welcome to you! We are delighted that you have chosen to attend the 2012 INFORMS Marketing Science Conference, and the Marketing Department of Boston University is especially grateful for the opportunity to host this exciting event. We are pleased to provide a platform for the more than 700 scheduled presentations and proud to report a record number of over 900 participants at this year's conference. Our design of the conference is intended to foster inspiring presentations and discussions and we hope will result in many successful publications.

The setting of this year's conference gives you the opportunity to enjoy one of the United States' most vibrant cities. Perhaps Boston can be best described as a city of contradictions; where hip exists alongside historic, where skyscrapers surround parks and gourmet cuisine meets North End pizza. Just as the city pays homage to every period of America's timeline, it also serves as all things to all people. Boston is a wonderful blend of stylish sophistication and historic New England charm. You can easily uncover the city's past while enjoying its distinctively modern edge. Follow the Freedom Trail from Boston Common, check out the Esplanade along the Charles River, or stroll along the new Rose Kennedy Greenway on your way to the harbor walk. We encourage you to venture out and visit the many tourist attractions as described on the web site and in the proceedings.

We hope you will also join us for the evening festivities. At the welcome reception on Thursday, June 7, we have arranged for some rousing Irish music from a local band. The reception will take place at 5:30 pm in the America Ballroom at the Westin Copley. On Friday, June 8, we are pleased to invite you to the Gala Conference Reception and Dinner also in the America Ballroom at the Westin Copley. Cocktails will be served at 6 pm and dinner will be served at 7 pm. The conference dinner will feature presentations of the Practice Prize, Little, Bass, ISMS Doctoral Dissertation, the Long-term Impact Award and the announcement of new ISMS Fellows. Please come and help us make this a wonderful celebration.

This conference has been made possible by the help of many people. We sincerely thank our sponsors for their generous support: Dean Kenneth Freeman and Associate Dean Karen Golden-Biddle, the Boston University School of Management and

in4mation insights. For their gracious help with reviewing and scheduling abstracts, we thank Professor Barbara Bickart, Professor Seema Pai, and Professor Remi Trudel. We also gratefully acknowledge the tremendous support of the extraordinary staff behind this effort, Brett Marks, Carol Waldvogel, and Ed Koenig for their tireless efforts and organizational "heavy lifting." We also thank Jovie Dagulpo for her technical assistance. We thank the INFORMS staff, in particular, Terry Cryan, Paulette Bronis, Cheryl Clark, Ellen Tralongo, and the many other helpful INFORMS staff for their wonderful organizational help. We thank the marketing doctoral students, Claudio Alvarez, Julia Kim, Liwu Hsu, Ozgun Atasoy and Tejvir Sekhon for their help, both with the conference support and with scheduling papers and sessions; we also thank SMG doctoral student Yulia Muzyrya and volunteers Fernanda Maciel and Shweta Nagpal for their help. Finally, we thank the ISMS board, in particular, Fred Feinberg, Scott Neslin, Gerry Tellis, Kannan Srinivasan and Bart Bronnenberg for their support. Such a large conference simply is not possible without the diligent dedication of many talented people. We thank them all for their tireless efforts to ensure that this year's conference will be a resounding success.

But really, we have only prepared the stage! You are the leading actors in the play, the conference participants and presenters who have contributed your creativity, research, and hard work to produce the insights that will result from this meeting. You will make the 2012 conference inspiring and rewarding. The stage therefore is yours for the next few days, and we sincerely hope you will take full advantage of both the spotlight of the conference and the backstage provided by the city of Boston. If we can assist you in any way, please let us know!

Sincerely,

The Marketing Science Conference Organizing Committee:
Shuba Srinivasan and Patrick Kaufmann (Co-Chairs)

CONFERENCE COMMITTEE


Barbara Bickart


Remi Trudel


Seema Pai


Carol Waldvogel


Brett Marks

For more information on the Marketing Department of the School of Management, visit
http://management.bu.edu/faculty-research/departments/marketing

Institute for Operations Research and the Management Sciences

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

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INFORMS Marketing Science Conference

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1982 University of Pennsylvania
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1983 University of Southern California
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1984 University of Chicago
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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 Völckner

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

Restaurant Recommendations *(by neighborhood)*

BACK BAY

Abe & Louie's Steakhouse
793 Boylston Street | 617-536-6300
www.abeandlouies.com
Boasting the service, style and elegance of a New York steakhouse, this establishment offers a menu that includes hand-selected, prime-aged cuts of beef, fresh fish and poultry, as well as an extensive wine selection. The sophisticated mahogany and brass-accented decor creates a comfortable environment perfect for entertaining.

Capital Grille
900 Boylston Street | 617-262-8900
www.thecapitalgrille.com
The impressive menu of nationally renowned dry aged steaks and the freshest of seafood will ignite your culinary imagination as their award-winning wine list of more than 5,000 bottles awakens your inner sommelier.

Davio's
75 Arlington Street | 617-357-4810
www.davios.com
Boston's only Northern Italian Steakhouse, Davio's offers the finest Italian cuisine featuring fresh seafood and a full range of the best meats available. Handsomely filling the first floor of the legendary Paine Furniture Building in Park Square, the space features an open kitchen backed with a bakery where both pastry chef and baker make all of the desserts and breads in-house.

Legal Sea Foods
100 Huntington Avenue | 617-266-6800
www.legalseafoods.com
Legal Sea Foods sets the standard for seafood restaurants, offering the freshest and highest quality seafood, an extensive wine list and superior service. The restaurant is located on the upper level of Copley Place, with direct indoor access to both the Westin and Marriott hotels as well as to the Prudential Center. Panoramic floor-to-ceiling windows overlook Boston's historic South End. Here the views and the seafood are second to none.

Mooo...
15 Beacon Street | 617-670-2515
www.mooorestaurant.com
Mooo, located on Boston's Beacon Hill, is a modern steakhouse adjacent to the luxurious XV Beacon Hotel. The warm modern décor provides a relaxed, sophisticated atmosphere. The restaurant is open seven days a week for breakfast, lunch, and dinner and brunch on Saturdays and Sundays. Moo also offers a full bar and an award winning wine list.

Sel de la Terre
774 Boylston Street | 617-266-8800
www.seldelaterre.com
Frank McClelland, chef-owner of famed L'Espalier in the Back Bay, partners with his longtime sous chef Geoff Gardner to bring the rustic cuisine of Provence to Boston diners. Sel de la Terre, which translates as "salt of the earth", celebrates the simplicity, warmth and tradition of the beloved region of Southern France.

Sonsie
327 Newbury Street | 617-351-2500
sonsieboston.com
Sonsie celebrates fifteen years on Boston's famous Newbury Street serving top-notch international cuisine from award-winning Chef Bill Poirier, whose menu always introduces fresh flavors and brilliant food combinations. Sonsie boasts beautiful French doors that translate to an open sidewalk cafe in season, as well as a European lounge with deep leather chairs and sofas.

Stephanie's on Newbury
190 Newbury Street | 617-236-0990
www.stephaniesonnewbury.com
The upscale Newbury Street location offers shoppers, tourists, business travelers and locals a hearty meal in a cozy banquette or street-side with a perfect view for people-watching. Owner Stephanie Sokolove serves sophisticated comfort food in a relaxed and welcoming environment. The restaurant features a sidewalk cafe, club-like bar, cozy fireplace and sky-lit dining area.

Sweet Cheeks
1381 Boylston Street | 617-266-1300
www.sweetcheeksq.com
Located behind Fenway, Sweet Cheeks is the latest to bring southern-style barbeque North of the Mason Dixon. They offer a wide selection of meats and sauces and also take care to do BBQ with a "doing it right" mentality that promotes sourcing locally and using treatment-free meats.

BROOKLINE

Fugakyu Japanese Cuisine
1280 Beacon Street | 617-734-1268
www.fugakyu.net
This unique Japanese restaurant is located in the heart of Brookline, Massachusetts. Serving great dishes, such as authentic Japanese sushi and sashimi, you will enjoy a hearty meal that will delight your tastebuds and satisfy even the largest of appetites. Its two floors include a sushi bar, a cocktail bar, common dining areas, bamboo-enclosed booths, screened Tatami rooms and several private function rooms.

The Fireplace
1634 Beacon Street | 617-975-1900
www.fireplacerest.com
Located on Beacon Street in Brookline's Washington Square, The Fireplace is the quintessential New England grill and barbeque. As its name might suggest, the restaurant's menu focuses on wood-smoked and rotisserie dishes, and uses only the freshest regional ingredients in its simple, thoughtfully prepared fare. The split level dining room with its floor to ceiling windows and blazing fireplace is sun-filled and airy in the summer, yet warm and cozy in the winter.

Lineage
242 Harvard Avenue | 617-232-0065
www.lineagerestaurant.com
Husband and wife team Jeremy & Lisa Sewall pull from their extensive culinary experience and deep New England roots to create Lineage, a vibrant neighborhood restaurant in the heart of Coolidge Corner. Combining an intimate appreciation for ingredients and a profound respect for seasonality, the two create a personal interpretation of modern American cuisine via frequently changing menus that showcase their creativity and expertise.

Yasu
1366 Beacon Street | 617-738-2244
www.yasuboston.com
Yasu is a full-service restaurant located in the heart of Brookline, Massachusetts. Over the last decade, they have been dedicated to the founding principle of providing you with delicious authentic cuisine made from the finest ingredients at the best prices. Yasu is proud to offer a variety of traditional Korean and Japanese dishes, including the famous Korean BBQ and fresh sushi.

KENMORE SQUARE

Eastern Standard
528 Commonwealth Avenue
617-532-9100
www.easternstandardboston.com
Located in the Hotel Commonwealth, Eastern Standard offers fine American Brasserie dining in a beautiful casual setting. Groups can reserve a round table, slide into a cushy leather booth, or pull together a few tall tables at the bar to enjoy a casual feast. Brisk service, a well-stocked raw bar, and a varied menu filled with small plates that range from salt cod fritters to fried calamari makes for easy sharing.

Island Creek Oyster Bar
500 Commonwealth Avenue
617-532-5300
www.islandcreekoysterbar.com
Designed to celebrate and educate diners about oysters and the bounty of the sea, ICOB is also a celebration of community. A collaboration of a farmer (Skip Bennett), a chef (Jeremy Sewall) and a restaurateur (Garrett Harker), a deep sense of community and connection lie at its core. In addition to extensive seafood offerings, their menu also features selections "from the land" for the non-seafood eating friends.

Petit Robert Bistro
468 Commonwealth Avenue
617-375-0699
www.petitrobertbistro.com
With a casual atmosphere, classic menu offerings at affordable prices and a sinful subterranean pastry bar that prepares homemade desserts in-house daily, chef/owner Jacky Robert has managed to re-create the genuine bistro experience in the heart of Kenmore Square.

NORTH END

Bricco
241 Hanover Street | 617-248-6800
www.bricco.com
Restaurateur Frank De Pasquale's popular and praised venture in Boston's North End offers modern interpretations of regional Italian dishes. Bricco's "boutique" Italian cuisine is unique, personal and created for a select and sophisticated diner. The food is complemented by a wine bar with an exceptional selection of all-Italian wines.

Lucca
226 Hanover Street | 617-742-9200
www.luccaboston.com
Named for the Tuscan town renowned for its extra virgin olive oil, Lucca offers Northern Italian classics, combined with new innovations that are sure to tantalize the most discriminating palate. Dimly lit and awash in romantic tones, Lucca's dining room is unquestionably one of the North End's most romantic.

Mamma Maria
3 North Square | 617-523-0077
www.mammamaria.com
Set in a nineteenth-century brick row house with five private dining rooms, Mamma Maria transports you to la Patria with an old-world intimacy, attention to detail and a warm welcome. The menu features 120 Italian and American wines and countryside fare such as pappardelle pasta with roasted rabbit and rosemary, osso buco with saffron risotto and oxtail ravioli.

Mike's Pastry
300 Hanover Street | 617-742-3050
www.mikespastry.com
Likely one of the North End's most famous bakeries, this neighborhood institution has been baking Italian and American pastries since 1946. Mike and Annette Mercogliano's dessert institution has hosted presidents, celebrities and tourists from all corners of the globe. You will always find a crowd eager to try one of the fifteen different types of cannoli. Open late and offering coffee and espresso, this is a great place to stop in for a snack.

CAMBRIDGE

Craigie On Main
853 Main Street | 617-497-5511
www.craigieonmain.com
At Craigie On Main, Chef Tony Maws, Boston's Best Chef (Boston Magazine) and one of America's Best New Chefs (Food & Wine), combines his trademark French-inspired "refined rusticity" with an unyielding passion for the best local, seasonal, and organic ingredients. In fact, the à la carte menu and tasting menus change daily, depending on which ingredients are the very best of the best that day.

Garden at The Cellar
991 Massachusetts Avenue
617-230-5880
www.gardenatthecellar.com
Inspired by eclectic British gastropubs, expect a relaxed dining experience in an intimate setting when you visit Garden at The Cellar. Surrounded by herbs and plants grown on a local farm, you will be inspired to appease your appetite with numerous offerings such as foie gras, locally caught and farmed fish and oysters or perhaps experiment with our ever changing Small Plate of The Day.

John Harvard's Brewery & Ale House
33 Dunster Street | 617-868-3585
www.johnharvards.com
Located in Harvard Square across from the Harvard Yard, this restaurant is famous for its hand-crafted beers and delicious pub menu. John Harvard's Brewery & Ale House received two more medals for the trophy case at the World Beer Championship in January 2009.

UpStairs on the Square
91 Winthrop Street | 617-864-1933
www.upstairsonthesquare.com
The Monday Club Bar on the first floor is a casual friendly space, dominated by the large rose colored serpentine bar, where guests can enjoy a bar snack, a full meal and an interesting glass of wine or one of our signature pink cocktails. The UpStairs Soirée Dining Room, reminiscent of a glowing and colorful jewel-box-like supper club, is lit with the flicker of working fireplace at each end of the room and serves a fine dining menu that is artisanal —with seasonal and local ingredients.

Bar & Club Recommendations *(by neighborhood)*

KENMORE/FENWAY

Boston Beer Works
61 Brookline Ave, Boston
www.beerworks.net
- Hours: Open Daily 11:30am–12:45am
- Dress Code: Casual
- Serves craft beer

House of Blues
15 Lansdowne Street, Boston
www.houseofblues.com/venues/clubvenues/boston
- Hours: Open on show nights & Red Sox games
  4pm–12am
- Dress Code: Casual
- The ultimate live music experience.

Game On
82 Lansdowne Street, Boston
www.gameonboston.com
- Hours: Mon–Wed, Sun 11:30am–1am, Thu–Sat 11:30am–2am
- Dress Code: Casual
- Multi-media sports bar.

Audubon Circle
838 Beacon Street, Boston
www.auduboncircle.us
- Hours: Daily 11:30am–1:00am
- Dress Code: Casual
- Expertly-mixed cocktails and fine dining.

ALLSTON

Tavern in the Square
161 Brighton Ave, Allston
www.tavernintheSquare.com/allston/allston
- Hours: Sat–Sun 10:30am–2am; Mon–Fri 11:30am–2am
- Dress Code: Casual
- Trivia and DJ's at night.

White Horse Tavern
116 Brighton Ave, Allston
www.whitehorseboston.com
- Hours: Daily 11:30am–2am
- Dress Code: Casual
- Casual dining and trivia nights.

BOSTON/BACK BAY

Back Bay Social Club
867 Boylston Street, Boston
www.backbaysocialclub.com
- Hours: Daily 11am–2am
- Dress Code: Casual
- Menu of American favorites.

Wally's Café
427 Massachusetts Avenue, Boston
wallyscafe.com/
- Hours: Mon-Sat 11am–2am
- Dress Code: Casual
- Live jazz music all night.

Top of the Hub
800 Boylston Street, Boston
www.topofthehub.net
- Hours: Daily 11:30am–1am
- Dress Code: Dressy
- City skyline views and romantic dining experience.

BROOKLINE

Publick House
1648 Beacon Street, Brookline
eatgoodfooddrinkbetterbeer.com
- Hours: Mon–Fri 5pm–2am; Sat–Sun 4pm–2am
- Dress Code: Casual
- Favorite Belgian beer and dining.

Beacon Tavern
1032 Beacon Street, Brookline
www.beacon1032.com
- Hours: Mon–Sun 5pm–2am
- Dress Code: Casual
- Lounge and dine.

FINANCIAL DISTRICT

Jose McIntyre's
160 Milk Street, Boston
www.josemcintyresboston.com
- Hours: Mon–Sun 11:30am–2am
- Dress Code: Casual
- Voted one of America's top 10 Irish establishments.

Bond Restaurant and Lounge
250 Franklin Street (Langham Hotel), Boston
www.bondboston.com
- Hours: Daily 11am–2am
- Dress Code: Dress to impress
- Drink and dine in glamour and sophistication.

The Four's
166 Canal Street, Boston
www.thefours.com
- Hours: Mon–Sun 11am–2am
- Dress Code: Casual
- One of the country's first sports pubs.

Howl At the Moon
184 High Street, Boston
www.howlatthemoon.com
- Hours: Mon–Fri 4:00pm–2:00am; Sat 6:00pm–2:00am
- Dress Code: Casual to dressy
- High-energy dueling piano bar.

WATERFRONT

Drink
348 Congress Street, Boston
www.drinkfortpoint.com
- Hours: Mon–Sun 4pm–1am
- Dress Code: Casual to Dressy
- Celebrates the craft of the cocktail.

SOUTH END

The Beehive
541 Tremont Street, Boston
www.beehiveboston.com
- Hours: Daily 5:30pm–2:00am
- Dress Code: Casual to dressy
- Artwork and live music nightly.

FANEUIL HALL

Ned Devine's
Faneuil Hall Marketplace, Boston
www.neddevinesboston.com
- Hours: Sunday—Saturday 11am–2am
- Music: Rock & Pop
- Hand painted murals and imported Irish woodwork.

KENDALL SQUARE, CAMBRIDGE

Cuchi Cuchi
795 Main Street, Cambridge
www.cuchicuchi.cc
- Hours: Mon-Sat 5:30–11pm, Bar until 12:30am
- Dress Code: Casual
- Spanish tapas and unique cocktails in this hideaway.

Sightseeing Recommendations

MUSEUMS

The City of Boston features some of the top museums in the country. These include:

- **Museum of Fine Arts** (617-267-9300) Free admission on Wednesday nights after 4pm. *www.mfa.org*
- **The Museum of Science** (617-723-2500) *www.mos.org*
- **The New England Aquarium** (617-973-5200) *www.neaq.org*
- **The Isabella Stuart Gardner Museum** (617-566-1401) *www.gardnermuseum.org*
- **The John F. Kennedy Museum and Library** (866-535-1960) *www.jfklibrary.org*
- **The Institute of Contemporary Art** (617-478-3100) Free admission on Thursday nights after 5pm. *www.icaboston.org*

TOURIST ATTRACTIONS

Faneuil Hall Marketplace
http://www.faneuilhallmarketplace.com
Built in the earliest days of Boston, this historic site is one of the oldest public trading/commerce forums in the United States. In the 1970's, Faneuil Hall and the Quincy Market were restored completely and became one of the top Boston tourist attractions. Today you can shop at one of the many stores, eat in a plethora of dining facilities, or watch a fantastic street performer.
Take the State Street T-stop on the Orange and Blue line, the Downtown Crossing T-stop on the Red and Orange lines, or the Government Center T-stop on the Green Line.

Fenway Park
(877) 733-7699
http://mlb.mlb.com/bos/ballpark/tour.jsp
Fenway Park is one of the most recognized ball fields in major league baseball. This notorious site is home to the Boston Red Sox, and some of the most ruthless fans in baseball. You can take a tour of the Red Sox clubhouse and Fenway Park for $12, or if you are brave enough, you can grab tickets to a big game.
Take the Green B, C, or D line train to the Kenmore Square T-stop.

Boston Common
http://www.cityofboston.gov/parks/emerald/Boston_common.asp
The largest park in the City of Boston, Boston Common offers as much culture as it does nature. You can tour the monuments and statues or take a seat and spend the day enjoying the peacefulness.
Take any Green line train to the Arlington, Boylston, or Park Street T-stop.

Boston Public Garden
http://www.cityofboston.gov/parks/emerald/public_garden.asp
The Public Garden was established in 1837 as the first public botanical garden in the United States. Formal plantings and a pond are maintained by the city from season to season. During the warmer months the pond is home to swans, and tourists can take a ride on the famous Swan Boats.
To reach the Public Garden, take the Green line to either the Boylston or Park Street T-stop.

The North End
http://www.northendboston.com
Historically known as Boston's Italian neighborhood, the North End boasts some of the finest food in Boston. Take a walk amongst the old, cozy architecture or dine pleasantly in one of the many restaurants. What to do after dinner? The North End also is home to the Improv Asylum, one of Boston's notorious spots for comedy, and Mike's Pastry Shop, notably the best place for desserts in Boston.
Take the Orange or Green line train to the Haymarket T-stop and walk to Hanover or Salem St.

Boston Public Library
(617) 536-5400
http://www.bpl.org
Founded in 1895, the Boston Public Library offers as much culture and history as it does educational value. Enjoy the pristine courtyard, ascend the marble staircase guarded by Saint-Gaudens Lions, or look around to every corner to find the fine artworks scattered throughout the library.
Take any Green line train to the Copley T-stop.

The Freedom Trail
http://www.thefreedomtrail.org
Recognized as a National Recreation Trail, the 3-mile trail is a walking tour of 16 sites and structures of historic importance in downtown Boston and Charlestown. Ninety-minute tours begin at the Visitor Center at 15 State Street and cover the heart of the Freedom Trail from the Old South Meeting House to the Old North Church.
Take any Green line train to the Park Street T-stop.

Massachusetts State House
(617) 727-3676
http://www.cityofboston.gov/freedomtrail/massachusettshouse.asp
In the 18th century, the newly independent Commonwealth of Massachusetts needed a larger common meeting place, and thus the inception of the Mass. State House. The gold-domed roof is the distinguishing feature that still shines brightly in the heart of Boston. Enjoy a free tour, which runs every 45 minutes, Monday–Friday 10am–3:30 pm, to see the well designed interior and colonial restored architecture.
Take either the Green or Red line to the Park Street T-stop. The State House is up the hill.

Old State House
(617) 720-1713
http://www.cityofboston.gov/freedomtrail/oldstate.asp
The Old State House is the oldest public building in Boston. It is the site of many historical events including the reading of the Declaration of Independence to the colonists of Boston and the site of the Boston Massacre, a key event that lead up to the American Revolution. Tours are offered by the Boston Historical Society.
Take the Orange or Blue line to the State Street T-stop, which is walking distance of the Old State House.

USS Constitution
(617) 242-5601
http://www.ussconstitutionmuseum.org
The USS Constitution got its fame in the War of 1812 carrying the name "Old Ironsides" because of its technological integrity. The naval shipyard in which the USS Constitution rests is now one large museum with plenty of history concerning shipbuilding and naval confrontations. The shipyard is also within walking distance of the Bunker Hill Monument.
Take the Green line to the North Station T-stop. The USS Constitution is a 15-minute walk from the T-stop. There is also a seasonal ferry service from Long Wharf.

Harvard Square
http://www.harvardsquare.com
Harvard Square is set in the heart of historical Cambridge, MA. Stroll around the parks or check out one of the many bookstores in Harvard Square. There is plenty of fine dining and shopping in the square as well.
Take the Red line going north to the Harvard T-stop.

SHOPPING RECOMMENDATIONS

Newbury Street
http://www.newbury-st.com
Newbury Street is one of the finest shopping experiences in Boston. Everything from GAP to Armani to small boutique type shops are represented as well as some of the finest dining in Boston.
Take the Green Line T direct to the Hynes Convention Center stop.

Copley Place
http://www.celebrateboston.com/copley-place.htm
Exclusive shops meet everyday contemporary styles. Copley Place also houses a fabulous collection of restaurants.
Take the Green Line T to Copley.

Harvard Square
http://www.harvardsquare.com
Harvard Square has some of the most interesting shopping with plenty of street performers and musicians.
Take the Green Line T to Park Street and change to the Red Line toward Alewife. Exit at the Harvard stop.

Prudential Center
http://www.prudentialcenter.com
The newly redesigned Prudential Center boasts over 70 shops and restaurants and connects to shops in Copley Place.
Take the Green Line T to Copley and walk two blocks towards Massachusetts Ave.

Faneuil Hall Marketplace
http://www.faneuilhallmarketplace.com
Faneuil Hall Marketplace has more than 100 of the finest shops and carts. National names, local specialties, and street performers create a diverse mix of shopping styles and tastes year round.
Take the Green Line T to Government Center.

Downtown Crossing
http://www.celebrateboston.com/downtown-crossing.htm
Over two million square feet of dining and shopping in the heart of Boston.
Take the Green Line T to Park Street

CambridgeSide Galleria Mall
http://www.cambridgesidegalleria.com
Classic suburban mall shopping located in Cambridge serving over 110 stores and 15 restaurants.
Take the Green E Line T and exit at the Lechmere stop.

The Shops On Commonwealth
http://www.hotelcommonwealth.com/shopping/index.cfm
There are 12 unique shops in the Hotel Commonwealth Retail Gallery, including custom made jewelry and accessories, vintage used books, a wine gallery, gourmet chocolates, clothing boutiques, and a photo gallery.
Take the Green Line T to Kenmore.

Summary Schedule

WEDNESDAY, JUNE 6, 2012		
8:00 am – 8:00 pm	Doctoral Consortium	Boston University, School of Management
4:00 pm – 7:00 pm	Conference Registration	Essex Ballroom Foyer, 3rd floor
*5:00 pm – 6:30 pm**	*ISMS Board Meeting*	*Kenmore Conference Room, Boston University*
THURSDAY, JUNE 7, 2012		
7:00 am – 5:00 pm	Conference Registration	Essex Ballroom Foyer, 3rd floor
7:00 am – 5:00 pm	Internet Café	Staffordshire, 3rd floor
7:30 am – 8:30 am	Continental Breakfast	America Ballroom, 4th floor
8:30 am – 10:00 am	Session 1 (TA)	3rd floor & 7th floor Meeting Rooms
9:00 am – 3:30 pm	Exhibit Hours	Essex Ballroom Foyer, 3rd floor
10:00 am – 10:30 am	AM Break	Essex Ballroom Foyer & Staffordshire, 3rd floor
10:30 am – 12:00 pm	Session 2 (TB)	3rd floor & 7th floor Meeting Rooms
12:00 pm – 1:30 pm	Lunch	America Ballroom, 4th floor
1:30 pm – 3:00 pm	Session 3 (TC)	3rd floor & 7th floor Meeting Rooms
3:00 pm – 3:30 pm	PM Break	Essex Ballroom Foyer & Staffordshire, 3rd floor
3:30 pm – 5:00 pm	Session 4 (TD)	3rd floor & 7th floor Meeting Rooms
*5:00 pm – 6:00 pm**	*You Can Get Data from the Wharton Customer Analytics Initiative!*	*St. George A*
5:30 pm – 7:30 pm	Opening Reception	America Ballroom, 4th floor
FRIDAY, JUNE 8, 2012		
7:00 am – 5:00 pm	Conference Registration	Essex Ballroom Foyer, 3rd floor
7:00 am – 5:00 pm	Internet Café	Staffordshire, 3rd floor
7:30 am – 8:30 am	Continental Breakfast	America Ballroom, 4th floor
8:30 am – 10:00 am	Session 1 (FA)	3rd floor & 7th floor Meeting Rooms
9:00 am – 3:30 pm	Exhibit Hours	Essex Ballroom Foyer, 3rd floor
10:00 am – 10:30 am	AM Break	Essex Ballroom Foyer & Staffordshire, 3rd floor
10:30 am – 12:00 pm	Session 2 (FB)	3rd floor & 7th floor Meeting Rooms
12:00 pm – 1:30 pm	Lunch	America Ballroom, 4th floor
*12:00 pm – 1:30 pm**	*Women in Marketing Science Lunch*	*Staffordshire, 3rd floor*
*1:00 pm – 2:00 pm**	*Marketing Science Editorial Board Meeting*	*Gloucester-Newbury Room, 2nd floor*
1:30 pm – 3:00 pm	Session 3 (FC)	3rd floor & 7th floor Meeting Rooms
3:00 pm – 3:30 pm	PM Break	Essex Ballroom Foyer & Staffordshire, 3rd floor
3:30 pm – 5:00 pm	Session 4 (FD)	3rd floor & 7th floor Meeting Rooms
6:00 pm – 7:00 pm	Cocktails	America Ballroom Foyer, 4th floor
*5:00 pm – 6:15pm**	*Marketing Science Associate Editors Reception*	*Gloucester-Newbury Room, 7th floor*
7:00 pm – 9:30 pm	Dinner Served	America Ballroom, 4th floor
SATURDAY, JUNE 9, 2012		
7:00 am – 1:30 pm	Conference Registration	Essex Ballroom Foyer, 3rd floor
7:00 am – 3:00 pm	Internet Café	Staffordshire, 3rd Floor
*7:30 am – 8:30 am**	*Future Conference Committees Meeting*	*Baltic, 7th floor*
7:30 am – 8:30 am	Continental Breakfast	America Ballroom. 4th floor
8:30 am – 10:00 am	Session 1 (SA)	3rd floor & 7th floor Meeting Rooms
9:00 am – 12:00 pm	Exhibit Hours	Essex Ballroom Foyer, 3rd floor
10:00 am – 10:30 am	AM Break	Essex Ballroom Foyer & Staffordshire, 3rd floor
10:30 am – 12:00 pm	Session 2 (SB)	3rd floor & 7th floor Meeting Rooms
12:00 pm – 1:30 pm	Lunch	America Ballroom, 4th floor
*12:00 pm – 1:30 pm**	*ISMS Fellows Lunch*	*Baltic, 7th floor*
1:30 pm – 3:00 pm	Session 3 (SC)	3rd floor & 7th floor Meeting Rooms

**Special & Invitational Meetings*

Guide to Exhibitors

Interpretive Simulations
www.interpretive.com
Interpretive Simulations offers realistic business experiences for the undergraduate and graduate business school classroom. Our simulations complement 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.

in4mation insights
in4mation insights, an analytics and marketing research consultancy, employs cutting-edge methods in Pricing, Marketing ROI, New Product Development, Market Structure, and Consumer & Market Segmentation. We use hierarchical Bayesian statistics to enhance the value of consumer and market data, applying these models in real-time to Big Data.

LINKS-simulations.com
www.links-simulations.com
The integrative, team-based, competitive LINKS business simulations are used worldwide in undergraduate, MBA and EMBA courses, and in ExecEd programs. The rich content, responsive high-touch, direct-from-the-author instructor support, and extensive student and instructor web-support resources of the 19 customizable LINKS simulations have enhanced 50,000+ students' learning experiences since 1999.

Now Publishers
www.nowpublishers.com
Now Publishers and its Foundations and Trends journals publish state-of-the-art review articles in business and technology written by leading researchers in the field with the references linked to the original articles and allows for updating by the author and community.

Routledge Journals
www.tandfonline.com
For two centuries, Taylor & Francis has been fully committed to the publication of scholarly information. Under our Routledge imprint, we publish a wide variety of journals in the field of marketing science. Visit the Routledge table to view our products and to pick up FREE sample copies of our journals!

Springer
www.springer.com
Springer is one of the world's largest scientific publishing companies, with a portfolio of over 5,000 new books per year, more than 2,000 scholarly journals, and innovative electronic products. Springer's Business, Economics & Statistics program offers authoritative titles in subject areas such as marketing, consumer behavior, strategic management, econometrics, research methodologies, operations research and business information systems.

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Information for Session Chairs, Presenters, and Participants

Guidelines for session chairs:

1. Please arrive at the room where you are chairing a session at least 10 minutes before its official start time (during the break prior to the session).
2. Plan to be present for the entire session.
3. Choose a seat in the front of the room where a presenter can easily observe you.
4. Introduce the session title at the beginning of the session and announce the allotted time per presenter (3 presentations per session: 30 min; 4 presentations per session: 22 min; 5 presentations per session: 18 min). The allotted time is inclusive of Q&A.
5. If presenters do not show up before the start of the session, you are free to allocate their time to the other presenters.
6. Please adhere to the sequence of presentations in the program since participants choose sessions based on paper sequence.
7. Introduce each speaker at the beginning of his or her talk.
8. Use the provided cards to let speakers know when there are 5 minutes and 2 minutes left in their allotted time.
9. Please look for the doctoral student helper assigned to your area if you have any problems.

Guidelines for presenters:

1. Please arrive at the room where you will be presenting at least 10 minutes before its official start time (during the break prior to the session).
2. Bring your presentation on a USB key in appropriate format (generally Power Point).
3. Insert your USB key into one of the slots of the laptop and copy your presentation to the desktop. Open your file to ensure it works, then close it. A student helper will be there to assist you.
4. All conference rooms are equipped with a laptop with a USB-port and a projector.
5. If you are not going to be present for the entire session, please let the session chair know.
6. Depending on the number of presentations in your session, you will have either 30 minutes (3 presentations), 22 minutes (4 presentations), or 18 minutes (5 presentations) to present. The allotted time is inclusive of Q&A for the presenter.
7. If you do not show up before the start of the session, the chair is free to allocate your time to the other presenters.
8. You will be prompted when there are 5 and 2 minutes left of your allotted time.

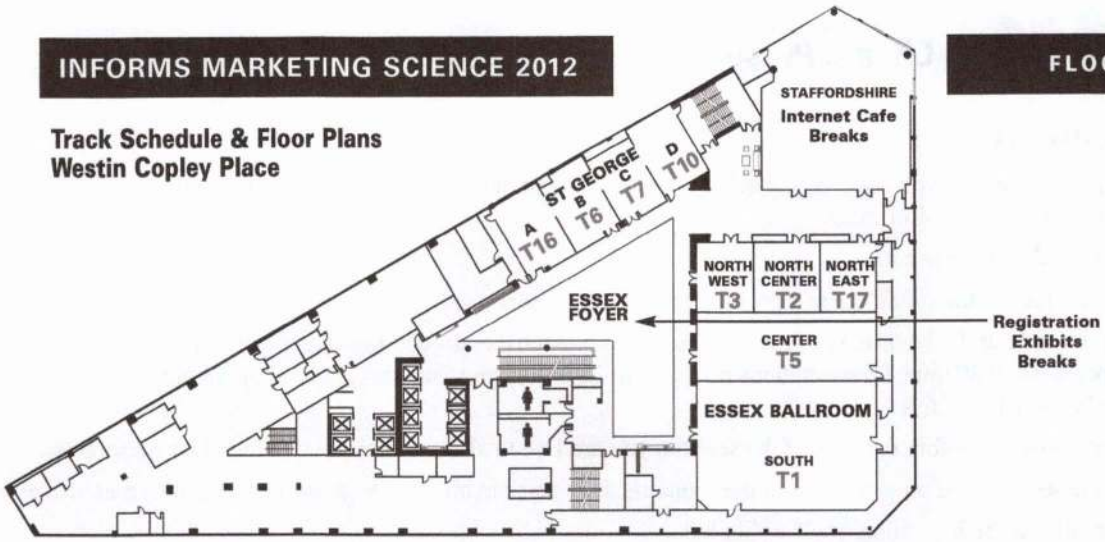
Guidelines for participants:

1. If you want to attend presentations of two different sessions that run at the same time, we kindly ask you to leave the sessions only at the beginning or end of a talk.
2. Please leave and enter the rooms quietly.

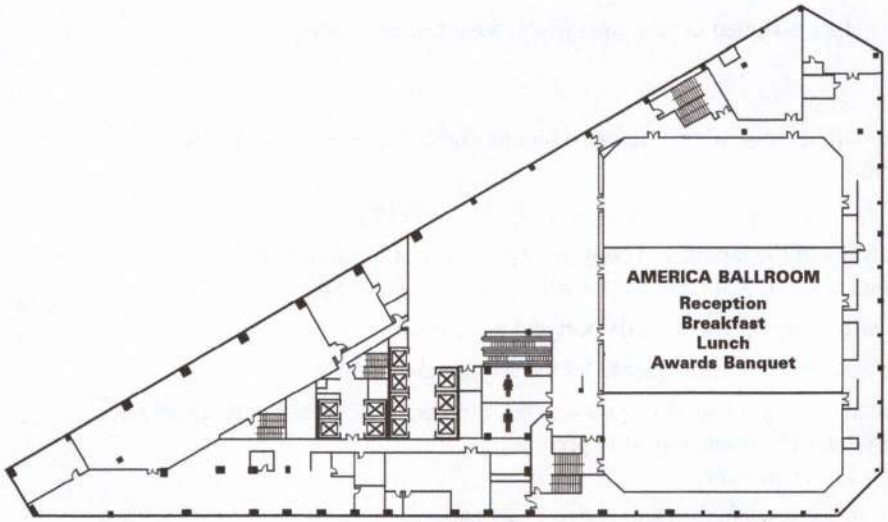
INFORMS MARKETING SCIENCE 2012

Track Schedule & Floor Plans
Westin Copley Place

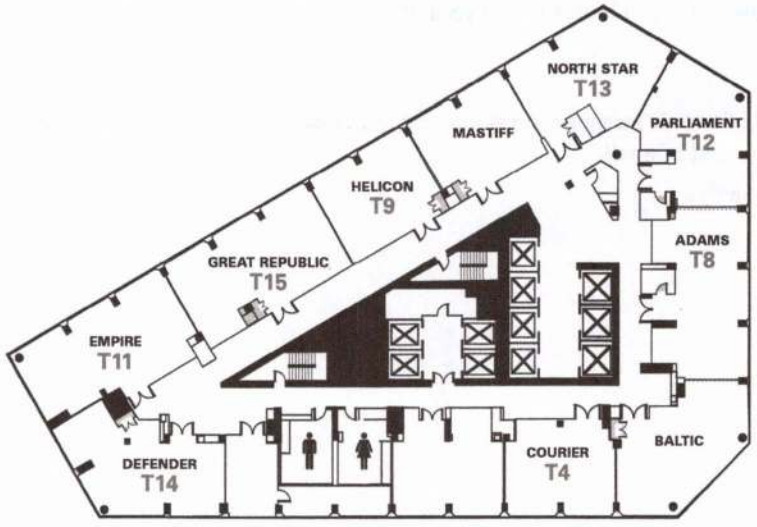
FLOOR 3



FLOOR 4



FLOOR 7



2012 INFORMS Marketing Science Conference

Thursday, June 7th, 2012 8.30-10.00 (TA)

TA01 – Essex Ballroom South

Valuing Online Activities and Businesses

Chair: Martin Spann

The Value of Receiving Passive Updates: A Quasi-Experiment on a Social Networking Site
Yotam Shmargad

Measuring the Consumer Value of Free Goods on the Internet
Erik Brynjolfsson, JooHee Oh

Measuring Freemium: The Value of Free Customers in a Networked Service
Clarence Lee, Sunil Gupta, Vineet Kumar

Location-based Advertising: What is the Value of Physical Distance on the Mobile Internet?
Martin Spann, Dominik Molitor, Philipp Reichhart

TA02 – Essex North Center

Customer Analysis and CLV - I

Chair: David Schweidel

A Cross-cohort Changepoint Model for Customer-Base Analysis
Arun Gopalakrishnan, Eric Bradlow, Peter Fader

"Counting Your Customers" Category by Category: Multi-category Customer Base Analysis
Chang Hee Park, Young-Hoon Park, David Schweidel

The Long and Winding Road: Modeling the Conversion Path of Online Customers
Alice Li, P.K. Kannan

Incorporating Nonrandom Direct Marketing Activity into Latent Attrition Models
David Schweidel, George Knox

TA03 – Essex North West

Social Media and the Facebook Effect

Chair: K. N. Rajendran

Towards Modeling Multiple Facebook Users' Actions for Social Media Marketing
Christine Balagué

How Facebook Influences Validity in Online-surveys
Richard Bensch, Alexander Sänn, Sebastian Selka

An Empirical Investigation of the Link between Social Media Efforts and Customer Firm Relationship
Rishika Ramkumar, Ram Bezawada, Ramkumar Janakiraman, Ashish Kumar

A Model of Satisfaction for Facebook "Likers"
K N Rajendran, Matthew Bunker, Steven Corbin, Ciara Pearce

TA04 – Courier

Market Segmentation

Chair: Simon Blanchard

Variable Weighting and Selection Approaches for Market Segmentation: A Comparison
Susanne Rumstadt, Daniel Baier

Consumer Choices Across Seemingly Disparate Product Categories: Latent Trait
Chen Lin, Douglas Bowman

Targeting Heterogeneous Segments
Neil Bendle

The Heterogeneous P-Median Problem for Categorization Based Clustering
Simon Blanchard, Daniel Aloise, Wayne DeSarbo

TA05 – Essex Center

Consumer Search and its Impact on Choice

Chair: Paulo Albuquerque

Modeling Optimal Search and Choice Decisions: The Role of Uncertainty, Innovation, and Consumer Reviews
Bart Bronnenberg, Paulo Albuquerque, Jun B. Kim

Search with Refinement
Song Yao, Yuxin Chen

Simultaneous or Sequential? Understanding the Drivers of Search Strategies and Search in the U.S. Auto Insurance Industry
Elisabeth Honka, Pradeep Chintagunta

Using Consumer Preferences to Improve Upon Popularity Rankings in Online Markets
Babur De los Santos, Sergei Koulayev

TA06 – St. George B

Cause Marketing

Chair: Carol Miu

Labeling Products with Carbon Footprints
Daniel Halbheer, Dennis Gärtner

CSR and Product-Immanent Advantages-The Influence on Brand Perception and Willingness to Pay
Hannah Winkler von Mohrenfels, Daniel Klapper

Why Do Consumers Buy Plastic Bags?
Tao Chen, Yuxin Chen, Jinhong Xie

Consumers Are Less Loyal Than You Might Think: The Role of Waste Avoidance
Carol Miu, Brian Ratchford

TA07 – St. George C

Customer Relationship Management I

Chair: Koen W. De Bock

The Industrial Brand Relational Elements and Customer Relationship Intention
Tony Garrett, Jong-Ho Lee, Irina Pieshkova

The Reliability and Validity of Alternative Customer Satisfaction and Loyalty Measurements
Keith Chrzan

Optimal Acquisition and Retention Strategies of New Subscribers Services
Tarek Ben Rhouma, Georges Zaccour

Remedying the Expiration of Churn Prediction Models with Multiple Classifier Algorithms
Koen W. De Bock, Kristof Coussement

TA08 – Adams

Structural Models of Dynamic Oligopoly

Chair: Ron Goettler

The Value of Market Information in the Dynamics of a Capital-Intensive Industry: The Case of DRAM Manufacturing
Pedro Gardete

The Dynamics of Retail Oligopoly
Paul Ellickson, Arie Beresteanu, Sanjog Misra

An Empirical Study of the Dynamics of Brand Building
Ron Borkovsky, Avi Goldfarb, Avery Haviv, Sridhar Moorthy

Competition and Product Innovation in Dynamic Oligopoly
Ron Goettler, Brett Gordon

2012 INFORMS Marketing Science Conference

Thursday, June 7th, 2012 8.30-10.00 (TA)

TA09 – Helicon

Conjoint Analysis: Methods

Chair: Mark Ratchford

Validity of Conjoint Analysis Studies: An Analysis of Recent Commercial Applications
Sebastian Selka, Daniel Baier, Peter Kurz

Does Brand Similarity of a Private Label Harm the National Brand: The Role of Choice Experiments
Youngju Kim, Neeraj Arora

Reconsidering Optimal Experimental Design for Conjoint Analysis
Agata Leszkiewicz, Mercedes Esteban-Bravo, Jose M. Vidal-Sanz

Choice Accuracy and Choice Deferral in Non-sequential Search
Mark Ratchford, Jeff Dotson, Jeff Larson

TA10 – St. George D

New Product Diffusion I

Chair: Sangkil Moon

The Diffusion of Renewable Energy Among Households
Hossein Eslami, Trichy Krishnan, Surendra Rajiv

Riding Successive Product Diffusion Waves: Building a Tsunami via Upgrade-Rebate Programs
Vardan Avagyan, Mercedes Esteban-Bravo, Jose M. Vidal-Sanz

Replacing Household Durables – Does Consumer Innovativeness Matter?
Maria Kaya, Sonke Albers, Paul Steffens

The Roles of Cultural Elements in International Diffusion of Entertainment Products
Sangkil Moon

TA11 – Empire

Geographic Models

Chair: Rutger van Oest

Entry and Spatial Competition in Retail Markets
Matilda Orth

An Empirical Study of National vs. Local Pricing under Multimarket Competition
Yang Li

Inference From Store Closures: A Structural Model of Ubiquity for Starbucks
Ali Umut Guler

Mapping Local Retailer Competition: Which Geographic Regions are Owned by Which Stores?
Rutger van Oest, Auke Hunneman

TA12 – Parliament

Retailing

Chair: Vincent Nijs

The Impact of Wal-Mart Supercenter Conversion on Consumer Behavior
Minha Hwang, Sungho Park

Impact of Shelf Design on Product Competition
Francisco Cisternas Vera, Alan Montgomery

A Targeting Approach Based on Consumers' Willingness-to-Pay Ranges
Florian Dost, Robert Wilken

Should Retailers Outsource Category Management? The Impact of Using a Category Captain on Manufacturers, Retailers, and Consumers
Vincent Nijs, Karsten Hansen, Kanishka Misra

TA13 – North Star

Two-Sided Markets

Chair: Upender Subramanian

Optimal Matchmaking
Kaifu Zhang

When Do Markets Tip? A Cognitive Hierarchy Approach
Tanjim Hossain, John Morgan

Consumer Heterogeneity and Product Offering in Two-Sided Markets
Li Sun, Junhong Chu, Surendra Rajiv

Portal or Pipe: Wireless Service Provider Strategies for Mobile Applications
Upender Subramanian

TA14 – Defender

Brand Equity

Chair: Richard Briesch

Autoregressive Latent Trajectory Modelling to Track the Change in Customer Equity and Brand Equity
Abas Mirzaei, David Gray, Lester W Johnson, Hume Winzar

Will Employees' and Customers' Perception of Brand Value Affect Firm Profitability?
Anita Pansari, V. Kumar

The Dynamic Impact of Product-Harm Crises on Brand Equity and Advertising Effectiveness
Yan Liu, Venkatesh Shankar

The Effect of Consumer Brand Equity on Firm Brand Profitability
Richard Briesch, Bill Dillon, Raj Sethuraman

TA15 – Great Republic

Marketing Productivity and Customer Value I

Chair: Xueming Luo

Do Recalls of One Brand Hurt or Help Rival Brands: Halo Effects in Social Media
Abhishek Borah, Gerard Tellis

Modeling the Immediate and Long-term Effectiveness of Location-targeted Mobile Marketing Channels
Xueming Luo, Zheng Fang, Wei Li

Informational Value of Social Tagging Networks
P.K. Kannan, Hyoryung Nam

More Than Numbers: Marketing Information Disclosures and IPO Pricing
Raji Srinivasan, Nicholas Crain, Robert Parrino

TA16 – St. George A

Game Theory Strategy I

Chair: Sherif Nasser

The Advantages of Underestimating the Competition
Jennifer Cutler, Richard Staelin

Optional versus Standard Features
Alex Kim, Subramanian Balachander, Esther Gal-Or, Tansev Geylani

Inter-Temporal Pricing Strategy with Product Concept Demonstration
Taewan Kim, Eunkyu Lee

Competing on Turnaround Time under Demand Uncertainty
Sherif Nasser, Danko Turcic

2012 INFORMS Marketing Science Conference

Thursday, June 7th, 2012 10.30-12.00 (TB)

TB01 – Essex Ballroom South

Search Marketing - I

Chair: John Hauser

Do Display Ads Influence Search?
Pavel Kireyev, Sunil Gupta, Koen Pauwels

Competitors' vs. Focal Keywords: An Empirical Analysis of Sponsored Search Advertising
Xiaomeng Du, Rui Pan, Meng Su, Xiaona Zheng

To Buy or Not to Buy? A Two Stage Model of Within Site Search
Ammara Mahmood, Catarina Sismeiro

Morphing Banner Advertising
John Hauser, Robert Bordley, Gui Liberali, Erin MacDonald, Glen Urban

TB02 – Essex North Center

Customer Analysis and CLV - II

Chair: Peter Fader

Predicting Partial Customer Churn in Retail: On the Value of the Purchasing Sequence
Vera Miguéis, Ana Camanho, João Falcão e Cunha, Dirk Van den Poel

The Power of Second "Customer Lifetime Value"
Yashoda Bhagwat, V. Kumar, Alan Zhang

A Study on the Empirical Validation of Probabilistic Customer-base Analysis Models
Evsen Korkmaz, Dennis Fok, Roelof Kuik

Bringing Heterogeneity into Customer Equity Calculations
Peter Fader, Bruce Hardie, Yuzhou Liu

TB03 – Essex North West

Social Media - Commerce & Context

Chair: Mark Elsner

Corporate Social Media: Which Impact Have Online Conversations On Firms' Blogging Effectiveness?
Cornelia Caprano, Florian Stahl, Hans Peter Wehrli

How is the Purchase Motive for Social Commerce Formed?
Byunghui Shim, Tae Ho Song

When to Buy and When to Redeem?: Consumer Learning with Daily-Deal Coupons
Minjae Song, Eunho Park, Byungjoon Yoo, Seongmin Jeon

Community Management: A New Marketing Perspective for Social Media?
Thomas Stenger

What's in a Story? Factors Influencing the Popularity of Online Content in Social Media
Mark Elsner, Lara Lobschat, Werner Reinartz

TB04 – Courier

Consumer Behavior – Preferences

Chair: Sergio Moccia

Satisfaction and Construal Level Theory: An Empirical Investigation
Wei Zhang, Ajay Kalra

Happily (Mal)Adjusted: Cosmopolitan Identity and Expatriate Adjustment
Amir Grinstein, Luc Wathieu

When Consumers Feel Distant From the Product: The Negative Effect of Product Package Cover on Consumer Product Evaluation
Jung min Jang, Eun-Young Park, Song-Oh Yoon

The Preference for Scarcity: How the Behavior of Conformists Change When They are Faced With Limited
Sergio Moccia, Oliver Heil

TB05 – Essex Center

Networks and Marketing: New Perspectives and Ideas

Chair: Andrew Stephen

The Structure of Online Diffusion Networks
Dan Goldstein, Sharad Goel, Duncan Watts

How Interest Shapes Word-of-mouth Over Different Channels
Jonah Berger, Raghuram Iyengar

Ideation Experiments in Social Networks
Peter Zubcsek, Jacob Goldenberg, Andrew Stephen

What Shapes Positive and Negative Sentiment towards a Brand in Social Media? A Network Perspective
Felipe Thomaz, Andrew Stephen, Vanitha Swaminathan

TB06 – St. George B

Consumer Response to Green Marketing

Chair: Manoshi Samaraweera

Psychological Reactance to Forced Adoption of Green Behaviors: Attitudes and Compliance
Judy Frels, Olga Kapitskaia

Crowding-out the Brand? – Brand Effects of Nonprofit Organizations Due to Incentives for Donations
Ann-Christin Michel Clement, Edlira Shehu

Impact of Spokes-character Types and Gender in 'Green Advertising'
Aditya Mishra, Ainsworth Bailey

Look 'GREEN': Using Font Color & Symbols to Boost Percieved Environmental Friendliness
Manoshi Samaraweera, Mohammad Abuobead, Jeanetta Sims

TB07 – St. George C

User-Generated Content and Word-of-Mouth

Chair: Yuchi Zhang

Promotional Reviews: An Empirical Investigation of Online Review Manipulation
Dina Mayzlin, Judith Chevalier, Yaniv Dover

Do Online Reviews Lead to Better Choices?
Yuchi Zhang, David Godes

On Medium and Message – Multichannel Word of Mouth
Renana Peres, Mitchell J. Lovett, Roni Shacher

Spatio-Temporal Clustering in Car Category/Brand Switching
Keren Haddad-Leibovich, Jacob Goldenberg, Daniel Shapira, Sai Sundarakrishna

TB08 – Adams

Structural Models of Sports Marketing

Chair: Timothy Derdenger

Do Super Bowl Advertisements Affect Brand Shares?
Wesley Hartmann, Daniel Klapper

Brand Equity Development in Asymmetric Alliances: The Case of the Bowl Championship Series
Michael Lewis, Manish Tripathi

The Dynamic Advertising Effect of Collegiate Athletics
Doug Chung

The Informative and Prestige Effects of Celebrity Endorsements
Kevin Chung, Timothy Derdenger, Kannan Srinivasan

2012 INFORMS Marketing Science Conference

Thursday, June 7th, 2012 10.30-12.00 (TB)

TB09 – Helicon

Conjoint Analysis I

Chair: Sascha Voekler

Lead Users and Non-Lead Users: Preferences Measured by Conjoint Analysis
Alexander Sänn, Daniel Baier

Product Design Optimization: A Comparison of Genetic, Ant Colony And Bee Algorithms
Sascha Voekler, Daniel Baier, Susanne Rumstadt

TB10 – St. George D

New Product Adoption I

Chair: Tilo Halaszovich

Who Wins the Convergence War? The Effects of Core Competency on Convergence Product Sales
Hyeokseong Lee, Wonjoon Kim

Diffusion of Smartphones: The Case of Venezuela and the United States
Antonieta Reyes

Modeling the Effects of Demographic and Social Factors on Diffusion of Innovation
Kapil Agrawal, Ashish Goyal, Harsh Kushwah, JB Shukla

Skim or Penetrate? Setting the Right Price at the Right Time for New FMCG Products
Tilo Halaszovich, Raimund Bau

TB11 – Empire

National Brands and Private Labels

Chair: Raphael Thomadsen

Consumer Perception of Multi-category Private Labels
Sophie Theron, Timothy Richards

Value Seeking Under Competition: Impacts of Wal-Mart Entry and Economy Store Brand Introduction
Satheesh Seenivasan, Debabrata Talukdar

Extending Private Labels into a Premium Range: Antecedents and Consequences
Anne ter Braak, Marnik G. Dekimpe, Inge Geyskens

Push vs. Pull: The Case for 50-50
Raphael Thomadsen, Minha Hwang

TB12 – Parliament

Sales Force

Chair: Tom Steenburgh

Control Patterns in Sales Organizations
Dominique Rouziès, Vincent Onyemah, Barton Weitz

Identifying the Appropriate Functional Form of an Aggregate Sales Response Function
Sonke Albers

Relationship Organization and Price Delegation: An Experimental Study
Noah Lim, Sung Ham

The Effect of Sales Compensation Incentives on Customer Quality in Service Environments
Tom Steenburgh, Vineet Kumar

TB13 – North Star

Auctions

Chair: Peter Popkowski Leszczyc

Losing the Loser's Curse and Reclaiming My Endowment: The Dynamics of Sequential Auctions on eBay
Tae-Hyung Pyo, Thomas Gruca, Dhananjay Nayakankuppam

The Value of Reputation in an Online Freelance Marketplace
Hema Yoganarasimhan

From Winner to Loser - Overpaying as a Process Across Multiple Auctions
Ju-Young Kim, Martin Natter

A Study of Bidding Behavior in All-pay Auctions
Peter Popkowski Leszczyc

TB14 – Defender

Advertising and Unique Topics

Chair: Ming-Chih Tsai

Is There a Dark Side of Adgames? – The Impact of Losing the Game
Celina Steffen, Gunnar Mau, Hanna Schramm-Klein

An Empirical Analysis of Distance Measures for Hierarchical Clustering of Images
Sarah Frost, Daniel Baier

Diffusion Patterns and Role of Anteceding Predictors-evidence From Chinese Automobile Industry
Xi Chen

Antecedents and Consequences to Contract Manufacturing Services Marketing Intent: An Exploratory Investigation in the IC Manufacturing Service Context of Taiwan
Chengter Ted Ho, Saji K B, Uma Nair S, Hsi-Chi Teng

Industrial Customer Satisfaction and Switching Behavior–threshold Model with eB2B Market
Ming-Chih Tsai, Wei-Che Hsu, Chien Hao Huang, Chieh-Hua Wen

TB15 – Great Republic

How the Stock Market Alters Company Strategies

Chair: Vivian (Yue) Qin

Co- Chair: Vivian (Yue) Qin

The Myopic Management of Intangible Assets: Evidence and Long-term Consequences
Vivian (Yue) Qin, Christine Moorman

Firm Innovation and the Ratchet Effect Among Consumer Packaged Goods
Christine Moorman, Natalie M. Mizik, Fredrika J. Spencer, Simone Wies

Learning That Pays: Stealth Strategies for Alliance to Acquisition
Matthew Manary, Christine Moorman

TB16 – St. George A

Game Theory in Marketing I

Chair: Jeffrey Shulman

Product Diversion to a Direct Competitor
Jeffrey Shulman

The Impact of Organized Retailing on Unorganized Retailing in Emerging Economies
Kinshuk Jerath, S Sajeesh

Should a Firm Favor a Winner or Loser of a Contest: A Dynamic Contest Approach
Jiwoong Shin, Robert Ridlon

The Impatient Innovator
Juanjuan Zhang

2012 INFORMS Marketing Science Conference

Thursday, June 7th, 2012 1.30-3.00 (TC)

TC01 – Essex Ballroom South

Search Marketing - II

Chair: Dinah Vernik

Optimal Bidding in Multi-Item Multi-Slot Sponsored Search Auctions
Kartik Hosanagar, Vibhanshu Abhishek

Bid Jamming
Yi Zhu, Shijie Lu

Competing Position Strategies for Related Keywords in Paid Search Market
Shuai Yang, Joseph Pancras, Yiping Song

Competing Position Auction
Dinah Vernik, Zsolt Katona, Woochoel Shin

TC02 – Essex North Center

Promotion & Customer Response Analysis

Chair: Eric Schwartz

Coupon Optimization – Making Coupons Personal
Dwight Mouton

Customers' Dynamic Response to a Direct Couponing Program
Ignacio Osuna, Jorge Gonzalez, Julian Villanueva

Are Free Trial Customers Worth Less Than Regular Customers?
Hannes Datta, Bram Foubert, Harald van Heerde

Adaptive Marketing Experiments Using a Correlated Multiarmed Bandit
Eric Schwartz, Eric Bradlow, Peter Fader

TC03 – Essex North West

Social Media's Impact on Firm Performance

Chair: Ashish Sood

The Dynamics of Commercial Media, Social Media, and Market Outcomes
Ho Kim, Dominique Hanssens

Recovering the Actual Impact of Word-of-Mouth and Biases in Suppliers' Expectations
Dong Soo Kim, Duk Bin Jun

Shape Analysis of Consumer Reviews: Evolution of Volume, Valence, and Dispersion
Ashish Sood, Mayukh Dass, Wolfgang Jank, Yue Tian

TC04 – Courier

Consumer Behavior I

Chair: Kimmy Wa Chan

Moderating Role of Customer Participation on Corporate Reputation and Customer Citizenship Behavior
Harmeen Soch, Nidhi Aggarwal

Use of Brand Symbolism in Teenagers: Evidence from a Modern-Conservative Country
Asli Kuscu

Do Consumers' Knowledge and Attitudes Determine Their Perceptions and Willingness-to-pay for GSCM?
Bowon Kim, Kwangtae Park

Service Unfairness is Not Good? The Mediating Roles of Envy, Benign Envy, and Boundary Conditions
Kimmy Wa Chan, Chi Kin (Bennet) Yim

TC05 – Essex Center

Meet the Editors I

Chair: Remi Trudel

Editors of leading journals for marketing academics will present their editorial policies and perspectives. The following editors are represented: Marketing Science: Preyas Desai; Journal of Marketing Research: Tulin Erdem; Journal of Marketing: Jeff Inman; Journal of Consumer Research: Brian Ratchford; Management Science: Pradeep Chintagunta; Information Systems Research: Chris Dellarocas.

TC06 – St. George B

Health Marketing – Behavior

Chair: Daniel Shapira

How do Health Claims Influence Product Choice Behavior? –An Experimental Study
Yasemin Boztug, Klaus G. Grunert, Liisa Laehteenmaeki

Can Anchoring Effects be Used to Increase the Consumption of Fruit and Vegetables?
Iris Versluis, Philip Hans Franses

Digital Healing: The Role of Mobile Health Apps in the World of Health 3.0
Balaji Krishnan, Ankit Kesharwani

Fashion Models and the Overweight Epidemic
Daniel Shapira, Amir Heiman, Oded Lowengart

TC07 – St. George C

Social Influence and Profitability

Chair: Barak Libai

Co-Chair: Barak Libai

Differential Adaptive Diffusion: Understanding Diversity and Learning Whom to Trust in Viral Marketing
William M. Rand, Lise Getoor, Hossam Sharara

The Social Costs of Knockoffs: Consumer Disengagement From Cultural Innovations
Gil Appel, Barak Libai, Eitan Muller

How Customer Referral Programs Convert Social Network Capital into Economic Capital
Christophe Van den Bulte, Sam K. Hui, Philipp Schmitt, Bernd Skiera

Social Interactions in Customer Churn Decisions: The Impact of Relationship Directionality
Michael Haenlein

TC08 – Adams

Recent Developments in Structural Learning Models

Chair: Andrew Ching

A Structural Analysis of Marketing-mix, Publicity and Correlated Learning: The Case of Statins
Hyunwoo Lim, Andrew Ching

Cellular Service Demand: Biased Beliefs, Learning, and Bill Shock
Michael D. Grubb, Matthew Osborne

An Empirical Model of Industry Dynamics with Common Uncertainty and Learning From the Past Actions of Competitors
Nathan Yang

Learning and Network Effects within Social Networks
Mantian (Mandy) Hu, Daniel Yi Xu, Sha Yang

2012 INFORMS Marketing Science Conference

Thursday, June 7th, 2012 1.30-3.00 (TC)

TC09 – Helicon

Conjoint Analysis II

Chair: Ely Dahan

Context Dependence as a Driver of Preference Dynamics
Robert Rooderkerk, Berk Ataman

Bayesian Rapid Optimal Adaptive Design: Applications Comparing Risky and Intertemporal Choice Models
Debajyoti Ray, Colin Camerer

Direct Comparison of Utility Maximization and Disutility Minimization in Conjoint Analysis
Berry T. Cox, Amit Pazgal, Seethu Seetharaman

Adaptive Best-worst Conjoint (ABC) Analysis
Ely Dahan

TC10 – St. George D

New Product Adoption II

Chair: Carlos Hernandez Mireles

The Effects of Platform and Consumer Lifecycles on Content Sales in a Platform-Mediated Market
John Healey, Wendy Moe

The Dynamics of New Product Feature Usage
Tingting Fan, Peter Golder, Eitan Muller

Modeling New Product Trial and Early Repeat Purchase: An Individual-Level Multi-Product Approach
Carmen Liutec, Edward Blair, Rex Du

A New Hazard Model with Causal Effects: A Study of the Sales-Price Crash in New Products Diffusion
Carlos Hernandez Mireles, Georgios Effraimidis, Gerard Tellis

TC11 – Empire

Channel Governance and Contracting I

Chair: Jong-Ho Lee

The Consequences of Misaligned Formal Contracting for Relational Contracting
Jon Bingen Sande, Sven A. Haugland

Can Bargain Power Paradox Institutionalize Fair Trade Ethics? A Consequential Evidence
Po-Fan Tsai, Wei-Che Hsu, Ming-Chih Tsai

Does It Make Relational and Financial Sense to be a Responsive Strategic Supplier?
M.Abrahim Zaka

The Interaction Effect of Formal Control and Social Control on B2B Performance
Jong-Ho Lee, Jae Wook Kim, Jin Hwa Rhee

TC12 – Parliament

Sales Force Control Mechanisms

Chair: James Hess

A Dynamic Sales Force Model
Olivier Rubel

Multi-product Pricing and Sales Incentives with Demand Interaction
Sumitro Banerjee, Alex Thevaranjan

Expert Peers in Team Production
Jeff Boichuk, Michael Ahearne, Zachary Hall, Niladri Syam

Thrill of Victory and Agony of Defeat: Emotional Rewards and Compensation
James Hess, Niladri Syam, Ying Yang

TC13 – North Star

Research on Media-Platform Marketing and Two-sided Markets

Chair: Murali K. Mantrala

Targeted Advertising in Magazine Markets and the Advent of the Internet
Ambarish Chandra, Ulrich Kaiser

Measuring the Economic Success of Marketing Investments in Two-sided Markets
Tim Kraemer, Oliver Hinz, Bernd Skiera

Investigating Advertisers' View of Online and Print Media: Complements or Substitutes?
S Sriram, Sridhari Sridhar

Social Network Games: An Emerging Platform for Product Placement Advertising
Huazhong Zhao, Jinhong Xie, Woochoel Shin

A New Approach for Nonparametric Network Efficiency Analysis
Sridhari Sridhat, Murali K. Mantrala, Prasad A. Naik

TC14 – Defender

Online Advertising

Chair: Sridhar Narayanan

Measuring Position Effects in Search Advertising: A Regression Discontinuity Approach
Sridhar Narayanan, Kirthi Kalyanam

Here, There and Everywhere: Correlated Online Behaviors Can Lead to Overestimates of the Effects of Advertising
Randall Lewis, Justin M. Rao, David H. Reiley

Synonyms and Sponsored Search Advertising: An Analysis of Exact Match and Broad Match
Amir Sayedi, Wilfred Amaldoss, Kinshuk Jerath

Pricing Online Content: Fee vs. Free
Kanishka Misra, Anja Lambrecht

TC15 – Great Republic

Top Management Processes and Marketing Investments: The Role of Strategic Flexibility

Chair: Martin Artz

The Role of Governance Mechanisms in Minimizing Myopic Marketing Investments
Amit Joshi, Gautham Vadakkepatt

Aggressive Marketing Strategy Following Equity Offerings and Firm Value: The Role of Relative Strategic Flexibility
John Hulland, Kurt Didem

Myopic Marketing and R&D Strategies Utilization: The Role of CMO, CEO, and CFO Personal Compensation Incentives
Martin Artz, Holger Daske, Natalie M. Mizik

Who You Know Versus Where You Compete: How Inter-firm Networks Affect the Success of Technology Startups
Isaac Dinner, Andrew Stephen

TC16 – St. George A

Game Theory In Marketing II

Chair: Paul Messinger

The Effect of Information on Pre-purchase Risk Reduction Tools on Perceptions and Choices in Competition
Amir Heiman

Keeping Your Enemies Closer
Jeffrey Cai, Jagmohan Raju

Making the Grade: Product Quality Reporting by Infomediaries
Nina Baranchuk, Ashutosh Prasad

Self-Service Co-creation: Cooperation or Competition?
Paul Messinger, Kursad Asdemir, Bora Kolfal

2012 INFORMS Marketing Science Conference

Thursday, June 7th, 2012 1.30-3.00 (TC)

TC17 – Essex North East **Agent-Based Modeling** **Chair:** Curt Stenger Simulating a Movie's Box Office Using an Agent-based Modeling Approach *Youngjin Park, Seo Il Chaiy* Cross-Selling Behavior of the Sales Force: The Effect of Salesperson-Owned Loyalty *Yashar Atefi, Michael Ahearne, Niladri Syam* Investigating the Profitability of Multilevel Marketing *Prithwiraj Mukherjee, Arnaud De Bruyn* Merging Vector-Autoregression & Agent-Based Models for Consumer Market Simulation of Sales *Curt Stenger, Rosanna Garcia, Koen Pauwels*			

2012 INFORMS Marketing Science Conference

Thursday, June 7th, 2012 3.30-5.00 (TD)

TD01 – Essex Ballroom South

Search Marketing - III

Chair: Oded Netzer

A New Dynamic Bayesian Space-time Model for Customer Acquisition
L. Katie Yang, David Bell

Dynamics of Sales and Consumer Online Search: the Case of the U.S. Automobile Market
Ye Hu, Sina Damangir, Rex Du

A Web Engagement Model Grounded on a Combined Online Behaviour-human Computer Interaction Framework
Antonio Hyder, Enrique Bigne

Using Hidden Markov Models to Identify Job Seekers From Social Network Data
Oded Netzer, Peter Ebbes

TD02 – Essex North Center

Modeling Online Behaviors

Chair: Anocha Aribarg

The Adoption of Online Distribution Channels and its Impact on Hotel's Marketing Strategies
Steven Lu, Yupin Yang, Ulku Yuksel

Let Me Stack Them Up: An Analysis of Internet Marketing Service Contract
Ryan Choi

Modeling Competition Among Paid Search Advertisers
Shijie Lu, Xianghua Lu, Sha Yang

Choice Interdependence in a Social Network
Anocha Aribarg, Yves Atchade, Jing Wang

TD03 – Essex North West

Spillover Effects of New Media

Chair: Junlin Du

Social Advertising
Catherine Tucker

Influence of Product Recommendations on Phantom Effects in an Online Shopping Environment
Jana Luisa Diels, Lutz Hildebrandt

From Stranger toward Friend: Using Social Media to Build Consumer-Brand Relationships
Renee Gosline, Nell Putnam-Farr, Joyce Salisbury, Glen Urban

How to Persuade 100,000 Friends? Understanding Blogs as One-to-One Mass Media
Soyean (Julia) Kim, Barbara Bickart, Frederic Brunel, Seema Pai

Sponsored Social-learning in Social Shopping Network
Junlin Du, Xiaojing Dong, Yacheng Sun

TD04 – Courier

Consumer Behavior - Decision Making

Chair: J. Jeffrey Inman

Quantity Decision After Missing a Better Opportunity
Song Su, Rong Chen, Jinsong Huang, Liuning Zhou

Smart Shopping Carts: How Real-Time Spending Feedback Influences Grocery Shopping Behavior
Koert Van Ittersum, Joost Pennings, Daniel Sheehan, Brian Wansink

When Knowing Hurts: The Dynamic Influence of Spending Feedback on Intra-Shopping Trip Decisions
Daniel Sheehan, Koert Van Ittersum

What Determines Unplanned Purchases?: A Model Including Purchase History and Within-Trip Dynamics
Karen Stilley, Tim Gilbride, J. Jeffrey Inman

TD05 – Essex Center

Meet the Editors II

Chair: Seema Pai

Editors of leading journals for marketing academics will present their editorial policies and perspectives. The following editors are represented: Quantitative Marketing and Economics: Greg Allenby/Sridhar Moorthy; International Journal of Research in Marketing: Jacob Goldenberg; Journal of Retailing: Praveen Kopalle; Journal of Service Research: Kay Lemon; Marketing Letters: Joel Steckel.

TD06 – St. George B

Pricing I

Chair: Jorge Silva-Risso

The Welfare Effects of "Bill Shock" Regulation in Mobile Telecommunication Markets
Lai Jiang

Strategic Price Obfuscation and its Impact on Consumer Search and Consideration Set Formation
David Muir, Katja Seim, Maria Ana Vitorino

Variety and Quality Heterogeneity on Two-Sided Platform
Ruhai Wu, Mei Lin

Out with the Old, In with the New: The Impact of "Cash for Clunkers"
Jorge Silva-Risso, Meghan Busse, Christopher Knittel, Florian Zettelmeyer

TD07 – St. George C

Mobile Marketing

Chair: Andrew Stephen

Determinants of Mobile Advertising Effectiveness
Yakov Bart, Miklos Sarvary, Andrew Stephen

Monetizing the Effect of In-store Travel Distance on Unplanned Purchases: The Relative Effectiveness of Mobile Shopping Apps versus Store Layout
J. Jeffrey Inman, Yanliu Huang, Sam K. Hui, J. Jeffrey Inman, Jacob A. Suher

Tie Strength and Network Closure on the Mobile Internet
Raghuram Iyengar, Anindya Ghose, Sang Pil Han

Consumer Surplus in the New Mobile Economy: Estimating Demand for Mobile Apps
Anindya Ghose, Sang Pil Han

TD08 – Adams

Marketing in Emerging Markets

Chair: K. Sudhir

Consumer Adoption of Modern Retail in Emerging Markets: Evidence From India
Vishal Narayan, Vithala R. Rao, K. Sudhir

Traditionalism Meets Modernity: Market Insights From Store Level Data in the Indian Retail Sector
Debabrata Talukdar, K. Sudhir

Income Inequality and the Demand for Counterfeits
Yi Qian, Derek Rucker

Fraud Transactions under Seller Rating System: A Dynamic Analysis of Price and Quality Competition on Online Retailing Platform
Baohong Sun, Xiao Liu, Robert Miller, Zhanbo Zhao

2012 INFORMS Marketing Science Conference

Thursday, June 7th, 2012 3.30-5.00 (TD)

TD09 – Helicon

Multiattribute Choice Models

Chair: Minki Kim

Catch A Tiger By His Toe: A Linear Programming Approach to Large Scale Discrete Choice Problems
David Anderson, Anna Devlin, William M. Rand

Understanding Choice Variation in Group Decision-making
Sam Riethmuller, Ujwal Kayande

Analyzing Heterogeneous Voting Behavior in Multiparty Elections: Implications for Political Marketing
Minki Kim

TD10 – St. George D

New Products Adoption III

Chair: Kay Ryung Koo

The Effect of ISP Availability on Internet Adoption
Junzhao Ma

An Investigation of Domain-specific Innovativeness
Masataka Yamada, Toshihiko Nagaoka

Markets or Exports?: Understanding Innovation in Emerging Markets
Bruce McWilliams, Rubina Verma

Prediction of Trial Purchase of New Product Based on Purchase History of Market Mavens
Takashi Teramoto, Akira Shimizu

Empirical Analysis of Market Maven's Bahavior
Kay Ryung Koo, Jiyoon Kim, Janghyuk Lee

TD11 – Empire

Consumer Channel Choice

Chair: Jing Li

The Effect of Unobservable Learning States on Customers' Channel Preference Evolution
Chun-Wei Chang

Consumer Shopping Behavior and Product Cannibalization
Bin Li, Xinxin Li, Hongju Liu

A Study to Evaluate Consumers Intention to Use Stationary, Mobile and TV Devices for Online Shopping
Gerhard Wagner, Hanna Schramm-Klein, Sascha Steinmann

Cross-competition Effects During the Customer Adoption of a New Online Channel
Jing Li, Umut Konus, Fred Langerak, Mathieu Weggeman

TD12 – Parliament

Bayesian Methods I

Chair: Jonathan Lee

When Are Your Customers Active? A State-Switching Mixture Model for Always-a-Share Markets
Joachim Bueschken, Shaohui Ma

A Managerial Perspective on Predicting Customer Behavior
Robin Wuenderlich, Florian v. Wangenheim, Nancy Wuenderlich

A Bayesian Approach to Correspondence Analysis
Jonathan Lee

TD13 – North Star

Bidding Strategies and Design in Quality Auctions

Chair: Sandy Jap

Co-Chair: Eman Haruvy

Differentiated Bidders and Bidding Behavior in Procurement Auctions
Sandy Jap, Eman Haruvy

Bidders as Networks and Key Bidders in Online Auctions: A Case of Fine Art Auctions
Mayukh Dass, Dawn Iacobucci, Srini Reddy

Advertising Agency Selection Contest with Stipends for New Business
Dan Horsky, Sharon Horsky, Robert Zeithammer

Quality Scores that Make You Invest
Zsolt Katona, Yi Zhu

Pay What you Like: A Controlled Laboratory Experiment
Robert Zeithammer, Klaus M. Schmidt, Martin Spann

TD14 – Defender

Global Branding

Chair: K. Sivakumar

Global Brand Relationship: Understand Customer Relationship with Global Brand that Does not Exist
Ibrahim Abosag, Oleskii Bekh

The Role of Internationalization in Firms' Branding Strategy Choices
Saejoon Kim, Pravin Nath

Cross-country Analysis of Conspicuous Consumption: The Case of the Automotive Industry
M. Berk Talay, Janell Townsend

Modeling Cultural Distance in Globalization Research: Measurement, Interpretation, and Implications
K. Sivakumar

TD15 – Great Republic

Marketing and Firm Performance I

Chair: Atanas Nikolov

Is Corporate Reputation Relevant for Financial Analysts?
Elena Michel, Manfred Schwaiger

Sources and Financial Consequences of Product-harm Crises: Evidence from Automobile Industry
Wonjoo Yum, Yan Liu, Venkatesh Shankar

Advertising Media Mix Cecisions and Firm Value
Jaime Romero, Pablo J. Lopez-Tenorio

Advertising Spending's and Marketing Strategy
Atanas Nikolov, Sundar Bharadwaj, Anindita Chakravarty, Guiyang Xiong

TD16 – St. George A

Channels: Game Theory I

Chair: Suman Thomas

How Brand Image and Product Characteristics Can Govern Firms' OEM and Entry Decisions
Fabio Caldieraro

How Warranty Influence the Pricing Strategy: Monopoly Manufacturer vs Multiple Retailers
Dalu Fang, Xubing Zhang

The Equilibrium Channel and Advertising Strategies for Duopolistic Retailers
Shan-Yu Chou

Sachet: Use of Size as a Retail Competitive Tool
Suman Ann Thomas, Trichy Krishnan

2012 INFORMS Marketing Science Conference

Thursday, June 7th, 2012 3.30-5.00 (TD)

TD17 – Essex North East **Consumer Promotion Response** **Chair:** Nathan Fong The Deal is on: Understanding and Managing Deal-of-the-day Promotions *Maik Eisenbeiss, Markus Cornelissen, Bernd Skiera, Robert Wilken* State Dependence in Frequency Reward Programs: A Dynamic Structural Examination *Huseyin Karaca, Yuxin Chen, Lakshman Krishnamurthi* Loyalty Effects of Multi-Item Promotions: What Happens to Brand Choice After the Promotion? *Carmen Horn, Bram Foubert, Karen Gedenk, Michael Knaf, Sonja Spürkmann* Targeted Marketing and Customer Search *Nathan Fong*			

2012 INFORMS Marketing Science Conference

Friday, June 8th, 2012 8.30-10.00 (FA)

FA01 – Essex Ballroom South

Adoption & Diffusions in Social Networks

Chair: Timothy Richards

Enhancing Brand Information Diffusion in Social Network Services: Challenging the Bandwidth-Diversit
Janghyuk Lee, Seokchul Baek, Sanghyun Jeon, Young-Kyu Kim

Diffusion on Social Networks: A Multi-relational Perspective
Xi Chen, Ralf van der Lans

Impact of Social and Spatial Proximity on the Adoption Timing of Telecommunication Service
Jannik Meyners, Christian Barrot, Jan U. Becker

Social Networks and New Product Choice
Timothy Richards, Stephen Hamilton

FA02 – Essex North Center

Online Customer Behavior – I

Chair: Manish Tripathi

Print vs. Digital: Cannibalization Effects in the Trade Book Market
Edlira Shehu, Michel Clement, Tim Prostka

Impact of Online Exposures: Influencing Online Shopper's Intent
Sudipt Roy, Pulak Ghosh, Purushottam Papatla

Raising Rival's Cost: Competitive Bidding Strategies in Search Advertising Auctions
Woochoel Shin

Completing the Customer Generated Content Loop: Linking Customer Complaint Data to CGM
Manish Tripathi, Douglas Bowman

FA03 – Essex North West

Online Pricng & Promotions

Chair: Charles Ingene

An Analysis of Optimal Discounts for Coupon Deals
Jochen Reiner, Martin Natter, Bernd Skiera

An Empirical Analysis of Digital Music Bundling Strategies
Yan Huang, Brett Danaher, Michael Smith, Rahul Telang

The Influence of Social Couponing on the Merchant's Promotion Decisions
Gang Wang

Are Retail Stores Dinosaurs?
Charles Ingene, Amiya Basu

FA04 – Courier

Consumer Behavior II

Chair: Seshan Ramaswami

Which Paradigm to Use for Extremeness Aversion Research? Meta-analytical and Experimental Evidence
Nico Neumann, Ulf Böckenholt, Ashish Sinha,

A Dual Process Theory of Decision Anomalies
Mark Schneider, Robin Coulter

Consumer Search: An Empirical Foundation
William Allender, Timothy Richards

Market Disruptions and Brand-switching Behavior in Emerging Markets
Sridhar Samu, Tanuka Ghoshal, Sudhir Voleti

The Attributes of Attributes
Seshan Ramaswami

FA05 – Essex Center

Uncovering Managerial Insights From Video Data

Chair: Min Ding

Modeling the Dynamic Influence of Group Interaction and the Store Environment on Shopper Preferences and Purchase Behavior
Xiaoling Zhang, Shibo Li, Raymond Burke

An Intelligent Video Ad System
Li Xiao, Min Ding

Impact of Retailer Promotions on Store Traffic - A Video-based Technology
Shyda Valizade-Funder, Oliver Heil, Kamel Jedidi

Fitting Room 2.0 – Real Time Garment Recommender
Shasha Lu, Min Ding, Li Xiao

FA06 – St. George B

Consumer Health & Marketing: The Impact of External Cues & Internal Motivations on Consumers' Food Choices

Chair: Kusum Ailawadi

Consumer Health & Marketing: The Impact of External Cues & Internal Motivations on Consumers' Food Choices
Jason Riis, Susan J. Barraclough, Lillian Sonnenberg, Anne N. Thorndike

How Packaging Makes Us Fat: Volume Estimation Heuristics and Size Preferences
Pierre Chandon, Nailya Ordabayeva

Drivers of Regular Food Purchases and the Impact of a Change in Health Status: The Case of Diabetes Diagnosis The Case of Diabetes Diagnosis
Kusum Ailawadi, Dhruv Grewal, Yu Ma

Unintended Nutrition Consequences: Firm Responses to the Nutrition Labeling and Education Act
Joel Huber, Rosellina Ferraro, Christine Moorman

FA07 – St. George C

Extant Research on Customer Management

Chair: Peter C. Verhoef

The Effect of Continuously Rewarding Customers: A Study of Frequency Reward Programs Linked to the World Championship Soccer
Alec Minnema, Tammo H.A. Bijmolt, Mariëlle C. Non

Decomposing Long Term Returns From Retailer Customized Coupons: Retention, Category Incidence or Brand Switching
Rajkumar Venkatesan, Dusan Curcic, Paul Ferris

Assessing Participation Loyalty in Online Communities
Liron Sivan, Barak Libai, Gal Oestriecher-Singer

Effects of Direct Mail Characteristics on Campaign Effectiveness
Kay Peters, Sebastian Feld, Heiko Frenzen, Manfred Krafft, Peter C. Verhoef

FA08 – Adams

The Dynamic Effects of Strategic Responses to Market Incentives I

Chair: Ahmed Khwaja

Co-Chair: K. Sudhir

Incentives from Employee Pay and Promotion System: Evidence from A Reform in A Large Japanese Auto Sales Firm
Tat Chan, Hideo Owan, Tsuyoshi Tsuru

Dynamic Choices under Uncertainty in the Presence of Moral Hazard: Estimating a Model of Health Care Decisions
Ahmed Khwaja

What Killed the Blackberry? Demand Side Drivers of Mobile Phone Purchases
Vineet Kumar, Timothy Derdenger

A Dynamic Model of Subprime Mortgage Default: Estimation and Policy Implications
Minjung Park, Patrick Bajari, Sean Chu, Denis Nekipelov

2012 INFORMS Marketing Science Conference

Friday, June 8th, 2012 8.30-10.00 (FA)

FA09 – Helicon

Consumer Preference Elicitation: Insights and New Methods

Chair: Lan Luo

The Strategic Importance of Predictive Uncertainty in Conjoint Design
Matthew Selove, John Hauser

Dynamic Experiments for Estimating Preferences: An Adaptive Method of Eliciting Time and Risk Parameters
Olivier Toubia, Philippe Delquié, Theodoros Evgeniou, Eric Johnson

Voice Analysis for Incorporating Uncertainty in Consumer Responses
Hye-jin Kim, Min Ding

Consumer Preference Elicitation of Complex Products using Support-vector-machine (SVM) Active Learning
Dongling Huang, Lan Luo

FA10 – St. George D

New Product Development

Chair: Vish Krishnan

Optimal Sampling Network for New Product Test Marketing
Inseong Song, Hongsuk Yang

How does Customer Participation Affect Task Performance? The Role of Relationship Multiplexity
Johanna Slot, Inge Geyskens, Stefan Wuyts

Who's Lying? A New Take on Traditional FMCG Concept Testing
Raimund Bau, Tilo Halaszovich

Extend or Trim: The Effect of a Firm's Product Portfolio on its NPD Plan
Vish Krishnan, Sreekumar Bhaskaran

FA11 – Empire

New Product Development and the Marketing/Operations Interface

Chair: Glen Schmidt

How Important are Raw Ideas in Innovation Success?
Laura Kornish, Nitin Joglekar, Karl Ulrich

Product Design for Flexible Needs
Karthik Ramachandran, Aydn Alptekinoglu, Kissan Joseph

Customer Valuation of Modularly-upgradeable Products
Sezer Ülkü, Claudiu V. Dimofte, Paul Messinger, Glen Schmidt

FA12 – Parliament

Bayesian Estimation of Structural Models in Marketing

Chair: Andrew Ching

Co-Chair: Masakazu Ishihara

Bayesian Estimation of Non-stationary Discrete Choice Dynamic Programming Models
Masakazu Ishihara, Andrew Ching

Dynamic Demand and Dynamic Pricing in a Storable Good Market
Matthew Osborne

An MCMC Approach to Estimating Demand for Differentiated Durable Products Using Aggregate Data
Yutec Sun, Masakazu Ishihara

A Simple Structural Model of Individual Demand for Multiple Related Goods
Andres Musalem, Patricio Del Sol, Kenneth Wilbur

FA13 – North Star

Social Influence I

Chair: John Roberts

Sales Force Targeting Strategy Incorporating Social Contagion among Decision-Makers
Jiaoyang Li, Venkatesh Shankar

Investigating Neighborhood Effects in Customer Acquisition Models across Multiple Product Categories
Philippe Baecke, Dirk Van den Poel

Testing Agent-Based Models of Innovation Diffusion: the Additive Approach and the Threshold Approach
Sebastiano Delre, Eitan Muller

Calibrating the Belief Structures of Stakeholder Groups with Respect to Climate Change Policy
John Roberts, Hieu Ha, Pamela Morrison

FA14 – Defender

Measuring Brands

Chair: Luming Wang

An Empirical Assessment of the Vampire Effect of Celebrity Endorsers and its Moderators
Carsten Erfgen, Henrik Sattler, Sebastian Zenker

Modeling the Age-related "Reminiscence Bump" in Brand Recall
Gilles Laurent, Raphaëlle Lambert-Pandraud

Evaluating the Favorability of Brand Association Networks using Brand Concept Maps
Oliver Schnittka, Henrik Sattler, Sebastian Zenker

A Psychometric Theory that Measures Up to Marketing Reality: An Adapted Many Facet IRT Model
Luming Wang, Adam Finn

FA15 – Great Republic

Marketing Metrics

Chair: Koen Pauwels

Valuing Growth: How Marketing Contributes to Value From Future Profit Growth
Tobias Hornig, Marc Fischer

Consumer Attitude Metrics for Guiding Marketing Resource Allocation
Dominique Hanssens, Koen Pauwels, Shuba Srinivasan, Marc Vanhuele, Gokhan Yildirim

Is Your Brand Going Out of Fashion? A Quantitative, Causal Study to Predict Brand Value from Search
Maureen Schumacher, V. Kumar

Is the Classic Funnel Dead? Sales Impact of Classic and New Online Funnel
Koen Pauwelss

FA16 – St. George A

Retailing and Operations: Analytic Models

Chair: Anne T. Coughlan

Wardrobing: Is it that Bad?
Ahmed Timoumi, Anne T. Coughlan

Billboard or Scarcity Effects of Inventory on Demand
Gerard Cachon

Why Would a Retailer Want to Use a Category Captain?
Skander Esseghaier, Ahmed Timoumi

R&D Lead Time and Product Line Strategies
Oded Koenigsberg, Eyal Biyalogorsky

Price-matching Policies in a Multichannel Retail Setting
Elie Ofek, Pavel Kireyev, Vineet Kumar

2012 INFORMS Marketing Science Conference

Friday, June 8th, 2012 10.30-12.00 (FB)

FB01 – Essex Ballroom South

Relationships Among Social Media Actors

Chair: Donna Hoffman

Flourish or Perish: The Drivers of Amateurs' Success at Social Net-literature Sites
Shibo Li, Amy Wenxuan Ding

Networking for Success
Florian Stahl, Asim Ansari, Lucas Bremer, Mark Heitmann

The Role of Social Interactions and Incentives in Driving Consumer Behavior
Kamer Toker, Huan Liu, Minakshi Trivedi, Ercan Yildiz

Predicting Identification with Social Media Groups: Flourishing Independents or Languishing Interdependents
Donna Hoffman, Thomas P. Novak, Randy Stein

FB02 – Essex North Center

Online Customer Behavior – II

Chair: Amit Mehra

Do Consumers Refer Deals to Friends? Effects of Tipping Point and Pricing Strategy on Daily Deals
Namil Kim, Wonjoon Kim, Jihwan Lim, Joonhyuk Yang

Consumer Behavior Analysis using the Behavioral Perspective Model From the Context of E-mail Marketing Valdimar
Sigurdsson, Gordon Foxall, Vishnu Menon

User-Generated Content and Political Opinions
Pinar Yildirim, Esther Gal-Or, Tansev Geylani

Pricing on Brick-and-Mortar and Online Retail Channels with Multichannel Customer Shopping
Amit Mehra, Subodha Kumar, Jagmohan Raju

FB03 – Essex North West

Social Media and WOM - I

Chair: Sascha Steinmann

How Engagement Experiences with Social Media Affect Online Usage and Cause Marketing Effects
Tiffany Ting-Yu Wang

Do We Need a Consumer-centric Ranking Systems? A Caution Tale From TripAdvisor.com
Lijia Xie, Chih-Chien Chen, Shin-Yi Wu

The Effect of Visual Representation on the Persuasiveness of Online WOM Messages
Anthony Asare, Adwait Khare, Lauren Labrecque

The Impact of Social Distance in Virtual Brand Communities on Consumer Behavior
Sascha Steinmann, Gunnar Mau, Jan Quickels, Hanna Schramm-Klein, Gerhard Wagner

FB04 – Courier

Goals and Decision-Making

Chair: Remi Trudeli

Information Search, Overconfidence and Investor Returns
Sheila Goins, Thomas Gruca

Modeling Consumer Decision-Making under Multiple Goals
Lianhua Li, Jennifer Argo, Joffre Swait

Can Small Victories Help Win the War? Evidence From Consumer Debt Management
Blakeley McShane, David Gal

Helping Consumers Get Out of Debt Faster: How Debt Repayment Strategies Affect Motivation to Repay Debt
Remi Trudel, Gerald Häubl, Keri L. Kettle

FB05 – Essex Center

2011-12 Gary L. Lilien ISMS-MSI Practice Prize Competition- Finalists' Presentations

Chair: Russell Winer

Creating a Measurable Social Media Marketing Strategy for Hokey Pokey: Increasing the Value and ROI of Intangibles and Tangibles
V. Kumar, Vikram Bhaskaran, Rohan Mirchandani, Milap Shah

Category Optimizer™: A Dynamic Assortment, New Product Introduction, Price-Optimization and Demand-Planning System
Ashish Sinha, Sharat Mathur, Anna Sahgal

PROSAD: A Bidding Decision Support System for Profitable Search Engine Marketing
Bernd Skiera, Nadia Abou Nabout, Steffen Vodel

FB06 – St. George B

Pharmaceutical Marketing

Chair: Japp Wieringa

Co-Chair: Stefan Stremersch

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

On the Use of Practitioner Budgeting Rules
Marc Fischer, Nils Wagner

International Growth of Generic Drugs
Vijay Ganesh Hariharan, Vardit Landsman, Stefan Stremersch, Isabel Verniers

How, When and to Whom Should Pharmaceutical Innovations be Promoted?
Katrin C. Reber, Peter S. H. Leeflang, Philip Stern, Japp Wieringa

FB07 – St. George C

Customer Relationship Management II

Chair: J. Andrew Petersen

Further Understanding Customer Loyalty: Explaining Variance in Drivers across Firms & Industries
Yi-Chun Ou, Peter C. Verhoef, Thorsten Wiesel

The Impact of Return Policy on Transaction- and Relationship-level Behaviors: Theory and Empirics
Xiaoqing Jing

Product Warranties as Reputation Mechanisms: An Investigation in Business-to-Business Markets
Lu Tai, Mrinal Ghosh, Tirthankar Roy

The Effect of National Culture on Consumer Behavior and Response to Marketing Initiatives
J. Andrew Petersen, V. Kumar, Tarun Kushwaha

FB08 – Adams

The Dynamic Effects of Strategic Responses to Market Incentives II

Chair: Ahmed Khwaja

Identification of Dynamic Models of Rewards Programs
Andrew Ching, Susumu Imai, Masakazu Ishihara, Neelam Jain

Dynamic Pricing with Negative Buyer Herding
Guofang Huang, Hong Luo, Jing Xia

An Empirical Model of Dynamic Merger Enforcement
Przemyslaw Jeziorski

Dynamic Learning and Exit in a Competitive Industry
Hongju Liu, Qiaowei Shen

2012 INFORMS Marketing Science Conference

Friday, June 08th, 2012 10.30-12.00 (FB)

FB09 – Helicon

Choice Models I

Chair: *Bas Donkers*

Measuring Incrementality and Substitutability in Automotive Purchases
Jihoon Cho, Fred Feinberg, Richard Gonzalez, Mike Palazzolo

The Value of Field Experiments
Jimmy Li, Paat Rusmevichientong, Duncan Simester, John Tsitsiklis, Spyros Zoumpoulis

The Effect of Constructed Preferences on Consumer Search for Durable Goods
Daria Dzyabura

Unity Makes Strength: Combining Binary Prediction Methods to Optimize Financial Performance
Bas Donkers, Aurelie Lemmens, Peter C. Verhoef

FB10 – St. George D

Innovation I

Chair: Elina Petrova

Predicting a Patent's Lifetime Value (PLV) using Patent Rank
Monte Shaffer, Avimanyu Datta, Len Jessup, U.N. Umesh

Spatial Success Factors for Product and Process Innovation in the Renewable Energy Sector
Anke Kutschke, Daniel Baier, Alexandra Rese

Optimal Licensing of an Agricultural Innovation: Fees versus Licenses
Di Fang, Timothy Richards, Bradley Rickard

The Impact of Openness in Innovation on Firms' Performance
Elina Petrova, Jean Johnson, Sanjay Sisodiya

FB11 – Empire

Supply Chain Issues at the Marketing-Operations Interface

Chair: Chakravarthi Narasimhan

Multilateral Bargaining and Downstream Competition
Liang Guo, Itai Ashlagi, Ganesh Iyer

Engine Mix Planning Optimization Across an Auto Fleet
Fred Feinberg, Mike Palazzolo, Jihoon Cho, Richard Gonzalez, Morris Cohen

The Economics of Joint Production in Services: Complementarity, Returns to Scales and the Client-provider Boundary
Guillaume Roels

FB12 – Parliament

Bayesian Methods II

Chair: Duncan Fong

An Alternative Approach to Choice Based Conjoint Analysis
Sudhir Voleti, Pulak Ghosh, Seenu Srinivasan

Design and Analysis for a Selective Choice Process
Qing Liu, Ty Henderson

Generalized Direct Sampling for Hierarchical Bayesian Models
Michael Braun, Paul Damien

A Heterogeneous Bayesian Regression Model for the Analysis of Cross-sectional Data
Duncan Fong, Wayne DeSarbo, Peter Ebbes

FB13 – North Star

Entertainment Marketing I

Chair: Min Ding

"I Got You Babe": Brand Alliances in Live Music
Anita Elberse, Vankat Kuppuswamy

Understanding Consumer Preference of Films From Voice Responses
Min Ding, Hye-jin Kim

An Investigation of the Relationship Between Minimum Gurantees and Movie Revenues
Mark A.A.M. Leenders, Gerda Gemser, Charles B. Weinberg

What is Advertising Content Worth? Evidence From the Motion Pictures Industry
Vithala R. Rao, Suman Basuroy, S. Abraham Ravid

The Impact of Social Networks on the Success of Innovation: A Study of the Hollywood Motion Picture Industry
Jurui Zhang, Yubo Chen, Yong Liu

FB14 – Defender

Brand and Intellectual Property Management

Chair: Yi Qian

Cosmetics in the Brand – Impacts of Counterfeit Cosmetics
Chayoun Kim, Yi Qian

Selling Intellectual Property Through Auctions: Understanding the Effects of Information Presentation
Joseph Derby, Mayukh Dass, Yi Qian

Innovation and the Market for Technology in the Biopharmaceutical Industry
Manuel Hermosilla, Eric Anderson, Yi Qian

Dyadic Patent Citation and Firm Performance
Yantao Wang, Yi Qian, Sha Yang

FB15 – Great Republic

Marketing Productivity and Customer Value II

Chair: Xueming Luo

"Firing" Customers: Does It Pay Off, and When? —Exploring the Impact of Customer Divestment on Stock Returns
Hui Feng, Neil A. Morgan, Lopo L. Rego

Stock Market Intelligence and Marketing Mix Upgrades
Simone Wies, Jaako Aspara, Arvid O. I. Hoffmann, Joost Pennings

The Role of Online User Generated Content and the Interrelationship between Product Development and Product Adoption
Nga N. Ho-Dac, Stephen J. Carson, William L. Moore

Discretionary Spending Intentions under Financial Constraints – The Role of Self-Concept Clarity and Perceived Stress
Gulen Sarial Abi, Zeynep Gurhan-Canli

FB16 – St. George A

Sales Force: Game Theory

Chair: Xiaolin Li

Sales Force Career Tournaments
Somnath Banerjee, Axel Stock

Sales Force Allocation in Competitive Environments
Amit Pazgal, Noah Lim

Bonuses Versus Commissions: A Field Study
Raghunath Rao, George John, Sunil Kishore, Om Narasimhan

Interim Feedback and Reference Dependency in Multistage Tournaments
Xiaolin Li, Haitao Cui, Om Narasimhan

2012 INFORMS Marketing Science Conference

Friday, June 08th, 2012 1.30-3.00 (FC)

FC01 – Essex Ballroom South

Social Media and Brands

Chair: Glen Urban

The Social Response: Predicting Word of Mouth after a Product Failure
Jameson Watts, Shankar Ganesan

Microblogging and Cascading: What It Means for Brands
Tolga Akcura, Kemal Altinkemer, Chen Hailiang

Do Customers Always Mean What They Say? An Empirical Analysis of Voicing Behavior on Twitter
Liye Ma, Sunder Kekre, Baohong Sun

Social Media and Generating Consideration Through Customer Discovery of New Information
Glen Urban, Renee Gosline, Nell Putnam-Farr, Joyce Salisbury

FC02 – Essex North Center

Customer Responses to Online Strategies – I

Chair: Avi Goldfarb

Shaping Imitation: A Test of Competing Theories in the Context of Retailers' Adoption of E-commerce
Ralitza Nikolaeva, Amit Bhatnagar, Sanjoy Ghose

The Efficacy of Firm Responses to Online Consumer Protests
David Langley, Tijs van den Broek

Telemedicine: Its Acceptance and Adoption by Medical Professionals
Huma Amir

Technology, Age, and Shifting Privacy Concerns
Avi Goldfarb, Catherine Tucker

FC03 – Essex North West

Social Media and WOM - II

Chair: Tomoko Kawakami

Social Learning and Trial on the Internet
Jae Young Lee, David Bell

Too Much Face and Not Enough Books? The Effect of Social Media Usage on College Students
Jun Wu, Anshu Arora

Social Effects on Consumers' Adoption vs. Defection Decisions
Irit Nitzan, Vardit Landsman, Aurelie Lemmens

Word-of-Mouth Transmission Modes and New Product Adoption: An Empirical Evidence from Japan
Tomoko Kawakami, Mark E. Parry

FC04 – Courier

Cross-Cultural Applications

Chair: Hester van Herk

In the Mood to Buy? Understanding the Interplay of Mood Regulation and Congruence
Robert Wilken, Erik Maier, Helmut Schneider

Impact of Marketing Signals on Product Performance: A Cross-country Analysis
M. Billur Akdeniz, M. Berk Talay

Toward the Identification of Goal Structures: A Consumer Typology for *Leisure Motorized Products*
Jean Boisvert

Value-based Multi-level Latent Classes: New Insights into Cross-cultural Differences
Hester van Herk, Julie Anne Lee, Geoff Soutar

FC05 – Essex Center

Panel Session: Funding and Support for Marketing Scientists: An Overview of Relevant Organizations and Centers

Moderator: Ross Rizley

Funding and Support for Marketing Scientists: An Overview of Relevant Organizations and Centers
Moderator: Ross Rizley, Panelists: John Deighton, Gary Lilien, Elea McDonnell Feit, Roland Rust, Jan-Benedict Steenkamp, Michael Wiles

FC06 – St. George B

Pricing: Bundling

Chair: R Venkatesh

Dynamic Sequential Bundling Choices
Hwang Kim, Vithala R. Rao

Bundling and Price Transparency
Khalil Rohani, Vinay Kanetkar

Designing the Bundle: Choose your Weapon!
Rahul Sett

Reserved Mixed Bundle Offerings with *Forward Looking and Myopic Customers*
R Venkatesh, Vijay Mahajan, Ashutosh Prasad

FC07 – St. George C

Customer Relationship Management – Loyalty

Chair: Xueni Li

Impact of Loyalty Program Enrollment on Consumer Purchasing Behavior
Martin Boehm, Alberto Maydeu

A Structural Analysis of Three-tier Customer Loyalty Reward Schemes
Amir Gandomi, Saeed Zolfaghari

A Study of the Influence of Relationship Benefits on Repurchase Intention
Shihyu Chou, Chien-Ping Lin

Incentive Strategies for User Community and Two-Sided Market Uncertainties in C2C e-platform
Xueni Li, Zhihao Chen, Nian Liu

FC08 – Adams

Structural Models: General

Chair: Brett Gordon

Evaluating Brand Performance in Emerging Markets: How to Account for Product Availability?
Yi Zhao, Shah Denish, V. Kumar

Push-Me Pull-You: Comparative Advertising in the OTC Analgesics Industry
Jura Liaukonyte, Simon P. Anderson, Federico Ciliberto, Regis Renault

Linking Macro-economic Changes to Consumer Choice
Andre Bonfrer, Anirban Mukherjee

Political Advertising and the Electoral College
Brett Gordon, Wesley Hartmann

2012 INFORMS Marketing Science Conference

Friday, June 08th, 2012 1.30-3.00 (FC)

FC09 – Helicon

Models for Heterogeneity

Chair: Hernan Bruno

The Relationship Between Income, Preferences, and Consumer Motivation
Rafael Becerril Arreola

Differential Impacts of Reference Prices on Purchase Behaviors Across Four Types of Consumer Groups
Jeonggyu Lee, Kanghyun Yoon

Explaining Heterogeneity in Donation Timing and Amount Through Community Characteristics
Shameek Sinha, Vijay Mahajan, Frenkel ter Hofstede

Investigating Within-Household Heterogeneity in Grocery Purchases
Hernan Bruno, Jose Javier Cebollada Calvo, Pradeep Chintagunta

FC10 – St. George D

New Products Strategy

Chair: Alexander Himme

First Mover Advantage in Product Attribute Level Competition in High-Tech Market
Wonjoon Kim

Market Entry Spillover Behavior: In Search for Peers Across International Borders
Bart Devoldere, Marion Debruyne, Ruud Frambach

In Search of Critical Launching Factors Influencing New Product Success- A Case Study from the Reseller's Perspective
Wei Guanve, Tomas Nord, Jakob Rehme

Being Second and Still Being First: A Multiple-market Approach to the Order of Entry-research
Alexander Himme, Christian Barrot

FC11 – Empire

Panel: Research Opportunities at the Marketing/Operations Interface

Moderators: Morris Cohen, Chakravarthi Narasimhan

Research Opportunities at the Marketing/Operations Interface
Moderators: Morris Cohen, Chakravarthi Narasimhan
Panelists: Gerard Cachon, John Hauser, Uday Karmarkar, Dave Montgomery

FC12 – Parliament

Bayesian Methods III

Chair: Ty Henderson

Compromise or Polarize – When Do Groups Make Better Decisions?
Lin Boldt, Neeraj Arora

When Harry Bet With Sally: An Empirical Analysis of Peer Effects in Casino Gambling Behavior
Hee Mok Park, Puneet Manchanda

An Investigation of Consumer, Store, and Spatial Determinants of Consumer Ratings of Retail Outlets
Ruijiao Guo, Purushottam Papatla

Format Changes and Radio Listening Behavior: A Natural Experiment
Ty Henderson

FC13 – North Star

Entertainment Marketing: Movies I

Chair: Jason Ho

Who Sets Movie Trends: The Consumer or the Producer?
Thomas Schollmeyer, Michel Clement, Marc Fischer

Green-lighting Movie Scripts: A Nearest Neighbor Regression Approach
Sam K. Hui, Jehoshua Eliashberg, Z. John Zhang

Impact of Movie Preference and Internet Piracy on Movie Distribution Channels and Purchase Timing
Backhun Leeming, Minhi Hahn

Uniform and Differential Pricing in the Movie Industry: An Empirical Analysis
Jason Ho, Charles B. Weinberg, Jing Yan

FC14 – Defender

Marketing Strategy I

Chair: Alexa B. Burmester

Reconsidering the Structure of Profit Impacts on Market-Share
Akihiro Inoue, Akihiro Nishimoto

Product Aesthetics as the Competitive Strategy: An Approach of Dynamic Conjoint Analysis
Jesheng Huang, Wei-Jhih Yang

Advertising and Sales under Dynamics of the Student Work Control Problem and Regularity
Aharon Hibshoosh

The Impact of Public Relations on Sales for Hedonic Goods
Alexa B. Burmester, Jan U. Becker, Michel Clement

FC15 – Great Republic

Marketing Strategy: Firm Performance

Chair: Sourindra Banerjee

Outsourcing Value Creation to Customers: When Should Firms Stimulate Customer Engagement Behaviors?
Sander F.M. Beckers, Jenny van Doorn, Peter C. Verhoef

How to Manage Through an Economic Crisis: Learning Orientation and International Dependence Effects
Peren Ozturan, Aysegul Ozsomer, Stefan Wuyts

The International Growth of Emerging Market Firms: Theory and Evidence From a Natural Experiment
Sourindra Banerjee, Rajesh Chandy, Jaideep Prabhu

FC16 – St. George A

Game Theory Strategy II

Chair: David Soberman

Is All State Dependence Equal? A Comparison of the Effects of Switching Costs and Inertia
Marielle Non

Competing Through Cooperatives
Sudheer Gupta, Omkar Palsule-Desai

Quality and Pricing Decisions in a Market with Consumer Information Sharing
Baojun Jiang, Bicheng Yang

Profit-Increasing Consumer Exit
David Soberman, Amit Pazgal, Raphael Thomadsen

2012 INFORMS Marketing Science Conference

Friday, June 08th, 2012 3.30-5.00 (FD)

FD01 – Essex Ballroom South

Online Advertising & Promotion

Chair: Nazrul I. Shaikh

Why Consumers Pay Groupon Counpon Online but Get More Regret Offline?
Yiping Song

Coupon Redemption Timing and Its Consequences in Mobile and Offline Markets
Joseph Pancras

Preference Structure of Social Network Services: Moderating Role of Self Construal
Cecil Cho, Sangman Han

Is Pre-roll Advertising the Next Big Thing
Nazrul I. Shaikh, Mahima Hada, Niva Shrestha

FD02 – Essex North Center

Customer Responses to Online Strategies - II

Chair: *Jian Ni*

A Value and Risk Model of Consumers' Mobile Marketing Acceptance
Tao (Tony) Gao, Andrew Rohm, Fareena Sultan, Jiao Wang

The Impact of Mobile Device Usage on Search Costs: A Choice-Based Conjoint Analysis
Dominik Molitor, Stephan Daurer, Martin Spann

Online Doctor Participation
Jian Ni, Baohong Sun

FD03 – Essex North West

Social Media and Product Development

Chair: Ya You

The Impact of Social Media Campaigns on Consumer Behavior
Daniela Baum, Johann Füller, Martin Spann, Carina Thürridl

Consumers' Social Embeddedness as Driver of New Products' Adoption Timing of Scarce Products
Christian Pescher, Oliver Hinz, Martin Spann

Cocreating Value with Other Customers and Firm in Social Media: From a Social Network Perspective
Jianjun Zhu, Kimmy Wa Chan, Stella Yiyan Li

Crowdsourcing New Product Ideas under Consumer Learning
Param Vir Singh, Yan Huang, Kannan Srinivasan

The Impact of Social Media on New Product Sales, and Customer Acquisition and Retention
Ya You, Amit Joshi

FD04 – Courier

Decision Making I

Chair: Arnaud De Bruyn

Individual Differences in Risk and Time Preferences
Alina Ferecatu, Ayse Onculer

Should I Take this Call? Theory and Evidence on the Optimality of Cell-Phone Use by Consumers
Robert Meyer, Arun Gopalakrishnan, Raghuram Iyengar

When Empathic Managers Misunderstand Their Customers: Evidence for a Self-Referential Bias
Johannes Hattula, Darren W. Dahl, Walter Herzog, Sven Reinecke

Maximizing vs. Satisficing: Understanding Managers' Tradeoffs Between Exploration and Exploitation
Arnaud De Bruyn, Alina Ferecatu

FD05 – Essex Center

ISMS Doctoral Dissertation

Chair: Bart Bronnenberg

Do Bonuses Enhance Sales Productivity? A Dynamic Structural Analysis of Bonus-Based Compensation Plans
Doug Chung, K. Sudhir

Hyper Media Search and Consumption
Jason M. T. Roos, Carl F. Mela, Roni Shacher

Effect of Temporal Spacing between Advertising Exposures: Evidence From an Online Field Experiment
Navdeep Sahni

FD06 – St. George B

Pricing II

Chair: Kissan Joseph

Dynamic Pricing in Las Vegas: Uncertain Demand in a Mature Market
Yang Wang

Contingent Preannounced Pricing Policies with Strategic Consumers
Ricardo Montoya, Jose Correa, Charles Thraves

Effectiveness of Information Sharing in Price Negotiations: A Comparison of Chinese and Americans
Abhik Roy, Michael Menasco

On the Design of Consumption Hassle
Kissan Joseph, Zelin Zhang

FD07 – St. George C

Online Word-of-mouth Advertising and Market Outcomes

Chair: Mitchell J. Lovett

Talk Bubbles – Word of Mouth Spikes and Their Role in Forecasting Box Office Sales for Movies
Sarah Gelper, Jehoshua Eliashberg, Renana Peres

Social Media and Politcal Campaigns
Paulo Albuquerque, Mitchell J. Lovett, Michael Peress

A Business by Any Other Name: Firm Name Choice as a Signal of Firm Quality
Ryan McDevitt

Social and Engagement Utility in Entertainment Brands
Mitchell J. Lovett, William Boulding, Richard Staelin

FD08 – Adams

Empirical Projects From Young Marketing Researchers

Chair: Pradeep Chintagunta

Entry and Investment Decisions in the Pharmaceutical Industry
Anita Rao

The Impact of Search Costs on Consumer Behavior: A Dynamic Approach
Stephan Seiler

Managing Capacity Utilization Through Targeted Marketing of Peak-pricing Technologies
Bryan Bollinger

Reputation and Learning in Two-sided Markets
Chris Nosko

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FD09 – Helicon

Choice Models II

Chair: Xiaoqian Yu

A Cigarette, a Six Pack or Porn: Are Vices Substitutes or Compliments
Rachel Shacham, Tulin Erdem, Peter Golder

Generalized Additivity and the Multinomial Logit Model
David Curry, A.A.J. Marley, Xin Wang

Modeling Cross-Category Dependencies in Households' Purchase Incidence Outcomes
Alex Chaudhry, Seethu Seetharaman

Emotion States and Multi-tasking: Horizontal and Temporal State Dependence on Consumer Media Choice
Xiaoqian Yu, Lihui Geng, Jamie Jia, Sha Yang

FD10 – St. George D

Innovation II

Chair: Eric Schmidbauer

Core versus Peripheral Innovations: The Effect of Innovation Locus on Consumer Adoption Intentions
Tripat Gill, Ying Jiang, Zhenfeng Ma

Social Capital and the Evolution of Successful Inter-organisational Networks
Regina McNally, Raffaele Filieri, Brian Healy, Michele O'Dwyer, Lisa O'Malley

Better Patent Data, Better Innovation Research
U.N. Umesh, Monte Shaffer

New and Improved?
Eric Schmidbauer

FD11 – Empire

Competition

Chair: Praveen Kopalle

A Churn Theory for Predicting and Explaining Market Growth
Steven Shugan, Deb Mitra

Bundling of Complementary Goods in Competition
Lei Wang

The Strategic Significance of Negative Externalities
Matthew Nagler

Strategic Quality and Quality Claims: The Impact of Competition and the Cost of Overstating Quality
Praveen Kopalle, Don Lehmann

FD12 – Parliament

Bayesian Applications - CRM

Chair: Thomas Otter

Quantifying Satisfaction Spillovers Across Categories
Xiaojing Dong, Pradeep Chintagunta

Latent Redemption Thresholds in Linear Loyalty Programs
Valeria Montero, Eric Bradlow, Peter Fader

The Myth of Increasing Loyalty
Joseph Davies-Gavin, Peter Fader, *Bruce Hardie, Yuzhou Liu, Tom Steenburgh*

The Dimensionality of Customer Satisfaction Survey Reponses and Implications for Driver Analysis
Thomas Otter, Greg Allenby, Joachim Büschken

FD13 – North Star

Entertainment Marketing: Movies II

Chair: Ashish Sinha

Impact of Pre-release Information Disclosure on New Product Sales Dynamics: The Case of Motion Picture
Guiyang Xiong, Ernie Cadotte, Adina Robinson

Network Power
Grant Packard, Anocha Aribarg, *Jehoshua Eliashberg, Natasha Zhang Foutz*

Resource Base, Strategies and Performance in the Motion Picture Industry
Dmitri Markovitch, Dongling Huang, Andrei Strijnev

Is Advertising a Reliable Signal of Quality? Evidence from the Motion Picture Industry
Reo Song, George Cai

Stars as Signal:The Impact of Star Power Across International Markets in the Motion Picture Industry
Ashish Sinha, Aaron Gazley, Nico Neumann

FD14 – Defender

Advertising Response

Chair: Berk Ataman

Effective Customer-Initiated versus Firm-Initiated Touchpoints
Evert de Haan, Koen Pauwels, Thorsten Wiesel

Multimedia Advertising Effectiveness
Peter Danaher

Going for Gold. Investigating the (Non)sense of Increased Advertising During Major Sports Events
Maarten Gijsenberg

The Long-term Effect of Advertising on Price Elasticity
Berk Ataman, Koen Pauwels, Shuba Srinivasan, Marc Vanhuele

FD15 – Great Republic

Marketing and Firm Performance II

Chair: Gautham Vadakkepatt

Marketing Alliances as a Channel to Access Customer Assets of Other Firms
Yoojin Oh, Jongkuk Lee

Demystifying the Impact of CEO Tenure on Firm Value Creation: Mediating Roles of Relational Capital
Michelle Andrews, Vamsi Kanuri, Xueming Luo

The Impact of Corporate Lobbying on Customer Satisfaction
Gautham Vadakkepatt

FD16 – St. George A

Game Theory: Applications

Chair: Rick Harbaugh

The Value of Clickstream Tracking: Advance Demand Information, Product and Price Personalization
Tingliang Huang

The Impact of Customer Boredom on the Efficacy of a Rewards Program
Minoo Talebi Ashoori, Axel Stock

Persuasive Puffery
Rick Harbaugh, Archishman Chakraborty

2012 INFORMS Marketing Science Conference

Saturday, June 09th, 2012 8.30-10.00 (SA)

SA01 – Essex Ballroom South

Designing Interfaces for Dynamic Consumer Behavior

Chair: Daniel Baier

Analyzing Internet Search for Multi-featured Products: The Case of Automobiles
Sina Damangir, Rex Du, Ye Hu

Seeing Your Ads through the Eyes of Consumers: Information Search on Search Engine Websites
Savannah Wei Shi, Michael Trusov

Dynamic and Adaptive Customer Acquisition on the Web
Yiting Deng, Jaroslaw Jankowski, *Wagner Kamakura*

Improving Online Shop Landing Pages Using Eye Tracking Experiments
Daniel Baier, Eva Stueber, Leon Zurawicki

SA02 – Essex North Center

Effects of Online WOM

Chair: Lisa Schöler

When Could Viral Marketing Hurt You? Role of Consumer Product Expertise on Viral Marketing Effective
Inyoung Chae, Yakov Bart, Andrew Stephen, Dai Yao

Consumer Expressions of Opinions: Relationships Between Frequency, Valence, Product Attributes
Jie Feng, Purushottam Papatla

Modeling Consumer Choice of Photography Device
Tony Bao, David Crandall

Sharing Mechanisms in Consumer-to-Consumer Communication
Lisa Schöler, Christian Schulze, Bernd Skiera

SA03 – Essex North West

Churn and Customer Management

Chair: Kristof Coussement

For New Customers Only: a Study on the Effect of Acquisition Campaigns on Existing Customers
Sietske Lhoest-Snoeck, Erjen van Nierop, Peter C. Verhoef

The RFM of Redemption Behavior and Customer Value Analysis
Dae Yun Park, Shijin Yoo

Developing a Customer Defection Model for Non-contractual Business
Dong-Yup Shin, Hyung-Su Kim

Ensemble Selection for Churn Prediction in the Telecommunication Industry
Kristof Coussement, Koen W. De Bock, Stefan Lessmann

SA04 – Courier

Emotions

Chair: Moran Cerf

Investigating the Role of Emotional and Cognitive Process on Post Product Recall Purchase
Kyung-Ah Byun, Mayukh Dass

The Impact of Country-Related Emotions On Performance-Based Country-Of-Origin Effect
Cathy Yi Chen, Durairaj Maheswaran

Single-neuron Correlates of Emotion Regulation in Humans
Moran Cerf, Eric Greenleaf, Vicki Morwitz, Tom Meyvis

SA05 – Essex Center

Packaging Strategy

Chair: Rita Vale

Single Package as a Signal of Quality
Chun (Martin) Qiu, Sameer Mathur

Price Up or Size Down: A Research on How Consumers Respond to Two Pricing Strategies
Xuan Zhang, Xin Cheng, Ji Liu

Changing Prices and Package Sizes Due to Cost Shocks
Alexei Alexandrov

Is it Worth Copying the Leader? Impact of Copycat Packaging Strategies on Private Label's adoption
Rita Vale, Pedro Matos

SA06 – St. George B

Health Marketing

Chair: Andrea Godfrey

Medical Adherence and Healthful Self-management
Rahul Govind, Nitika Garg, Charles Ingene

Regulatory Interventions and Heterogeneous Health Effects: An Empirical Analysis of Tobacco Industry
Yanwen Wang, Michael Lewis

Leveraging Capabilities for New Product Development: How Emerging Firms Succeed in Biotech
Rakesh Niraj, Andrew Gallan, Monte Shaffer

The Influence of Physician Interventions on Patient Compliance and Healthcare Service Utilization
Andrea Godfrey, Leonard Berry, Kelly Haws, Kathleen Seiders

SA07 – St. George C

Customer Relationship Management - Satisfaction

Chair: Nevena T. Koukova

The Ugly Side of Customer Management – Consumer Reactions to Firm Induced Contract Terminations
Anke Lepthien, Michel Clement, Dominik Papies

Modeling Determinants of the Satisfaction-loyalty Relationship
Younghan Bae, Lopo L. Rego, Gary J. Russell

Does a Portfolio of Hierarchically Related Technology Products Improve Customer Outcomes?
Nevena T. Koukova, Shu Han, Jason Kuruzovich, T. Ravichandran

SA08 – Adams

Dynamic Structural Models I

Chair: Song Lin

An Empirical Analysis of Consumer Purchase Behavior of Base Products and Add-ons
Xiao Liu, Timothy Dedenger, Baohong Sun

The Timing of New Product Release and Preannouncement-enabled Learning
Liang Zhao, Yubo Chen, Yong Liu

A Dynamic Equilibrium Model of Durable Goods Market: Intertemporal Pricing and Durability Extension
Joon Ro, Jason Duan

Learning From Experience, Simply
Song Lin, John Hauser, Juanjuan Zhang

2012 INFORMS Marketing Science Conference

Saturday, June 09th, 2012 8.30-10.00 (SA)

SA09 – Helicon

Choice Models III

Chair: Kanghyun Yoon

Modeling Consumer Choice of Fuel Station: The Role of Spatio-temporal Constraints and Choice Set For
Ari Pramono, Harmen Oppewal

The Effects of Decision-making Style on the Choice of Foreign Market Entry Modes: An Application of Conjoint Analysis
Wei-Jhih Yang, Lichung Jen

The Perceived Visual Similarity of Realtors: An Exploratory Study
Larry Garber, Michael Dotson, Earl Honeycutt

Interpreting the Effects of Interaction Terms in Various Types of Linear and Non-Linear Models
Kanghyun Yoon

SA10 – St. George D

New Product Diffusion II

Chair: Rosanna Garcia

Demystifying the Bass Diffusion Model: The Hidden Role of Distribution Channel
Sungjoon Nam

Supply Constrained Diffusion Models: An Investigation of Parameter Bias
P.V. (Sundar) Balakrishnan, Surya Pathak

The International Takeoff of New Services
Margot Loewenberg, René Algesheimer, Markus Meierer

The International Rate of Discontinuance
Rosanna Garcia, Antonio Ladron de Guevara, Javier Palacios Fenech

SA11 – Empire

Channel Governance and Contracting II

Chair: Shan Yu

Toward Predicting the Influence on Dimensions of Contractual Completeness in International Context
Emmanuel Chao

Ex-Ante Governance Mechanisms and Distribution Expansion: Empirical Analysis of Franchising
Nicole Hanson, Gary Frazier, Venkatesh Shankar

Forward Integration Into Retailing: Motives, Determinants of Channel Structure, and Performance
Dominik Orbach, Mark Elsner, Werner Reinartz

Restricted Rights & Payment Schemes in Technology Licensing:A Cross-National Empirical Investigation
Shan Yu, Mrinal Ghosh, George John, Chae-Un Lim

SA12 – Parliament

Bayesian Econometrics: Applications

Chair: Sunghoon Kim

Modeling Information Content in Sales Spikes of Fast Decay Products
Yu Yu, Ashish Sood

Utility and Attention - A Structural Model of Consideration
Keyvan Dehmamy, Thomas Otter

Modeling Geo-dependent Attitudes with Spatial Factor Analysis: An Application to Financial Planning
Stanislav Stakhovych, Tammo H.A. Bijmolt, Michel Wedel

Model Based Segmentation Featuring Simultaneous Segment Level Variable Selection
Sunghoon Kim, Wayne DeSarbo, Duncan Fong

SA13 – North Star

Entertainment Marketing II

Chair: Fang Wu

Launching Products During High vs. Low Seasons: Implications for Small Firms
Judy Ma, Dongling Huang, Dmitri Markovitch

Consumer Involvement with Experiential Products
Yulia Nevskaya, Paulo Albuquerque

From Piracy to Business Intelligence: Using Pre-release Piracy Information to Predict Music Sales
JooHee Oh, Il-Horn Hann, Gareth James

Pre-launch Analysis of Dynamic Market Structure
Fang Wu, Natasha Zhang Foutz

SA14 – Defender

Marketing Strategy II

Chair: Eelco Kappe

Distribution of Changes in Buyer Purchasing Behavior
Giang Trinh, John Dawes, Carl Driesener, Cam Rungie, Malcolm Wright

Brand Deployment Consistency and Market Share
Harry Antonio, Douglas Bowman

Do Brands Really Work? Dynamics and Heterogeneity of Brand Performance
Sascha Raithel, Xueming Luo, Marko Sarstedt

The Interplay between Sales, Marketing and Clinical Reviews in the Pharmaceutical Industry
Eelco Kappe, Ashish Sood, Stefan Stremersch

SA15 – Great Republic

Innovations and Firm Performance

Chair: Thomas Dotzel

Innovation and Supply Chain Financing
Ashwin Malshe

Epochal Innovation and Stock Market Bubbles
Alina Sorescu, Will Armstrong, Bart Devoldere, Sorin Sorescu

New Services versus New Goods: Effects on Firm Value and Risk
Thomas Dotzel, Venkatesh Shankar

SA16 – St. George A

Channels: Game Theory II

Chair: J. Miguel Villas-Boas

Trade Promotion Budget and Allocation Decisions under Demand Uncertainty
Miguel Gomez, Vithala R. Rao, Hong Yuan

Pricing and Quality Provision in a Channel: A Model of Efficient Relational Contracts
Cristina Nistor

The Optimal Individual Marketing Strategies in Imperfect Competition in the Presence of the Internet
I-Huei Wu, Chyi-Mei Chen, Shan-Yu Chou

Too Much Information? Information Gathering and Search Costs
J. Miguel Villas-Boas, Fernando Branco, Monic Sun

2012 INFORMS Marketing Science Conference

Saturday, June 09th, 2012 10.30-12.00 (SB)

SB01 – Essex Ballroom South

Personalization and Customization

Chair: Benedict Dellaert

Right Ad, Wrong Time? A Field Experiment on the Effects of Retargeting on Online Shopping Behavior
Alex Bleier, Maik Eisenbeiss

IPTV Customization
Gui Liberali, Bas Donkers, Stefan Stremersch

When Does Personalization Pay Off?
Isabelle Kes, David M. Woisetschläger

Default "After-Image": The Effect of Not Choosing a Default Option on Subsequent Option Choice
Benedict Dellaert, Bas Donkers, Andreas Herrmann, Jan Landwehr, Daniel Stadel

SB02 – Essex North Center

Customer Reviews/User-Generated Content

Chair: Hsin-Chen Lin

Intrinsic and Monetary Incentives of Product Review Contribution in Online Social Shopping Platform
Yacheng Sun, Xiaojing Dong, Junlin Du

Virtual Community vs. Virtual Society: A Sociological View of Online Consumer Reviews
Ravi Shanmugam, Shelby McIntyre, Edward McQuarrie

An Investigation on the Effects of Helpfulness of Customer Reviews: A Case of the Movie Industry
Omer Topaloglu, Mayukh Dass, Ashish Sood

Modeling Opinion Formation and Word-of-Mouth: A Case Study in Online Book Sales
Hsin-Chen Lin, Artur Jackson

SB03 – Essex North West

The Impacts of New Media – I

Chair: Yiyuan Liu

Customer Tracking in Shopping-malls: An Exploratory Analysis
Dries Benoit, Nico Van de Weghe, Dirk Van den Poel

In Which Direction Does Online Price Dispersion Go? A Meta-analytic Review
Yiyuan Liu, Sanjoy Ghose

Cross-national Analysis of Customer Satisfaction/Loyalty on Mobile Information Services
Hisahi Ishida, Fumiyo Kondo

SB04 – Courier

Aesthetics

Chair: Hao Shen

The Self and Product Curvature Preferences
Tanuka Ghoshal, Peter Boatwright, Dilip Soman

Do Multicultural Aesthetic Profiles Really Exist in the Field of Arts and Design?
Joelle Lagier, Fatma Smaoui, Mourad Touzani

If You Can't Grab it, it Won't Grab You: The Effect of Restricting the Dominant Hand on Target Evaluations
Hao Shen, Jaideep Sengupta

SB05 – Essex Center

International Topics

Chair: Mbaye Fall Diallo

The Impact of Power Asymmetry on Strategies and Outcomes in Intercultural Business Negotiations
Tayfun Aykac, Frank Jacob, Nathalie Prime, Robert Wllken

Factors Influencing Inter-firm Co-marketing Within Industrial Clusters
Kai Li, Qi Xiaoxun

Empirical Test of Gender Stereotype in the Competitive Environment
Xiaohua Zeng, Xinlei Chen, Cheng Zhang

Store Brand Purchase Behavior in an Emerging Market: Proposition and Test of an Integrative Mode
Mbaye Fall Diallo

SB06 – St. George B

Pricing: B2B

Chair: Sourav Ray

Price Variation and Customer Service Cost in a B-to-B Market
Xing Zhang, Tat Chan, Ying Xie

Commitment Effects of RPM in Durable Goods Markets
Oystein Daljord

Rockets and Feathers: A Supply Side Explanation
Ayelet Israeli, Eric Anderson, Anne T. Coughlan

Price Adjustment Costs and Price Rigidity: Implications for Strategic Pricing Capability in Distribution Channels
Sourav Ray, Mark Bergen

SB07 – St. George C

Services Marketing

Chair: Nita Umashankar

The Relevance of Marketing Competencies in Financial and Non Financial Industries
Chiara Saibene, Fabio Ancarani, Maria Christina Cito, Paola Musile Tanzi

Competition for Service Quality and Price: Study of the Airline Industry
Chen Zhou, Rajdeep Grewal

Disentangling the Effects of Failure Recovery on Satisfaction and Behavior Intentions
Henning Kreis, Till Dannewald

Modeling the Influence of Macro-Economic, Attitudinal and Behavioral Factors on CLV: The Case of the Airline Industry
Nita Umashankar, Yashoda Bhagwat, Kihyun Kim, V. Kumar

SB08 – Adams

Dynamic Structural Models II

Chair: Patrick Choi

Evolution of Attribute-Specific Preference Through Consumer Learning
Jihong Min, Subramanian Balachander

Identifying the Discount Factor of Forward Looking Consumers Based on Consumption From Inventory
Selin Akca, Daniel Klapper, Thomas Otter

A Dynamic Structural Model of Sequential Store Choices and Category Purchases
Patrick Choi, J.Jeffrey Inman, Baohong Sun

2012 INFORMS Marketing Science Conference

Saturday, June 09th, 2012 10.30-12.00 (SB)

SB09 – Helicon

Survey Research: Improving Methods

Chair: Yansong Hu

Statistical Software Providing Image Clustering Algorithms for Marketing Purposes
Robert Naundorf, Daniel Baier

Key Drivers, Yes Please (... But Could the Focus be on a Top 2 Box Score?)
Jorge Alejandro

Grouping of Customers using Uploaded Photos Versus Responses to Rating Scales: A Comparison
Ines Daniel, Daniel Baier

Respondent Evaluation and Creation: A Crowdsourcing Experiment
Joseph White, Michael Kemery

Early Use and Stoppage Behaviors of New Products
Yansong Hu, Qing Wang

SB10 – St. George D

Innovation III

Chair: Jonathan Bohlmann

Rasch Modeling Innovative Behavior in Inter-organizational Radical Innovations
Alexandra Rese, Daniel Baier, Hans-Georg Gemünden

Exploring Success with Open Innovation: An Investigation of New Product Development Performance
Sanjay Sisodiya, Yany Grégoire, Jean Johnson, Steve Shook

Entrepreneurship and Innovation in Financial Institutions
Chandler Velu

Innovation in Buyer-supplier Relationships: Strategies and Perceptions
Jonathan Bohlmann, Daniel Lynch

SB11 – Empire

Privacy and Marketing

Chair: Ivan Png

Imperfect Targeted Advertising and Privacy Regulations
Stephen Bruestle

Will Johnny Facebook Get a Job? An Experiment in Hiring Discrimination via Online Social Networks
Alessandro Acquisti, Christina Fong

Is Patient Data Better Protected in Competitive Healthcare Markets?
Rahul Telang, Martin S. Gaynor, Muhammad Zia Hydari

Privacy Externalities and "Opt Out": Theory and Evidence From Do Not Call
Ivan Png, Khim-Yong Goh, Kai-Lung Hui

SB12 – Parliament

Bayesian Choice I

Chair: Sri Devi Duvvuri

Modeling Indivisible Demand
Sanghak Lee, Greg Allenby

Out-of-Stock as a Promotional Tool: Consumer Learning and Retailer Profitability
Jason Duan, Frenkel ter Hofstede

How Does Assortment Size Impact Consumer Choice?
Tae-kyun Kim, Sivaramakrishna Siddarth

Measuring Consumer Category/Brand Values
Sri Devi Duvvuri

SB13 – North Star

Social Influence II

Chair: Alexander Krasnikov

Groups and Variety-seeking: An Empirical Investigation in a Household Panel
Jose-Domingo Mora

Group Buying: Boon, Bane or Both? A Normative Study of Alternative Contexts and Approaches
Feihong "Jerry" Xia, Rabikar Chatterjee, R. Venkatesh

Desire for Uniqueness Versus Conformity in Conspicuous Demand: Modeling the Effect of Consumer Attitude Functions
Kyuhong Han, Jaehwan Kim

Social Status and Excessive Consumption in Mortgage Market
Alexander Krasnikov, Christo Pirinsky

SB14 – Defender

Advertising Strategy

Chair: Meltem Kiygi Calli

An Empirical Investigation of Price Content in Search Advertising
Yupin Yan, Guanting Tang

Modeling the Dynamics of Multiple Media Consumption using a Markov Chain
Vijay Viswanathan, Kalyan Raman

Uncovering Dynamics in Advertising Strategy Types: A Hidden Markov Model
Charles Kang, Frank Germann, Rajdeep Grewal, Srihari Sridhar

Call Center Operation and Capacity Management
Meltem Kiygi Calli, Philip Hans Franses, Marcel Weverbergh

SB15 – Great Republic

Marketing and Firm Performance III

Chair: Vinay Kanetkar

Retailer Performance and the Voluntary Disclosure of Monthly Same Store Sales
Chenxi, Zhou, Jennifer Tucker, Barton Weitz

The Variance of Customer Satisfaction and Stock Return Risk
Eun Young Lee, Dong Wook Lee, Shijin Yoo

The Impact of Price on Profitability: Study of Four Stock Markets
Vinay Kanetkar

SB16 – St. George A

Game Theory In Marketing III

Chair: Chuan He

Strategic Incentives for Licensing
Hulya Karaman, Sherif Nasser

On Bayesian Bidding Strategies of a Multi-period Participant in Sequential Online Auctions
Prabirendra Chatterjee

The Kindle-Macmillan War... Which Business Model for the eBook Industry?
Sihem Taboubi, Peter Kort, Georges Zaccour

Pricing Prototypical Products
Chuan He, Wilfred Amaldoss

2012 INFORMS Marketing Science Conference

Saturday, June 09th, 2012 1.30-3.00 (SC)

SC01 – Essex Ballroom South

Online Channel

Chair: Ilaria Dalla Pozza

Analyzing Preferences of Multichannel Shoppers Based on Cognitive Orientation
Oliver Emrich

Introducing Online Mobile Channels in Multichannel Environment: An Analysis of Cross-Channel Effects
Umut Konus, Jing Li

How Multichannel Advertiser Communication Affects Conversion Rates of Online Shops
Jan H Schumann, Sebastian Klapdor, Florian V. Wangenheim

The Role of Facebook and Twitter in a Multichannel Strategy: the Example of a Telecom Provider
Ilaria Dalla Pozza, Erwan Le Quentrec

SC02 – Essex North Center

Online Customer Behavior

Chair: Meenakshi Handa

The Impact of Smart Device Screen Size on Paid-Content Preference on Multi-Screen Environment
Kyeongseo Hwang, Ingoo Han, Sung-Hyuk Park

Do (How) Digital Natives Adopt A New Technology Differently than Digital Immigrants? A Longitudinal Comparison of Four Competing Theoretical Models
Ankit Kesharwani, Daniel Sherrell

A Study of the Relationship Between Shopping Orientation and Online Shopping Behaviour amongst Indian Youth
Meenakshi Handa, Nirupma Gupta

SC03 – Essex North West

The Impacts of New Media – II

Chair: Ashish Agarwal

Crowdfunding: Discovering the Moment of Choice
Sunghan Ryu

Affiliate Program as Consumer-Generated Advertising Media
Makoto Mizuno

How Organic Results Impact Sponsored Search Advertising Performance
Ashish Agarwal, Kartik Hosanagar, Michael Smith

SC04 – Courier

Decision Making II

Chair: Dimitrios Tsekouras

Tiers in Consumer Fractional Ownership Markets
Yu Wang, Eman Haruvy

Managing Consumer Categorization under Category Uncertainty
Akihiro Nishimoto, Akihiro Inoue

Bounded Rationality in Comsumer Choice
Onesun Yoo, Rakesh Sarin

Choice Set Complexity Effects on Consumer Product Knowledge
Dimitrios Tsekouras, Benedict Dellaert

SC05 – Essex Center

Marketing in Indian Subcontinent

Chair: Gurbux Kotwani

Changing Preferences for Gold Jewelry: A Study on Jewelry Customers in an Indian City
Lalitha Rani Daggubati, Rama Devi Annapantula

Values and Consumption Behavior: Exploring the Link in Indian Context
Rajat Sharma, Mithileshwar Jha

The Impact of Materialism on the Consumption Behavior of the Pakistani Consumer
Farah Naz Baig

Marketing Agricultural Produce in India by Empowering Farmer's Organization
Anup Raj

Personality Traits and Value Expressive Influence: Implications for Marketing Communication in India
Gurbux Kotwani

SC06 – St. George B

Pricing Structures

Chair: *Bo Zhou*

Service Refund as a Price Discrimination Mechanism
Zelin Zhang, Weishi Lim

Lock-in vs. Repeat Purchase: Two-Stage Service Pricing for Pool Leak Detection and Repair Services
Bo Huang

Product Improvement and Guaranteed Future Buybacks
Bo Zhou, Preyas Desai, Debu Purohit

SC07 – St. George C

Topics in Services

Chair: Dai Yao

Consumer's Perceptions of Service Experience and Service Quality of an Alliance Network
Vikrant Janawade

Information Asymmetry and Service Evaluation in Professional Services: An Empirical Study
Hidehiko Sakurai, Yukitoshi Hayase, Hajime Itoh, Carolus Praet

To Arrive or Not to Arrive: An Empirical Investigation into Patient No-Shows
Genevieve O'Connor

Do Female Marketing Personnel do Better in Service Industries? Insight the Female Characteristics
Qinlen Chen, Xiangmin Zheng

Let Ill News Fly Apace: Firms' Response to Customer Complaints on Social Platforms
Dai Yao

SC08 – Adams

Structural Economic Models

Chair: Anirban Mukherjee

Modeling the Effects of Advertising Executions on Advertising Allocations and Consumer Purchases
Michael Cohen, Henry Assael, Bryan Bollinger

Estimating Dynamic Models of Price and Non-price Conducts in the Salty Snack Industry
Margil Funtanilla, Benaissa Chidmi

Targeting Strategies in the US DVD Market: A Study of Dynamic Segment-Specific Competition
Anirban Mukherjee, Vrinda Kadiyali

2012 INFORMS Marketing Science Conference

Saturday, June 09th, 2012 1.30-3.00 (SC)

SC09 – Helicon

Survey Research: Improving Measures

Chair: Pilsik Choi

Scale Orientation, Grids and Modality Effects in Mobile Web Surveys
Jeremy Loscheider, Keth Chrzan, Ted Saunders

Quantifying Social Desirability Bias Through Item Randomized Response
Martijn de Jong, Jean-Paul Fox, Jan Benedict Steenkamp

Attention and Answers: Using Eye Tracking to Explore the Interaction of Respondents with Surveys
Daniel Stengel, Joachim Bueschken

Scale Response Biases Induced by Eye Dominance
Joseph Lajos

Understanding DVD Purchase and Rental Decisions by College Students
Pilskik Choi

SC10 – St. George D

Models for Enhancing Marketing Decisions

Chair: Feray Adiguzel

Active Learning for Top Expected Profits in Target Marketing
Danxia Kong

Proactive Churn Management – Let Sleeping Dogs Lie
Dennis Fok

Electric-Circuit Analysis for Marketing Science: An Application to Product Recommendation
Joonhyuk Yang, Wonjoon Kim, Hinwook Kim, Young Hwan Kim

Identifying Lost Sales with Navigational Patterns
Feray Adiguezel

SC11 – Empire

Marketing Strategy

Chair: Marcel Goic

Product Introduction, Cannibalization and Competition
Christian Essling, Christian Peukert

Incorporating Competitive Promotional Information in Forecasting SKU Product Sales for Retailers
Tao Huang, Robert Fildes, Didier Soopramanien

The Role of Complementary Multi-homing in Two- Sided Markets: Implications for B2B Electronic Market
Wenyan Zhou, Xiaoling Li, Xishu Zheng

Dynamic Assortment Planning for Penny Auctions Websites
Marcel Goic, Rodrigo Garcia

SC12 – Parliament

Bayesian Choice II

Chair: Christine Eckert

Consumer Brand Choice & Experiential Quality Learning: Semantic versus Episodic Retrieval
Zhiying Jiang, Surendra Rajiv, Suman Ann Thomas

Market Basket Analysis Using Bayesian Networks
Sanal Mazvancheryl, Xiaojun Li, Srinivas Prasad, Pradeep Rau, Refik Soyer

Copula-based Simultaneous Approach to Multivariate Alternative Choice and Quantity Choice
Chul Kim, Duk Bin Jun

Incorporating Prior Information to Overcome Complete Separation Problems in Discrete Choice Models
Christine Eckert, Bart Frischknecth, John Geweke, Jordan J. Louviere

SC13 – North Star

Entertainment Marketing III

Chair: Rui Huang

Should Movie Producers Care? The Impact of Product Placement on Movie Performance
Sumaiya Ahmed, Sam Riethmuller, Ashish Sinha

Continuity, Change and New Product Performance
Enrico Forti, Maurizio Sobrero, Andrea Vezzulli

Star Wars and Cereal Wars: Managerial and Policy Implications of Food Marketing with Movie Tie-ins
Rui Huang, Joshua Berning, Hongju Liu, Adam Rabinowitz

SC14 – Defender

Brands – General

Chair: Dinesh Gauri

Consumer Risk Reduction Behavior of New Brand Purchase
Koichi Yonezawa, Timothy Richards

A Latent Structure Model for Investigating the Disparity of PL Presence in the International Market
Mouna Sebri, Georges Zaccour

Bases of Power of Brand and its Impact on Consumers' Attitude and Behaviour in a Brand Consumer Relationship
Roopika Raj, Abraham Koshy

Composite Product Choice and its Effects on Partner Brands
Dinesh Gauri, Kalpesh Desai, Yu Ma

SC15 – Great Republic

Dynamic Empirical Models

Chair: Ashwin Aravindakshan

New Product Introduction and Cannibalization for Multi-brand Companies
Xin-Yu Zou, René Algesheimer, Florian Stahl

Can We Curb Retail Sales Volatility through Marketing Mix Actions?
Gokhan Yildirim, Mercedes Esteban-Bravo, Jose M. Vidal-Sanz

Promotions and Popular Seasonal Events
Wiebke Schlabohm, Barbara Deleersnyder, Karen Gendek

Impact of Consumer Memory in Advertising
Ashwin Aravindakshan, Prasad A. Naik

SC16 – St. George A

Retailing: Game Theory

Chair: Erik Bushey

Competition in Shopping Experience
Dmitri Kuksov, Ganesh Iyer

Commodities Fleeing: Pricing Strategies for Manufacturer in the Dual-channel Supply Chain
Hai Li, Jashen Chen, Nanfang Cui

Signaling Value Through Assortment
Yuanfang Lin, Dmitri Kuksov

A Game Theoretical Analysis of the Winners and Losers under a Category Captain Arrangement
Erik Bushey, Udatta Palekar

How to Navigate the Technical Sessions

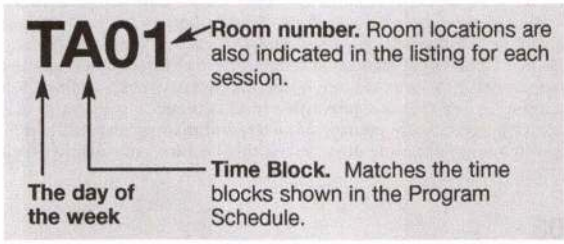
There are four primary resources to help you understand and navigate the Technical Sessions:

- 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 116-125).
- 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 118) — 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



Time Blocks

Thursday

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

Friday

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

Saturday

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

Thursday, 8:30am - 10:00am

■ TA01

01- Essex Ballroom South

Valuing Online Activities and Businesses

Cluster: Internet and Interactive Marketing

Invited Session

Chair: Martin Spann, University of Munich, Munich School of Management, Munich, D-80539, Germany, spann@bwl.lmu.de

1 - The Value of Receiving Network Updates: A Quasi-Experiment on a Social Networking Site

Yotam Shmargad, Kellogg School of Management, Marketing Department, 2001 Sheridan Road, Evanston, IL, 60208, United States of America, y-shmargad@kellogg.northwestern.edu

Social networking sites (SNSs) enable consumers to receive updates about their contacts without engaging with these contacts directly, giving them access to information they may not otherwise have. Yet no existing study isolates the value of receiving these updates, leaving unanswered questions regarding if and when network updates benefit consumers. In my study, I analyze the private database of a large social network company that began charging customers to use a network update application they had previously offered for free. The sudden monetization of this app provides a unique quasi-experiment that allows me to measure how its value varies with properties of consumers' networks. I find that: 1) The value of the app increases with the number of SNS connections a user has, indicating a presence of network externalities; and 2) The strength of these externalities is greater for users embedded in less clustered networks, suggesting that the value of network updates is derived from increased access to information about contacts loosely connected to us. These results have implications for the diffusion, monetization, and targeting of a broad array of social networking apps whose value depends on providing consumers with network updates.

2 - Measuring the Consumer Value of Free Goods on the Internet

Erik Brynjolfsson, Professor, Massachusetts Institute of Technology, 100 Main St, Room E62-414, Cambridge, MA, 02142, United States of America, erikb@mit.edu, JooHee Oh

A growing share of consumers' time is spent on the explosion of new information goods provided via the Internet, including Facebook posts, Wikipedia articles, Google maps and YouTube videos. Yet, these goods are priced at zero to consumers. What is the value of these goods, not to advertisers or other third parties, but to the consumers themselves? Traditional economic and marketing approaches based on measuring prices and quantities do not work well for such goods. People who already have access to the Internet do not spend any additional money to consume free goods, so consumers' surplus calculated from a money-based 'demand curve is relatively uninformative. In this study, we develop a framework to quantify the value of online applications that have very low prices using the insight that even when people do not pay cash, they must still pay attention, or time, when consuming information goods. Accordingly, we contrast the value of consumer surplus using two different methods, one based on the value of direct market expenditure, and one based on the value of time spent consuming free goods. We provide a generalized model of household consumption and time use and estimate the value of consuming information goods on the Internet that is not measured in GDP. Our model yields an estimate of annual consumer surplus gain from free sites on the Internet of around $15 billion between 2001 and 2006 and $48 billion 2007 and 2010. This corresponds to about 0.13% and 0.34% of average annual GDP during the each period. Our data imply that only 1.5% of total welfare gain would be measured by approaches that rely solely on the variation in direct dollar expenditures. To identify the remaining 98.5% of value, one must consider time spent on consumption, as we do in this paper.

3 - Measuring Freemium: The Value of Free Customers in a Networked Service

Clarence Lee, Harvard Business School, One Soldiers Field Road, Boston, MA, 02163, United States of America, clee@hbs.edu, Sunil Gupta, Vineet Kumar

Many of the latest digital media start-ups, such as Pandora, Spotify, and Dropbox, make money with a "freemium" business model. With this business model, a majority of the customers use the basic, free version of the service while a small percentage of the customers upgrade to paying premium accounts. Furthermore, these services often include referral programs and social features that allow for customers to invite and share with one another. Therefore, free customers add value to the firm through viral activities such as 1) inviting other customers to join and 2) influencing other customers to upgrade by collectively increasing each other's usage and sharing behaviors over time. In this study, we quantify the value of free customers in a freemium service with network effects. Using a rich panel dataset acquired from a major cloud storage service, we model the

dynamics of customer upgrade behavior and viral activities (referral and sharing) at the individual level. We incorporate major factors such as observed personal usage, social interaction, individual heterogeneity, and firm marketing actions to identify the effects on customer dynamics. By quantifying the networked lifetime value of customers, our work contributes to the customer lifetime value and social network literature and addresses a fundamental issue that freemium services face.

4 - Location-based Advertising: What is the Value of Physical Distance on the Mobile Internet?

Martin Spann, University of Munich, Munich School of Management, Munich, D-80539, Germany, spann@bwl.lmu.de, Philipp Reichhart, Dominik Molitor

Location-based services provide information on the physical surroundings (e.g., shops, retailers and restaurants) of mobile internet users. Consumers' awareness of their physical surroundings leads to a convergence between online and offline commerce. We expect that the increased usage of location-based services strongly impacts consumers' search and purchase behavior. The goal of this paper is to analyze this impact and to measure the value of physical distance on the mobile internet. Using data on location-based coupon choices of several ten thousand consumers, we find that distance, face value as well as display rank all significantly impact click-through and redemption rates, while controlling for different coupon categories, the daytime and consumers' usage experience. The mobile internet hence adds a new dimension to the relationship between buyers and sellers, benefiting consumers while enabling new business models.

■ TA02

02- Essex North Center

Customer Analysis and CLV - I

Cluster: Internet and Interactive Marketing

Invited Session

Chair: David Schweidel, University of Wisconsin-Madison, 975 University Ave, 4191B Grainger Hall, Madison, WI, 53703, United States of America, dschweidel@bus.wisc.edu

1 - A Cross-cohort Changepoint Model for Customer-base Analysis

Arun Gopalakrishnan, Wharton School, University of Pennsylvania, 3730 Walnut Street, Philadelphia, PA, 19104, United States of America, agop@wharton.upenn.edu, Peter Fader, Eric Bradlow

We develop a Hierarchical Bayesian cross cohort changepoint model framework that (1) allows for cross-sectional heterogeneity within a cohort, (2) identifies regime shifts/changepoints in cohort behavior along the sequence of customer cohorts, and (3) enables predictions of recently acquired cohorts for whom the firm has little to no longitudinal transaction data. The model combines the Reversible-Jump MCMC sampler with a vectorized-changepoint approach which enables each parameter in the cohort-level model to have its own regime configuration. We calibrate the model in the context of a discrete-time non-contractual setting, using multi-cohort donation data from a U.S. non-profit organization, using the Beta-Geometric Beta-Bernoulli (BG/BB) model developed by Fader, Hardie and Shang (2010) to characterize each cohort's behavior. The results demonstrate strong evidence for changepoints in some dimensions of the BG/BB parameter space but not others, through which we are able to disentangle which parameters are shifting. Results suggest that prediction of new cohorts using this model has lower bias compared to both a naive Hierarchical Bayes model without changepoints and a model that fully pools data from all cohorts. The proposed framework can be applied to any setting with a sequence of cohorts, by selecting an appropriate cohort-level model.

2 - "Counting Your Customers" Category by Category: Multi-category Customer Base Analysis

Chang Hee Park, Cornell University, 201 Sage Hall JGSM, Ithaca, NY, 14853, United States of America, cp247@cornell.edu, Young-Hoon Park, David Schweidel

Customer base analysis is an essential tool to measure customer lifetime value (CLV) and develop relationships with customers. While various models have been proposed to conduct customer base analysis, they focus primarily on analyzing transactional data at the firm level and do not consider customers' purchasing activity across different categories. This research proposes a modeling framework for customer base analysis and lifetime value measurement in a noncontractual setting with multiple product categories. To this end, we model customers' arrival process, multi-category choice behavior, and purchase amounts using an integrated framework that allows for dynamics in shopping behavior arising from the interplay of purchase timing, incidence, and amount across multiple categories. The proposed framework makes use of a parsimonious latent space model that avoids the 'curse of dimensionality in modeling multi-category customer behavior. Applying the model to category-level transaction data from a leading beauty care company, we find that the proposed model offers excellent fit and performance in predicting customer purchase patterns across multiple categories. We also quantify the contribution of each category to CLV, and compute the metric with greater accuracy in comparison to existing approaches.

3 - The Long and Winding Road: Modeling the Conversion Path of Online Customers

Alice Li, University of Maryland, Robert H. Smith School of Business, College Park, MD, United States of America, hli2@rhsmith.umd.edu, P.K. Kannan

Online marketers invest significant resources in driving traffic to their websites through multiple marketing interventions. Yet they have not been very successful in understanding the impact of those interventions, beyond determining the aggregate measures of click-through rates and purchase conversion rates of each campaign channel or source or touch point. In this paper, using a cohort of customers' panel data of visits and purchases at a company's website, we develop a three-level model of customers' consideration of online channels/sources, their visits through these channels over time and subsequent purchase at the website. Analyzing the conversion path of customers enables us to parcel out the impact of consideration and various marketing interventions on conversion across customers. In our application to a firm in the lodging industry, we find that (1) customers' consideration of channels/sources through which to visit the firm's website varies significantly across rewards program membership status of visitors, (2) there is significant carryover and spillover effects at both visit and purchase stages, some of which varies across rewards program status, and (3) the firm's e-mail campaigns trigger visits through other channels and thus deserve a larger credit for conversions than what a click-through conversion would indicate.

4 - Incorporating Nonrandom Direct Marketing Activity into Latent Attrition Models

David Schweidel, University of Wisconsin-Madison, 975 University Ave, 4191B Grainger Hall, Madison, WI, 53703, United States of America, dschweidel@bus.wisc.edu, George Knox

Latent attrition models serve as the foundation for analyzing transactional customer relationships to derive forecasts of customer behavior and value. Yet, extant models often overlook the effects of direct marketing and how it is individually targeted. We propose a parsimonious model that allows for direct marketing to impact the frequency with which transactions occur, the monetary amount of a transaction, and the latent customer lifetime. Additionally, our modeling framework takes into account the way in which organizations may target direct marketing at the individual level. Using donation data from a non-profit organization, we find that direct marketing increases the donation rate and the amount donated for active donors. However, direct marketing is a double-edged sword for some donors because it accelerates their attrition. We use our model to examine the financial impact of direct marketing activities, deriving the residual lifetime value (RLV) associated with alternative direct marketing policies and the incremental RLV as a measure of the effectiveness of an additional piece of direct marketing. We examine how these metrics relate to summaries of past donation activity (recency, frequency, and average donation amount) and discuss potential shortcomings of basing direct marketing decisions on such heuristics.

■ TA03

03- Essex North West

Social Media and the Facebook Effect

Cluster: Internet and Interactive Marketing

Invited Session

Chair: K. N. Rajendran, Associate Professor, University of Northern Iowa, 342 Curris Business Building, Cedar Falls, IA, 50614, United States of America, raj.rajendran@uni.edu

1 - Towards Modeling Multiple Facebook Users' Actions for Social Media Marketing

Christine Balagué, Chair Social Networks, Telecom Institute-Telecom School of Management, 9 rue Charles Fourier, EVRY, 91011, France, christine.balague@it-sudparis.eu

This research proposes to model web users'actions on social networks in order to improve social media marketing. The importance of the topic is related to the recent explosion of usage on social networks (800 millions of members on Facebook, 200 millions on Twitter) that represents a big opportunity for marketers. However, marketing researches on social networks' users remain scarce while necessary on account of the change of paradigm brought by social networks versus traditional marketing. Our research aims at filling this gap. To analyze social networks users' behavior, we developed a specific Facebook application dedicated to capture all the posts, actions and profiles of 200 Facebook users (business school students. The application captured the same data on their friends, and on the friends of their friends (participants accepted the application by Facebook connect). Using these data, we modeled the behavior of these Facebook users by Petri Networks, particularly adapted to model dynamic complex systems with parallel, synchronous and simultaneous actions of several agents. Results reveal interesting statistical laws describing different types of behaviors on social networks and show the advantage to use Petri networks to model such complex systems. Based on these results, we proposed recommendations for social media marketing. Our paper also opens a new area of possible research.

2 - How Facebook Influences Validity in Online-surveys

Richard Bensch, Chair of Marketing and Innovation Management, Brandenburg University of Technology Cottbus, Erich-Weinert-Str. 1, Building 10, Cottbus, 03046, Germany, rbensch@tu-cottbus.de, Sebastian Selka, Alexander Sänn

Nowadays, social networks like facebook are rising and gathering more and more users. Therefore social networks accelerate people's communication, providing business, social and educational applications and extending people's online life. In this paper the influence of social networks to the validity of online-surveys is analyzed. Further, the paper examines whether this context influences (new) product design for generating innovations using online conjoint measurement. We assume that social networks decrease the validity of online-surveys. Today, several methods are known to measure preferences of customers online, e.g. conjoint analysis (Netzer et al. 2008). According to a high demanding task within conjoint measurement the online-survey might be influenced by a lack of attention and affects the validity (DeSarbo et al. 2005). As a consequence of the preliminary observations, conjoint analysis is now implemented in an online software environment, testing respondent's facebook status during the survey. The new approach will further extend conjoint analysis to identify distracted customers by "focus on survey" algorithms. The well-known field of mountain biking is used as an application area. Based on the results the distraction in online-surveys is a common problem and tends to be increased by social networks. Therefore a new strategy is provided by the authors to improve respondent's attention in web-surveys within a social network surrounding.

3 - An Empirical Investigation of the Link between Social Media Efforts and Customer Firm Relationship

Rishika Ramkumar, Assistant Professor of Marketing, Texas A&M University, 4112 TAMU, Texas A&M University, College Station, TX, 77843, United States of America, rrishika@mays.tamu.edu, Ashish Kumar, Ramkumar Janakiraman, Ram Bezawada

The use of social media by internet users has expanded exponentially in recent years. Facebook now boasts of 800 million active users and You Tube has 490 million unique users per month. According to Forrester Research, 75% of internet users participate in some form of social media. Social media has clearly changed how individuals interact with each other and is impacting consumer-firm interaction as well. This has led companies to increasingly participate in these online platforms especially social media to increase interaction with their consumers. The underlying belief behind a firm's social media strategies is that it creates a new touchpoint between the firm and the consumer in a community setting which fosters development of new relationships thereby creating greater customer loyalty. Thus, advent of social media has provided businesses with a new channel for relationship marketing. In this research we examine the effectiveness of social media in creating customer driven value for a firm by examining consumer purchase behavior both before and after their participation in social media efforts of the firm. Drawing on the literature of relationship marketing, we propose a conceptual framework and hypothesize a set of relationships between consumers' propensity to participate in social media and firm value. Leveraging a unique data on customer participation in social media, we empirically test our proposed hypotheses. Based on our results, we shed light on the factors that can enable managers to design better social media marketing plans.

4 - A Model of Satisfaction for Facebook "Likers'"

K. N. Rajendran, Associate Professor, University of Northern Iowa, 342 Curris Business Building, Cedar Falls, IA, 50614, United States of America, raj.rajendran@uni.edu, Steven Corbin, Ciara Pearce, Matthew Bunker

Social media has grown rapidly over the last decade. In particular Facebook seems to be gaining ground among all age groups. One of the features that Facebook provides is the ability for consumers to indicate their associations through the "like" feature. Companies are beginning to utilize that feature to develop relationships with consumers. However people who "like" a company, do so because they already have some type of relationship with that company. So a more logical goal would be to use "liking" to improve customer satisfaction. In as much as the act of "liking" reflects some form of a relationship bond, the purpose of getting customers to "like" a company may be to get them more involved with that company and derive greater satisfaction from the relationship. This paper proposes a model of customer satisfaction for Facebook "likers" who are customers of the respective companies, based on antecedents of satisfaction such as identity, relationship bond, coupon use and involvement. The model is tested on data collected from a global probability survey data of "likers". A data collection firm with a database consisting of over 6 million panelists in 37 countries was used to gather responses from a sample of 402 panelists. The proposed model was a good fit for the data and suggests how satisfaction can be enhanced for people who like a company on their Facebook page. The results indicate that involvement is the key to satisfaction and that relationship bond is the key to involvement.

■ TA04

04- Courier

Market Segmentation

Contributed Session

Chair: Simon Blanchard, Georgetown University, 37th and O St. N.W., Washington, DC, 20057, United States of America, sjb247@georgetown.edu

1 - Variable Weighting and Selection Approaches for Market Segmentation: A Comparison

Susanne Rumstadt, Scientific Assistant, Brandenburg University of Technology Cottbus, Chair of Marketing and Innovation Management, Erich-Weinert-Str. 1 Building 10, Cottbus, 03046, Germany, susanne.rumstadt@tu-cottbus.de, Daniel Baier

The selection and weighting of variables play decisive roles in market segmentation. The inclusion or exclusion of variables as well as the distribution of their possible values affect the quality of the grouping. Some selection and weighting approaches suggest better, some worse groupings. So, e.g., in the grouping of respondents on the basis of uploaded holiday, spare time, or appartment images in social networks or during online interviews (see, e.g., Baier, Daniel 2012 for a recent overview), a manifold of subsets of extracted features from these uploaded images (e.g. color histograms, edge histograms, high level features like number of persons or categories like beach or mountain) can be used, resulting in different grouping results. For solving this problem, several feature saliency approaches have been proposed recently, basing, e.g. on latent class analysis (see, e.g. Law et al. 2004) or k-means heuristics (see, e.g. Carmone et al. 1999, Brusco, Cradit 2001, Steinly, Brusco 2008). In this paper we analyze which feature saliency approach is advantageous in which setting. We use real data from image clustering and simulated data, both in a Monte Carlo setting, for this purpose.

2 - Consumer Choices Across Seemingly Disparate Product Categories: Latent Traits

Chen Lin, Emory University, 1300 Clifton Road NE, Atlanta, GA, 30322, United States of America, chen_lin@bus.emory.edu, Douglas Bowman

This research takes a first step in modeling a complete picture of consumer decision problems by examining consumption across seemingly disparate product categories to advance our understanding in both dimensions of customer behavior: the breadth of their consumption portfolio, and the depth of their latent decision processes. Marketing activities today are coordinated in a variety of categories and in a variety of formats, and consumer naturally shop around a globe of unrelated product categories that are more complex and diverse than the traditionally defined "market basket". In order to understand consumer behavior across such broad and disparate categories, this research examines the deep underlying processes, which are defined as the "latent traits" that govern consumer choices across five seemingly disparate product categories: media consumption, automobile purchases, financial investments, soft drinks and cell phone plans through a propriety dataset consisting of 5,014 consumers in the United States. The author proposes a hierarchical multinomial processing tree model to empirically investigate the impact of latent traits across decision stages and across product categories. This research further suggests new approaches to segment consumers based on collection of their inferred latent processes rather than observed behavior across multiple categories, thereby providing an answer for "why consumers did it, as opposed to "what consumers did", using behavioral data.

3 - Targeting Heterogeneous Segments

Neil Bendle, Assistant Professor of Marketing, University of Western Ontario, 1151 Richmond Street N, London, N6A 3K7, Canada, nbendle@ivey.uwo.ca

Marketers form segments and target these with products. However a segment, like any group, differs noticeably from an individual. Even within the best constructed segment heterogeneity remains so there exists a problem: What taste precisely do you target? I argue this targeting problem has been underplayed because people implicitly assume that targeting segments is conceptually the same as targeting individuals. This is exemplified by the popular description of individuals as segments of one. I argue that targeting segments is very different from targeting individuals as targeting segments depends upon at least two factors irrelevant when targeting individuals. 1. Given every group, even a group selected to be relatively homogenous, contains some heterogeneity marketers must devise a within segment targeting strategy. This task, which they may perform sub-optimally, is unnecessary when targeting individuals. 2. Consumers may react to targeting and be deterred from purchasing a product explicitly targeted at a group they do not belong to. A man avoiding a women's deodorant. An analytical model of costless targeting on a discrete space illustrates that targeting individuals is conceptually different from targeting segments. Indeed costless targeting of individuals is weakly superior to mass marketing but this is not true of targeting segments. Targeting segments can be less effective than targeting the mass market if marketers use a suboptimal within segment targeting strategy and consumers react to the targeting. I suggest further research into targeting is needed. Tightening the theory of targeting segments will benefit managers who are encouraged to recognize that residual heterogeneity within segments creates important targeting considerations.

4 - The Heterogeneous P-Median Problem for Categorization Based Clustering

Simon Blanchard, Georgetown University, 37th and O St. N.W., Washington, DC, 20057, United States of America, sjb247@georgetown.edu, Daniel Aloise, Wayne DeSarbo

The p-median offers an alternative to centroid-based clustering algorithms for identifying unobserved categories. However, existing p-median formulations typically require data aggregation into a single proximity matrix, resulting in masked respondent heterogeneity. A proposed three-way formulation of the p-median problem explicitly considers heterogeneity by identifying groups of individual respondents that perceive similar category structures. Three proposed heuristics for the heterogeneous p-median (HPM) are developed and then illustrated using a sample of undergraduate students who performed a sorting task of major U.S. retailers.

■ TA05

05- Essex Center

Consumer Search and its Impact on Choice

Cluster: Special Invited Sessions

Invited Session

Chair: Paulo Albuquerque, University of Rochester, 4-345 Carol G. Simon Hall, Rochester, NY, 14627, United States of America, paulo.albuquerque@simon.rochester.edu

1 - Modeling Optimal Search and Choice Decisions: The Role of Uncertainty, Innovation, and Consumer Reviews

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We present a joint model of costly consumer search and choice decisions. In this model, consumers construct a limited choice set guided by incremental benefit and cost of an extra search and choose the utility maximizing alternative from this set. Our model explains why some products are more popular during the search stage than their expected utility merits, by explicitly modeling pre-search consumer uncertainty about choice alternatives. Applying our model to aggregate search and choice data from the camcorder category at Amazon.com, we find that consumers are more uncertain about products with new attributes, but do not necessarily value these attributes highly on average. The increased search associated with more uncertainty leads to higher incidence of choice. Thus, ignoring the search-stage suggests revealed preference for these attributes, i.e., confounds willingness to pay and willingness to search. Additionally, we show that consumer review information, such as the consumer rating for a product or the number of reviews, simultaneously impacts product uncertainty, search, and market shares. Finally, we demonstrate how manufacturers can use our model to make decisions regarding the adoption of a new feature in its product line management, accounting for consumer uncertainty about the new attribute.

2 - Search with Refinement

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The development of online search technology has profound impacts on consumers, business and the society. One important feature of online search is that consumers are able to refine the search results using tools such as sorting and filtering. Albeit such refinement tools have significant effects on consumer behavior and market structure, there is little empirical research documenting and measuring the effects. We propose a structural model of optimal consumer search that coherently integrates the decisions of consumer search and refinement as well as the structure of uncertainty about the products. The model is estimated using a unique data set of individual level search activities of hotels provided by Expedia.com. We find that the refinement tools encourage 57% more searches and enhance the utility of the purchased product by nearly 20%. However, the overall welfare surplus may deteriorate by up to 8% because consumers engage in disproportionally more searches among highly substitutable products with similar expected utilities. We also find the refinement leads to a less concentrated market structure.

3 - Simultaneous or Sequential? Understanding the Drivers of Search Strategies and Search in the U.S. Auto Insurance Industry

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Whether consumers use simultaneous or sequential search strategies has long been a question of interest among researchers. The difficulty in settling this question stems from the fact that, in most data sets, the type of search is not identified so researchers have to make an assumption regarding the specific search strategy being used. For example, Mehta et al. (2003) assume that consumers search simultaneously, while Kim et al. (2010) assume that consumers search sequentially. An assumption on the type of search is usually driven by both substantive reasons and feasibility concerns. Morgan and Manning (1985) have shown that either type of search can be optimal under certain circumstances. Using a unique data set on consumer shopping behavior in the U.S. auto insurance industry, we study the effects of making either assumption on the type of search. Specifically, we estimate search costs under both the assumption of simultaneous and sequential search and compare the estimation results. This allows us to provide guidance on the sensitivity of empirical results to either assumption on the type of search. Further, since we observe data on factors that could influence a consumer's choice of type of search, we estimate search costs using a model where these factors influence a consumer's probability of searching simultaneously or sequentially.

4 - Using Consumer Preferences to Improve Upon Popularity Rankings in Online Markets

Babur De los Santos, Professor, Indiana University, Kelly School of Business, Bloomington, IN, United States of America, babur@indiana.edu, Sergei Koulayev

When consumers examine differentiated products, we expect them to incur greater costs to obtain the necessary information to weigh the various alternatives. The vast amount of information available online has revolutionized the way firms present consumers with product options. Presenting the best alternatives reduces the search cost associated with the consumer finding the right product. Consumer heterogeneity with regard to products with multiple attributes makes it challenging to present a relevant ranking, especially when important characteristics, such as price, differ between the formation of the underlying ranking and the consumer's search process. We use novel data on consumer click-stream behavior from a major web-based hotel comparison platform to estimate a random coefficient discrete choice model. We are then able to infer consumer preference regarding a set of product attributes and propose an optimal ranking tailored to anonymous consumers that differ in their price sensitivity. We are able to customize rankings by relating random price coefficients estimates to their request parameters, such as the day of stay and number of guests. In contrast to a myopic popularity-based ranking, our model accounts for the rapidly changing prices that characterize the hotel industry, consumer expected search strategies, such as result sorting and filtering, and consumer heterogeneity. The platform must determine which hotel ordering maximizes consumers' click through rates based on the information available to the platform at that time, its assessment of consumers' preferences and their expected consumer type based on request parameters. We find that consumer's click-through rates more than double resulting from positioning better options at the top of the rankings and by presenting diverse consumers, as suggested by their request parameters, a ranking that reflect their price/quality tradeoff. We show that the optimal ranking results in welfare and efficiency gains. Overall, consumers' welfare is on average 173 percent greater than in the original ranking.

■ TA06

06- St. George B

Cause Marketing

Contributed Session

Chair: Carol Miu, University of Texas at Dallas, 800 W. Campbell Road, Mailstop SM 32, Richardson, TX, 75080, United States of America, cxm109420@utdallas.edu

1 - Labeling Products with Carbon Footprints

Daniel Halbheer, University of Zurich, Department of Business Administration, Zurich, 8006, Switzerland, daniel.halbheer@business.uzh.ch, Dennis Gärtner

This paper analyzes the decision of a supplier to label its products with product carbon footprints when consumers care about the climate impact of producing them. Consumers cannot verify the climate impact unless it is certified and are heterogeneous with respect to the perception of the impact their consumption choice has on other consumers: Green consumers take the external effect on all consumers into account, while brown consumers only care about the private effect of their consumption decision. The consumer heterogeneity implies that brown consumers have a higher willingness-to-pay than green consumers, leaving the supplier the option to design two products with different emission levels. Under the assumption that consumer types are unobservable, we show that the supplier will always choose to certify the footprint for both products when certification costs are sufficiently low. In this case, the supplier segments the market and sells a product with a low footprint at a high price to green consumers and a product with a high footprint at a low price to brown consumers. Furthermore, we show that the supplier distorts the footprint of the product tailored to green consumers downwards compared to the case with observable consumer types.

2 - CSR and Product-immanent Advantages - The Influence on Brand Perception and Willingness to Pay

Hannah Winkler von Mohrenfels, Goethe University Frankfurt, Grueneburgplatz 1, Frankfurt, 60629, Germany, hwvm@wiwi.uni-frankfurt.de, Daniel Klapper

In order to keep up with the rising interest in corporate social responsibility and healthy products, more and more companies advertise their efforts to contribute to an enhanced handling of this topic. This paper examines which factors determine acceptance of such endeavors and which possibilities arise for

companies that can communicate their accomplishments successfully. We differentiate between two prevalent corporate trends: the sustainable production of goods which save natural resources and benefits society and ecology in general, and products which are beneficial to consumers' personal well-being, e.g. organic groceries. Using an experimental setup, we measure how informing consumers about a company's credible achievements to act socially responsible and produce healthy products influences brand perception. Our results show that both efforts heighten the perception of the brand significantly. We furthermore discuss how informing consumers about these topics influences their buying frequency. In another experimental setup, we investigate the impact these information have on consumers' willingness to pay. We find that communicating credible product-immanent advantages that heighten consumers' well-being enhances the willingness to pay significantly. We furthermore show that this does not apply to corporate social responsibility efforts. Thus, our findings suggest that consumers acknowledge companies' endeavors to act pro-socially, but are unwilling to reward them monetarily unless they can personally benefit.

3 - Why Do Consumers Buy Plastic Bags?

Tao Chen, Assistant Professor of Marketing, University of Maryland, Robert H. Smith School of Business, College Park, MD, 20742, United States of America, taochen@rhsmith.umd.edu, Jinhong Xie, Yuxin Chen

Plastic bags bring huge convenience to grocery shopping and hundreds of billions of plastic bags have been consumed worldwide every year. Due to their chemical properties, plastic bags have been considered as public hazard and many countries and regions have implemented the plastic bag levy to reduce the usage. The plastic tax (typically 5~20 cents per bag) can reduce the plastic bag consumption by 60~90% in different parts of the world. In this paper, we examine when consumers decide to purchase a plastic bag if bags are no longer free. Particularly, we are interested in exploring how mental accounting plays a role in the plastic bags purchase decisions. Using a unique panel data set from a retail store, we test the predictions from the mental accounting theories.

4 - Consumers Are Less Loyal Than You Might Think: The Role of Waste Avoidance

Carol Miu, University of Texas at Dallas, 800 W. Campbell Road, Mailstop SM 32, Richardson, TX, 75080, United States of America, cxm109420@utdallas.edu, Brian Ratchford

Consumers often stay with a particular brand and size of a product although a competing product is promoted at a lower price per unit volume. Historically marketers have attributed this inertia to brand loyalty, consumer heterogeneity, or unexplained state dependence. This paper investigates the roles of product perishability and packaging on purchase and switching behavior. Preference for waste avoidance may partially explain non-switching. Smaller package sizes are more easily consumed without waste, but are usually sold at a higher price per unit volume than larger sizes. Perishable items can only be stored for a very limited amount of time, whereas non-perishable items can be stockpiled but often become perishable once opened. Therefore, waste avoidance-driven purchase inertia should exist with both perishable and non-perishable food items, and are expected to be more pronounced with perishables. We hypothesize that smaller households choose to buy smaller package sizes and pay higher unit prices than larger households. When large sizes are discounted, consumers may choose to stay with their normally-purchased smaller size to avoid waste. Larger households may be easier able and therefore more likely to switch product sizes. We also hypothesize that size switching occurs less frequently with perishable items than with shelf stable products. We use the IRI Marketing Data Set, which contains panel data for 2 US markets with 7 years of information on product sales, pricing, and promotion.

■ TA07

07- St. George C

Customer Relationship Management I

Contributed Session

Chair: Koen W. De Bock, IESEG School of Management, 3 Rue de la Digue, Lille, 59000, France, k.debock@ieseg.fr

1 - The Industrial Brand Relational Elements and Customer Relationship Intention

Tony Garrett, Korea University Business School, Anam-Dong, Seongbuk-Gu, Seoul, Korea, Republic of, tgarrett@korea.ac.kr, Irina Pieshkova, Jong-Ho Lee

Industrial suppliers are constantly on the lookout on how they can attract customers who are willing to engage in long-term profitable relationships. One tool available to these organizations is their industrial brand. Although the industrial brand is increasingly the focus of academic attention with many important results already been found, there is a gap in knowledge as to what relational attributes of the industrial brand are valued by customers when they are making risky decisions to engage in a long-term relationship with a supplier firm. There is therefore recognition that a brand represents more than functional elements of the product, but it also includes relational elements. After an extensive review of the literature, these relational brand elements were identified and then categorized as being either company (reputation, community and personality) or relationship (adaptation and advice) specific brand elements and their associations to relationship intention was hypothesized. The moderating effect of perceived choice risks (financial, social and time) was also examined. A survey was administered to a sample of middle managers from involved in business-to-business relationships. Results show that the reputation and personality elements are significant brand relational elements influencing long-term customer relationship intention, however when considering the moderating effect of risk, and in particular time and social risk, all of company specific elements are significant. Further results along with academic and managerial implications will be given.

2 - The Reliability and Validity of Alternative Customer Satisfaction and Loyalty Measurements

Keith Chrzan, Chief Research Officer, Maritz Research, 996N 250E, Chesterton IN, United States of America, keith.chrzan@maritz.com

Academic interest in evaluating customer satisfaction metrics has waned since some promising early work (e.g. Westbrook 1980) while measurement of loyalty often falls to practitioners with more interest in hyping a particular metric than in validating it with evidence. To address these lapses, we conducted a study of alternative measures of satisfaction and loyalty. Using a test-retest research design featuring 1,505 respondents, of whom 1,187 also completed a recontact questionnaire, we examine four customer satisfaction scales: • A common fully-anchored five-point unipolar rating scale • The D-T (Delighted-Terrible) scale with seven scale points and two off-scale responses (Westbrook 1980) • An 11-point percentage of satisfaction scale with endpoint verbal anchors and with points labeled from 0% to 100% • A binary satisfied/not satisfied scale. We also assess three loyalty metrics: • Intent to recommend (advocacy) • Intent to return in the future • Probability allocation of future business We compare these measures in terms of: • Test-retest reliability of satisfaction scales • Convergent validity of satisfaction scales • Criterion validity of satisfaction scales to the ability of satisfaction scales to be well-predicted by attributes/antecedents of satisfaction to the ability to satisfaction scales to predict consequents of satisfaction like intentional loyalty and behavioral predictions • The sensitivity of both the satisfaction scales and the loyalty metrics • The distribution of the satisfaction scales • Predictive validity of loyalty measures (the ability of the three loyalty measures to predict respondents' post-survey behavior).

3 - Optimal Acquisition and Retention Strategies of New Subscribers Services

Tarek Ben Rhouma, HEC-Montreal, 4694, Rue Beauvior, Saint-Leonard, QC, H1R1V6, Canada, tarek.ben-rhouma@hec.ca, Georges Zaccour

The core of relationship marketing is the development and maintenance of long-term relationship with customers. This task requires an efficient management customer relationship that takes into account the benefits and the costs of marketing efforts, sales and customer interactions. In a recent Forbes survey (2011), 52% of marketing executives consider customer retention and customer acquisition as their top current priorities. Few papers studied the allocation of marketing resources between acquisition and retention, but to date, there was no comprehensive examination of optimal CRM strategies, particularly in services sector. The purpose of this study is to fill an important gap in marketing literature by analyzing the diffusion of new subscribers services within a marketing relationship framework. We seek to determine the optimal investment level a service provider should make to attract new customers and retain existing ones throughout the lifecycle of the service. In our framework, the success at attracting and retaining a customer depends on (i) the acquisition (retention) efforts and (ii) the effectiveness of marketing efforts. By effectiveness of marketing efforts, we mean the sensitivity of a customer to marketing efforts. In the first part of this work, we assume that the effectiveness is constant over the diffusion process. The second part consists in assuming that the effectiveness of marketing dollars varies with the service penetration level. We consider that early adopters are more sensitive toward marketing spending than laggards and the subscribers' loyalty is increasing with the total number of users. A model relying on dynamic programming solution techniques has been developed to determine optimal strategies of customer acquisition and retention.

4 - Remedying the Expiration of Churn Prediction Models with Multiple Classifier Algorithms

Koen W. De Bock, IESEG School of Management, 3 Rue de la Digue, Lille, 59000, France, k.debock@ieseg.fr, Kristof Coussement

Predictive modeling is one of the most important instruments in a database marketer's arsenal. In the case of customer churn prediction, a predictive model generalizes the relationship between upcoming churn behavior on the one hand, and a range of characteristics describing that customer and his or her historical behavior on the other hand. Despite the increasing availability of standardized out-of-the-box software tools, the process of creating a predictive model remains a resource-intensive process. One of the challenging factors is the limited staying power of churn prediction models, or the observed deterioration of prediction quality over time. In data mining literature, this decreasing performance is known as concept drift. Churn prediction models age and hence, models have to be periodically re-estimated in order to preserve their validity. In business, limited resources introduce the need for modeling techniques that are able to deal with concept drift in an automated manner so that resource-consuming re-estimation of models can be avoided. Hence, in this research, an investigation is made to assess the potential of ensemble learners to counter concept drift in

customer churn prediction, and guarantee a model's staying power. Experiments are presented that demonstrate the presence of concept drift in subscription churn prediction at a newspaper publishing company. Further, several candidate algorithms to deal with concept drift and maintain model performance over time are introduced, evaluated and compared.

■ TA08

08- Adams

Structural Models of Dynamic Oligopoly

Cluster: Special Invited Sessions

Invited Session

Chair: Ron Goettler, University of Chicago, Chicago, IL, United States of America, ronald.goettler@chicagobooth.edu

1 - The Value of Market Information in the Dynamics of a Capital-Intensive Industry: The Case of DRAM Manufacturing

Pedro Gardete, Stanford University, Stanford, CA, United States of America, gardete@stanford.edu

Much like in other semiconductor environments, DRAM manufacturers face significant demand uncertainty before production and capacity decisions can be implemented. This paper investigates the role and assesses the value of market information in the DRAM manufacturing industry. A dynamic oligopoly model of competition with capacity constraints is developed, where firms hold information about demand. The model reveals that better information is especially beneficial when the market performs poorly. In addition, a non-linear relationship between the quality of the information and the performance of the industry is found, once the costs of adjusting capacity levels are incorporated. The equilibrium is solved through an approximation of the firms' actions conditional on the market information available to them, and the parameters are estimated through the simulated method of moments. The model recovers the market information that rationalizes the decisions of the firms. The available market information is valued at approximately $290 million for the industry per quarter, and is estimated to have yielded returns of $1,647 million during the recent DRAM market 'bust' period, from 2008 to mid 2009.

2 - The Dynamics of Retail Oligopoly

Paul Ellickson, University of Rochester, Rocheter, NY, United States of America, paul.ellickson@simon.rochester.edu, Sanjog Misra, Arie Beresteanu

This paper examines competition between supermarkets as a dynamic discrete game between heterogeneous players. We focus on the impact of Wal-Mart's entry on incumbent supermarket firms, quantifying the impact on welfare and competition. Employing a unique thirteen year panel dataset of store level observations that includes every supermarket firm operating in the United States alongside the rapid proliferation of Wal-Mart supercenters, we propose and estimate a dynamic structural model of chain level competition in which incumbent firms choose each period whether to add or subtract stores or exit the market entirely, and potential entrants choose whether or not to enter. Product market competition is modeled as Nash in prices, incorporating detailed information on prices and characteristics and unobserved heterogeneity in chain-level quality. Our estimation approach combines two-step estimation methods with a one-period ahead (renewal) representation of the value function, which allows for large-dimensional counterfactual simulations. We examine the impact of Wal-Mart on incumbent supermarket investment and pricing decisions.

3 - An Empirical Study of the Dynamics of Brand Building

Ron Borkovsky, University of Toronto, Toronto, ON, Canada, ron.borkovsky@rotman.utoronto.ca, Avi Goldfarb, Avery Haviv, Sridhar Moorthy

Brand equity is a dynamic concept in the sense that it is built over time and offers long-term benefits. To account for this, we devise and estimate a dynamic model of brand building in which firms invest in advertising in order to build and sustain brand equity. Our purpose is to better understand brand building and harvesting and, accordingly, the evolution of brand equity in oligopolistic industries. The model allows us to address several fundamental questions on the nature of brand-building and competition: How strong are the leading firm's incentives to perpetuate its brand equity advantage? How strong are the followers' incentives to overcome the gap it faces? When should firms harvest brands? How efficient is the conversion of advertising into brand equity and how quickly does brand equity depreciate? We also devise a dynamic measure of brand value that accounts for the effect of a brand on both current and future profits. We estimate this model using data from the stacked chips category in the consumer packaged goods (CPG) industry. The stacked chips category is ideally suited for this study because it is characterized by brands that possess a great deal of brand equity and by very high levels of spending on advertising.

4 - Competition and Product Innovation in Dynamic Oligopoly

Ron Goettler, University of Chicago, Chicago, IL, United States of America, ronald.goettler@chicagobooth.edu, Brett Gordon

We investigate the relationship between competition and innovation using a dynamic oligopoly model that endogenizes both the long-run innovation rate and market structure. Determinants of competition, such as product substitutability, entry costs, and innovation spillovers, affect firms' equilibrium strategies for entry, exit, and R&D. We find an inverted-U relationship between product substitutability and innovation: the returns to innovation initially rise for all firms but eventually, as the market approaches a winner-take-all environment, laggards have few profit scraps to fight over and give up pursuit of the leader, knowing he will defend his lead. We also find competitive forces interact with each other: innovation exhibits a positive relationship with spillovers when product substitutability is high but is unaffected by the spillover when substitutability is low. Entry costs and innovation exhibit a U-shaped relationship that results from entry-deterring R&D by laggards.

■ TA09

09- Helicon

Conjoint Analysis: Methods

Contributed Session

Chair: Mark Ratchford, Assistant Professor of Marketing, Vanderbilt University, Owen Graduate School of Management, 401 21st Avenue South, Nashville, TN, 37203, United States of America, mark.ratchford@owen.vanderbilt.edu

1 - Validity of Conjoint Analysis Studies: An Analysis of Recent Commercial Applications

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Due to more and more online questionnaires and possible distraction —e.g. by mails, social network messages, or news reading during the processing in an uncontrolled environment— one can assume that the (internal and external) validity of conjoint studies lowers. We test this assumption by comparing the (internal and external) validity of commercial conjoint analysis studies over the last years. Research base are (disguised) recent commercial conjoint analysis studies of a leading international marketing research company in this field with about 1.000 conjoint studies per year. The validity information is analyzed w.r.t. research objective, product type, period, incentives, and other categories, also w.r.t. other outcomes like interview length and response rates. The results show some interesting changes in the validity of these studies. Additionally, new procedures to deal with these setting will be shown. Sources Wittink, D. R. and Vriens, M. and Burhenne, W. (1994): Commercial use of conjoint analysis in Europe: Results and critical reflections, in: International Journal of Research in Marketing, 11, 1, 41 - 52. Deutskens, E. and de Ruyter, K. and Wetzels, M. and Oosterveld, P. (2004): Response Rate and Response Quality of Internet-Based Surveys: An Experimental Study, in: Marketing Letters, 2004, 15, 1, 21-36. Green, P. E., Kreiger, A. M., and Wind, Y. J. (2001): Thirty Years of Conjoint Analysis: Reflections and Prospects, in: Interfaces, 31, 56-73.

2 - Does Brand Similarity of a Private Label Harm the National Brand: The Role of Choice Experiments

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Store brands often imitate national brands in how they are packaged. Prominent examples include the use of similar color and shape in categories such as analgesics and shampoos. Existing research suggests that brand similarity, and the resulting consumer confusion, is a hotly contested legal issue (see Zaichkowsky 2006 for a review) that is hard to demonstrate. The legal system often relies on surveys to assess likelihood of brand confusion and harm to the copied brand is rarely shown empirically. In this research we study the outcome of brand similarity using choice experiments and statistical models. Our research questions include: 1. While several variables (color, shape, print style, graphics etc.) are known to cause brand confusion, their relative contribution to the confusion outcome remains unknown. We hope to uncover main drivers of brand confusion and explore moderating variables that can help understand the relationship. 2.While existing methods attempt to show the possibility of brand confusion via surveys, we focus our attention on the question of 'harm to the national brand. We link brand similarity to shifts in market share using choice experiments and statistical models. 3.Recently, 'initial interest confusion has emerged as a variable of interest in some legal cases. In the language of marketing, brand similarity likely impacts brand considerationóstore brands maybe more likely to be considered because of brand similarity. We believe that brand consideration models could help assess 'initial interest confusion. We share our findings from early empirical work on the above research questions.

3 - Reconsidering Optimal Experimental Design for Conjoint Analysis

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In conjoint analysis, respondents are presented with a series of stimuli (product/service descriptions, illustrations, samples, prototype etc.), and are asked to rank or rate them, or choose one from the shown set of profiles. Correct estimation of the experiment design matrix allows eliciting more information about preferences from the small number of questions, thus reducing experimenal cost and respondent's fatigue. The quality of statistical analysis heavily depends on the alternatives presented in the experiment. There are several problems that arise in this setting. Firstly, there is autocorrelation in responses, which may arise from individual characteristics of the respondents (e.g. tendency to give higher/lower evaluations). Secondly, classical optimal design algorithms often select the same combination of stimili more than once, but in the context of conjoint analysis, replications make sense only for market segments but not for individual respondents. This paper presents a general approach to compute optimal designs for conjoint experiments in a variety of contexts. We do not compute good designs, but the best ones according to the size (determinant or trace) of the information matrix of the associated estimators without repeating profiles as in Kiefer's methodology. We handle continuous, discrete and mixed types of attributes, implementing efficient optimization algorithms to achieve our goal. By imposing managerial constraints we flexibly handle a variety of marketing scenarios and methodologies.

4 - Choice Accuracy and Choice Deferral in Non-sequential Search

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In this research, we investigate choice accuracy and choice deferral in a non-sequential search environment that replicates the basic features of a typical online travel website. Specifically, we study how processing strategies (analytical processing, visual processing, cognitive load, etc.), as well as the ordering of alternatives in the choice environment, impact choice accuracy, deferral, confidence and satisfaction. The set of experiments have two components. In the first, subjects engage in a choice-based conjoint task in order to ascertain underlying individual preference structures (utilities) for a hypothetical set of New York City hotels. In the second, subjects engage in a choice task in which a set of 75 hotel options are presented. Subjects are asked to select either their most preferred option, or if unable to find a satisfactory option, the 'no choice option. When considering the percentage of maximum attainable utility as the dependent variable, we find that those under cognitive load achieve a significantly higher percentage of their maximum attainable utility than those in the non-load (control) group. We also find that inducing imagery processing achieves the same result. Hence, non-analytical processing appears to increase choice accuracy, while not affecting the tendency to select the 'no choice option. In addition, we find significant ordering effects that counter the prevailing wisdom that ordered search from predicted best to worst leads to higher utility choices.

■ TA10

10- St. George D

New Product Diffusion I

Contributed Session

Chair: Sangkil Moon, Associate Professor, North Carolina State University, Poole College of Management, Raleigh, NC, 27695-7229, United States of America, smoon2@ncsu.edu

1 - The Diffusion of Renewable Energy Among Households

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Sustainability has become a hot global issue and renewable energy sources are among the most important solutions discussed. Although the rapid growing market for renewable energy, we see very few research from marketing perspective addressing this topic. To fill this gap, we study the diffusion of renewable energy among households. More specifically we investigate the mechanism leads to the distribution of adoption timing across households. The nature of adoption (i.e. one would get the same electricity but from a different source) and the structure of the market (e.g. governmental subsidies play an important role in incentivizing adoption) make it distinct from the conventional models of durable good adoption in the extant literature. The results of the study would have implications for renewable business sector, utility companies, and policy makers.

2 - Riding Successive Product Diffusion Waves: Building a Tsunami via Upgrade-Rebate Programs

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Managing diffusion waves for successive product generations implies that marketing managers should try to dissuade some customers to jump across successive generation waves optimally for the company profits, as well as to lessen the regret of old-generation product buyers. In this paper we discuss how Upgrade-Rebates (also known as trade-in rebates) can be used to reintegrate owners of old versions of the product to the market and therefore accelerate current sales. Prior literature has considered upgrade-rebate program as a means to disable second hand market of the products, to decrease the regret of customers of buying the old generation product, to price discriminate the customers. However, most of the previous models analyze the program in an essentially static context. This paper takes a different approach to analyze the upgrade-rebate program in a dynamic context, where it is used to control the whole diffusion of the successive generations. We first build a general diffusion model for successive product generations. We study the optimal behavior of the firm controlling the prices and rebates associated to product upgrades. In order to quantify the effect of upgrade-rebate strategy, we particularize the general model for some general examples and numerically solve them for certain sets of parameter values. We demonstrate that the trade-in program accelerates the diffusion of the later generations but has the reverse effect for the diffusion of the old generation product. The size of the percentage gain in profits varies depending on several conditions, providing a 2-5% increase in total discounted profits.

3 - Replacing Household Durables – Does Consumer Innovativeness Matter?

Maria Kaya, Queensland University of Technology, 2 George Street, Brisbane, Australia, maria.kaya@qut.edu.au, Paul Steffens, Sonke Albers

Replacement purchases have a huge impact on the overall success of durable products such as televisions, notebooks or digital cameras. Companies like Whirlpool, Siemens and Sony want to know: When are consumers likely to purchase? Which consumers can be encouraged to make earlier replacement purchases? What factors drive these purchases? Yet replacement purchases have received relatively limited attention in new product diffusion research. Only a handful of studies have examined the drivers of replacement purchases. Although consumer innovativeness is recognized as the central consumer characteristic in studies of product adoption, research has yet to investigate its impact on replacement purchases. We explore empirically whether consumer innovativeness influences the timing of replacement purchases. We also re-examine the impact of other household characteristics by investigating their differential impact on replacements forced by failure versus discretionary replacements of working units. For our investigation we conducted a survey of the purchase behaviour for 8,077 households across six durable products: TV, VCR, DVD player, notebook, PC and digital camera. We contribute to diffusion research in two ways: Using hazard models we demonstrate that consumer innovativeness is a strong driver for the timing of discretionary replacements but not for forced replacements. We show the strength of this influence varies between products and household types. Second, we identify strong asymmetric effects of household characteristics between forced and discretionary purchases.

4 - The Roles of Cultural Elements in International Diffusion of Entertainment Products

Sangkil Moon, Associate Professor, North Carolina State University, Poole College of Management, Raleigh, NC, 27695-7229, United States of America, smoon2@ncsu.edu

This research investigates factors influencing entertainment products' international diffusion with a specific focus on cultural elements. Toward that end, we concentrate on two types of cultural factors: the cultural content embedded in the product and the cultural environment of the foreign market. To understand this cross-culture predictability issue, we develop a text mining procedure to elicit the cultural content of the product using consumers' online product reviews. On the other hand, to measure the cultural environment of the market, we apply the commonly used cultural distance measure. From a theoretical perspective, we rely on cultural discount and cultural categorization theories to explain foreign markets' acceptance of culturally specific elements. Given our interest in the cultural issues, we focus on entertainment products such as movies, books, play, and TV programs. In particular, because of relatively high data availability, we conduct our empirical test on American movies' international performances. Notably, we apply text categorization to infer whether each movie is American and un-American based on consumers' movie reviews. We find that the commercial success of American movies in international box-office is determined by the two cultural aspects along with the movie's characteristics and the market's economic environment. From a practical perspective, we find that Hollywood studios need to choose between two types of movies: relatively small-budget movies containing rich American cultural content and relatively big-budget movies with strong international cultural content. In choosing appropriate foreign markets, they need to balance both cultural and economic elements.

■ TA11

11- Empire

Geographic Models

Contributed Session

Chair: Rutger van Oest, Associate Professor, BI Norwegian Business School, Nydalsveien 37, Oslo, 0442, Norway, rutger.d.oest@bi.no

1 - Entry and Spatial Competition in Retail Markets

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Differentiation in both geographic location and store type plays a central role in retail markets and its importance has increased over time. The goal of this paper is to investigate entry and spatial differentiation among heterogenous retail food stores, and to assess the competitive intensity between traditional stores and so-called hard discounters, i.e., small stores with a core focus on low prices and limited product assortment. I use a static entry model with endogenous location and store type choices. The model allows for asymmetric competitive effects across both store types and locations. The empirical application relies on rich data on all retail food stores in Sweden, including their exact geographic location. Importantly, the study has the possibility to explore data before and after hard discount entry. It moreover adds spatial competition to previous studies of hard discount entry in European retail markets. The results show that competition between stores of the same type is strong, but declines relatively fast with distance. Discounters reduce the profits of traditional stores located nearby. The reverse effect is smaller but more persistent as distance increases. The findings contribute with knowledge regarding the role of product differentiation and the extent to which new players reduce profits of incumbent stores.

2 - An Empirical Study of National vs. Local Pricing under Multimarket Competition

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Geographic price discrimination is generally considered beneficial to firm profitability. Firms can extract higher rents by varying prices across markets to match consumer's preferences. This paper empirically demonstrates, however, that a firm may instead prefer a national pricing policy that fixes prices across geographic markets, foregoing the opportunity to customize prices. Under appropriate conditions, a national pricing policy helps avoid intense local competition due to targeted prices. I examine the choice of national versus local pricing under multimarket retail chain competition using extensive data from the digital camera market. I estimate a highly flexible model of aggregate demand that incorporates additional micro purchase moments and semi-parametric heterogeneity. Counterfactual analyses show that the major retail firms should employ a national pricing policy to maximize profits. Fixing prices across markets allows the retailers to soften otherwise intense local competition by subsidizing competitive markets with profit from less competitive markets. Additional results explore how market factors could affect the pricing policy decision and assist retail managers in choosing their geographic pricing policy.

3 - Inference From Store Closures: A Structural Model of Ubiquity for Starbucks

Ali Umut Guler, PhD Candidate, London Business School, Regent's park, London, NW14SA, United Kingdom, uguler.phd2008@london.edu

The density of the Starbucks store network has been a topic of general interest as the company consistently opened new outlets over the past two decades at an unprecedented rate. At the same time, many industry observers questioned this strategy in terms of its impact on the overall profitability of the firm. Starbucks profits did take a hit and the firm decided to close 800 US stores in two distinct actions in 2008 and 2009. Focusing on the Starbucks chain, this paper studies the interplay of opposing demand and supply side factors that jointly determine the profitability of a chain retailer's store network. Each new store is costly to run, but draws incremental customer visits. On the other hand, a dense store network enables economies of scope in various cost items, but additional outlets steal away customers from existing ones. The main aim of this study is to disentangle the impact of these factors on firm profits. Inference is based on a novel approach that makes use of the two mass store closures Starbucks went through. In the manner of entry models from the empirical industrial organization literature, Starbucks' decision to close or keep each of its stores is taken to be a revealed preference resulting from a latent profit function. As store closures provide exact data on locations where an outlet has not been profitable, inference based on closures is advantageous for studying the spatial aspects of a store network. Preliminary analysis documents evidence of cannibalization and economies of scope across neighboring stores. The impact of both factors diminishes as stores are located farther apart. A structural model of incremental store profits is developed to identify separately the demand and supply side determinants of profitability.

4 - Mapping Local Retailer Competition: Which Geographic Regions are Owned by Which Stores?

Rutger van Oest, Associate Professor, BI Norwegian Business School, Nydalsveien 37, Oslo, 0442, Norway, rutger.d.oest@bi.no, Auke Hunneman

A thorough understanding of the geographic extent of store trade areas is crucial in today's retail environment. Current methods to delineate retail trade areas, such as the traditional Huff model, approximate these areas quite well. However, a major limitation of these models is that they need individual-level consumer patronage data connecting regions to stores, leading to high data requirements. Although the widespread adoption of loyalty cards offers opportunities to overcome this limitation, such data are typically only available for the own chain and not for competitor chains. Furthermore, these data are only collected for members and might not be representative for the whole customer base. Alternatively, one could conduct a survey to investigate where customers come from and where they shop, but this approach is costly and based on self-reporting. Hence, there is a need for a model to identify retail trade areas that does not require individual-level customer patronage data. In this study, we offer such a model: it only needs (1) the aggregate sales levels for each store, (2) region-store distances, and (3) population characteristics at the region level. These data are either publicly available or routinely collected by data vendors such as AC Nielsen and Experian, and thus easily obtained. Our model structure is built from assumptions on individual-level customer behavior, but conveniently estimated at the aggregate level. This allows us to estimate trade areas for both existing and yet to be introduced stores. We calibrate and test the model using sales and location data for all grocery stores in a major Northwest European city.

■ TA12

12- Parliament

Retailing

Contributed Session

Chair: Vincent Nijs, Assistant Professor of Marketing, University of California, San Diego, Rady School of Management, La Jolla, CA, 92093, United States of America, vnijs@rady.ucsd.edu

1 - The Impact of Wal-Mart Supercenter Conversion on Consumer Behavior

Minha Hwang, McGill University, Bronfman Building, Rm 558, 1001 rue Sherbrooke Ouest, Montreal, QU, H3A 1G5, Canada, minha.hwang@mcgill.ca, Sungho Park

This paper provides an empirical study of the impact of Wal-Mart supercenter conversion on consumer shopping behaviors. By using a difference-in-difference estimator, we find that Wal-Mart gains 44% in weekly revenue from the conversion. Decomposing the revenue gains into components attributed to store visits and in-store expenditures, we find the majority of these gains were due to larger expenditures with a much smaller impact on store visit. In contrast, among the competing retailers, supermarket chains experience most significant loss of 19% weekly revenue mostly due to fewer store visits with a much smaller impact attributed to expenditure. Taken together, these findings suggest that consumers benefit from reduced shopping costs by making less overall trips and increasing their Wal-Mart basket sizes. In addition, we find that neighboring Wal-Mart supercenters also benefit from conversion due to a small increase in store visits. Finally, from category-level analyses, we find that gains in the expenditure in the converted supercenter due to positive demand spill-over are localized to food categories, which are close to newly-added produce sections. We discuss the implications of our findings for academics and retail managers.

2 - Impact of Shelf Design on Product Competition

Francisco Cisternas Vera, PhD Student, Carnegie Mellon University, Forbes 5000, Tepper School of Business, PhD program, Pittsburgh, PA, 15213, United States of America, fcisternas@cmu.edu, Alan Montgomery

Arranging products on a retail shelf can directly influence consumer purchase by making products easy to find, and also indirectly by influencing the competitive set of products that a consumer considers. Our research conjecture is that if products are placed closer together then the retailer can increase the competition between the products, but also encourage consumers to consider products that would not have previously been purchased. Our intuition is that consumer search is costly and that consumers focus their search to local neighborhoods that are influenced by shelf design, since search is costly consumers may not exhaust all possibilities which means that position could be an important component of consideration. To formally model this behavior we create a sequential consideration model. Initially consumers are influenced by colors or previous choices to begin their search. As consumers shift their focus they expand the

consideration set with products that are located near their focus, and sequentially compare their previous best choice with the spatially induced consideration set. Using this approach we found that the demand is greatly impacted by shelf position and retailers can create plan-o-grams that can shift demand from one product to another. Our focus on using shelf design to stimulate competition contrasts with past research on shelf design that has focused mainly on cost minimization. Preliminary data using the shelf-experiments from Dominick's retail stores shows that re-arranging the products on the shelf can improve the profits by up to 15%.

3 - A Targeting Approach Based on Consumers' Willingness-to-pay Ranges

Florian Dost, ESCP Europe Business School Berlin, Heubnerweg 8-10, Berlin, 14059, Germany, florian.dost@escpeurope.eu, Robert Wilken

Retailers customize shopper marketing activities to improve their effectiveness. They focus on consumer groups or individual consumers who appear likely change their choice behavior, e.g. in response to a price discount for a specific product. Academic insights into these targeting strategies are limited though. Thus, the current MSI Research Priorities call for "new ways" to leverage information about customer preferences ... to enhance or supplant conventional ... targeting approaches (MSI 2011, p. 4). We propose an in-store targeting approach that is based on consumers' willingness-to-pay (WTP) ranges. This approach classifies consumers into three categories, depending on whether they would certainly buy, certainly not buy, or express uncertainty about buying a particular product at a given price. With an analytic demonstration and across three empirical studies, we show that our targeting approach can benefit retailers: Compared with predominant practices (e.g., targeting loyal consumers or consumers of competing brands), our method demands relatively little effort, by targeting only uncertain consumers, but generates relatively large increases in choice rates. The result holds across different product categories (FMCGs and high-involvement electronic devices), varied marketing mix activities, different market settings (monopolistic or competitive), and different ways to identify consumer groups (WTP ranges, direct elicitation). Price promotions and positive word of mouth are particularly beneficial for the retailer. Between 30% and 40% of uncertain consumers adapted their choice behavior for a promoted brand. Decreased WTP ranges accounted for these effects. This result promotes the usefulness of range-based WTP as a basis for targeting.

4 - Should Retailers Outsource Category Management? The Impact of Using a Category Captain on Manufacturers, Retailers, and Consumers

Vincent Nijs, Assistant Professor of Marketing, University of California, San Diego, Rady School of Management, La Jolla, CA, 92093, United States of America, vnijs@rady.ucsd.edu, Kanishka Misra, Karsten Hansen

It has been argued that many retailers lack both the resources and capabilities to maximize category performance. Retailers may seek category management (CM) advice from a manufacturer, referred to as category captain (CC). A CC's recommendations affect all brands in the category, not just her own. While the number of CC-collaborations is increasing, many retailers are concerned about manufacturer opportunism and government agencies are wor- ried about anti-competitive behavior that could harm consumers. In this study we develop an empirical model to evaluate competing retailers' CC selection decisions and to quantify the impact of CC-arrangements and retailer-implemented CM on retailers, manufacturers, and consumer welfare.

■ TA13

13- North Star

Two-Sided Markets

Contributed Session

Chair: Upender Subramanian, Assistant Professor, University of Texas, Jindal School of Management, 800 W Campbell Road, Richardson, TX, 75080, United States of America, upender@utdallas.edu

1 - Optimal Matchmaking

Kaifu Zhang, INSEAD, Blvd de Constance, Fontainebleau, France, kaifu.zhang@insead.edu

Two sided-platforms - such as dating agencies, B2B platforms - often consider matchmaking as an important component of their services. Paradoxically, efficient matchmaking is aimed at helping clients find their 'right' counterparts, therefore stop using the matchmaking service. This paper explores the matchmaker's incentive to intentionally lower its efficiency and the moderating role of competition.

2 - When Do Markets Tip? A Cognitive Hierarchy Approach

Tanjim Hossain, University of Toronto, 105 St. George Street, Toronto, ON, M5S1J5, Canada, tanjim.hossain@utoronto.ca, John Morgan

The market structure of platform competition is critically important to managers and policy makers. While network effects in these markets predict concentrated industry structures, competitive effects and differentiation suggest the opposite. Standard theory offers little guidance—-full rationality leads to multiple equilibria with wildly varying market structures. We relax full rationality in favor of a boundedly rational cognitive hierarchy model. Even small departures from full rationality allow sharp predictions—-there is a unique equilibrium in every case. When participants single-home and platforms are vertically differentiated, a single dominant platform emerges. Multi-homing can give rise to a strong-weak market structure: One platform is accessed by all while the other is used as a backup by some agents. Horizontal differentiation, in contrast, leads to fragmentation. Differentiation, rather than competitive effects, mainly determines market structure.

3 - Consumer Heterogeneity and Product Offering in Two-sided Markets

Li Sun, Assistant Professor, Zayed University, P.O. Box 19282, Dubai, United Arab Emirates, li.sun@zu.ac.ae, Surendra Rajiv, Junhong Chu

Research on two-sided markets has highlighted the strategic importance of choosing the right pricing structure to maximize the two-way interactions between distinct platform user groups. However, the strength of indirect network effect empirically has been treated as being exogenous. From a marketing perspective, it can and should be determined by the match between platform users' tastes and platform-based product features offered by firms. It is especially true when there are providers of complementary products(to the platform) on the one side and end-users of complementary products on the other. In markets with highly heterogeneous consumers, it is possible that the overall network effect is low if the offered product features are not well synchronized with the distinct needs and wants of different consumer segments. This poses an additional challenge: the platform not only needs to grow the size of the complementary eco-system but also its composition to match consumers' taste. In an evolving market where different segments with varying preferences enter at different stages, the platform must constantly adjust the composition of complementary eco-system to ensure product-market fit. To demonstrate the importance of recognizing key product features and consumer preference characteristics in consumer choice decisions in a two-sided market, we propose a model for consumer's hardware adoption in home video game market. The results suggest that the indirect network effect of software supply hardly spills over across consumer segments because they have distinct tastes for the types of games. Hence, the strength of indirect network effect on the consumer side varies, depending on the extent to which the supply of software variety matches consumers' tastes.

4 - Portal or Pipe: Wireless Service Provider Strategies for Mobile Applications

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Many wireless service providers sell mobile content and applications to their cellphone subscribers through their own branded portals (e.g., Verizon VCast, Vodafone Live!). However, even as the demand for such content and applications has been increasing, some wireless providers are moving away from this strategy (e.g., Verizon, Sprint), opting instead to act merely as bandwidth providing "pipes"; selling bandwidth to application providers and allowing them to directly and independently sell to consumers. In this paper, we examine when and why a wireless service provider might choose to offer a portal or act as a pipe. We analyze a market served by two service providers who differ in their network coverage across the market. We consider that consumers demand for wireless voice (cell phone) service and mobile applications are sensitive to network reception. We find that by offering a portal, a service provider can strengthen its tie with subscribers and also manage both sides of the market. However, when both service providers offer portals, they gain a monopoly over access to their subscribers, which may lead to intense competition to acquire subscribers. Whereas, when a service provider acts as a pipe, it can soften competition for subscribers by providing a viable alternative for application providers to reach the rival's subscribers and, thereby, reducing the rival's incentive to acquire subscribers. We find that when applications are not very sensitive to differences in network coverage or quality, then service providers are more likely to act as pipes than as portals. Our results are consistent with the market observation that service providers adopting "pipe" strategy have done so primarily for low-bandwidth, network insensitive applications.

■ TA14

14- Defender

Brand Equity

Contributed Session

Chair: Richard Briesch, Southern Methodist University, 6212 Bishop Boulevard, Dallas, TX, 75025, United States of America, rbriesch@cox.smu.edu

1 - Autoregressive Latent Trajectory Modelling to Track the Change in Customer Equity and Brand Equity

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Although there is a large body of research on marketing performance, the majority of them if not all capture a single snapshot of performance in time. However marketing performance is an ongoing process which varies over time. More recently few studies have shifted their focus to determine the long term influences of marketing strategies and actions on marketing performance. However the findings of those studies indicate a positive/ negative relationship between marketing actions and marketing performance in the long term but there is little guidance on the nature of this relationship and the way marketing actions affect marketing performance. This study using autoregressive latent trajectory (ALT) model which is a combination of autoregressive models and latent growth curve (trajectory) models proposes a new framework to track the change in marketing performance as a result of change in marketing actions over the long term. Since ALT models enable us to have more than one performance indicator, by focusing on firm intangible assets we consider brand equity and customer equity as performance indicators. Controlling for time- invariant and time- varying parameters such as firm size, market share, and industry competition, current research captures the impact of advertising, promotion, product innovation, and distribution on brand equity and customer equity across all time points in long term. This research contributes to the marketing literature by quantifying the nature of change in brand equity and customer equity in the long term as a result of the change in its predictors using ALT.

2 - Will Employees' and Customers' Perception of Brand Value Affect Firm Profitability?

Anita Pansari, Research Scholar, IFEN, Dontapally, Shankerpally Highroad, Hyderabad, India, anitapansari1@gmail.com, V. Kumar

In a market where most products are homogeneous in nature, exceptional service is a competitive advantage for firms. Firms interact with customers on a day to day basis and these interactions, if managed efficiently could be a source of competitive advantage. The success of these interactions depends on the employees as they are the face of the firm and a key component for interaction. The employees' behavior, attitude and action can either strengthen a brand's advertised standards or if incompatible with these standards,can challenge the credibility of the organization. Therefore,it is essential to align employees' values,standards and behaviour with the brand's desired values and standards. An effective internal communication of a brand with its workforce enhances the intellectual and emotional commitment of its employees towards the brand. The most vivid service impression occurs during the service encounter or moment of truth, i.e. when customers interact with the service company (Zeithaml & Bitner, 2002). This interaction between customer satisfaction and employee productivity or service quality has a huge impact on financial performance for products. Past studies have analyzed the impact of service quality on customer satisfaction and customer's impact on firm profitability,but there is a dearth of literature on the effect of employees on profitability. Also,there is no literature on the combined impact of employees and customers attitudes on firm profitability. Therefore,the objective of this paper is to propose a conceptual framework which studies the impact of both the employees and customers attitudes on firm profitability and also understand the effect of employees' brand values on the customers attitudes.

3 - The Dynamic Impact of Product-harm Crises on Brand Equity and Advertising Effectiveness

Yan Liu, Assistant Professor, Texas A&M University, 4112 TAMU, College Station, 77843, United States of America, yliu@mays.tamu.edu, Venkatesh Shankar

Brand equity is fragile to product-harm crises such as product recalls. Despite the potentially devastating effects of these crises, most firms are inadequately informed and underprepared to handle them (Dawar and Pilluta 2000). How do product recalls affect brand equity? How do they influence the effectiveness of different types of advertising? How should firms allocate their advertising spending across different types? The answers to these questions will enable firms make better advertising allocation decisions and rebuild brand equity in response to product recalls. In this study, we develop a state space model of brand equity based on Kalman filtering to capture the dynamics related to spending on different types of advertising. We then integrate the Kalman filter with a random coefficient demand model based on BLP (1995). The model allows us to capture the direct effects of product recall on brand equity as well as the indirect effects of recall on brand equity through the effectiveness of different advertising types. We estimate our model on a dataset from the automobile industry, comprising 35 auto brands that had a total of 642 recalls during 1997-2002. Our results reveal that product recall has no direct effect on brand equity. However, it has significant negative influence on the effectiveness of each advertising type, with sponsorship advertising suffering the most. The reallocated advertising budget based on our model is associated with higher sales and profits. Our results have other important managerial implications as well. They suggest that, in response to product harm crises, firms should avoid advertising the recalled model, cut sponsorship advertising, and spend more on non-recalled product model and promotional advertising.

4 - The Effect of Consumer Brand Equity on Firm Brand Profitability

Richard Briesch, Southern Methodist University, 6212 Bishop Boulevard, Dallas, TX, 75025, United States of America, rbriesch@cox.smu.edu, Bill Dillon, Raj Sethuraman

This research addresses three questions – What is the effect of consumer level brand equity on firm level brand profits? How does consumer equity affect other financial outcomes such as revenues and ratio of channel profits? Is revenue premium a good outcome measure of brand equity? We define consumer level equity in terms of incremental utility for the brand and assess its impact in a market consisting of two brands and one retailer. Our research approach uses equilibrium analysis supplemented with numerical analysis. Our model yields several qualitative insights. Some key insights are: (i) Investing in equity yields larger profits for the brand with higher category and brand potential. (ii) Higher price sensitivity in the market diminishes the ability to get high profits through equity enhancement. (iii) Equity helps the focal brand without hurting the competition that much. (iv) The presence of a retailer significantly diminishes the profitability of equity enhancement for the manufacturer but the presence of a private label (retailer's brand) does not significantly alter the profitability compared to another manufacturer's brand. (v) Total focal brand and channel profits increase with consumer equity, representing a win-win situation for both manufacturer and retailer but the manufacturer gets greater share of the increased profits. (vi) Revenue premium measure (Difference in revenue between branded and unbranded goods) is an excellent outcome measure for tracking movement of consumer brand equity for a given brand but it is not a strong measure for tracking variation in consumer equity across markets or categories. The managerial implications of these findings and directions for future research are discussed.

■ TA15

15- Great Republic

Marketing Productivity and Customer Value I

Cluster: Special Invited Sessions

Invited Session

Chair: Xueming Luo, Eunice & James L. West Distinguished Professor of Marketing, University of Texas at Arlington, S West Street, Arlington, TX, United States of America, luoxm@uta.edu

1 - Do Recalls of One Brand Hurt or Help Rival Brands: Halo Effects in Social Media

Abhishek Borah, PhD Candidate, University of Southern California, Dept. of Marketing, Los Angeles, CA, 90089-1421, United States of America, aborah@usc.edu, Gerard Tellis

The halo effect refers to the phenomenon wherein if people perceive an entity to rank very high on one attribute, they perceive it to rank high on other independent attributes too (Thorndike 1920; Hindle 2008). Current research has attempted to mine online conversations for brand perceptions. However, no research has evaluated if the Halo effect exists in online conversations. Halo effects in online conversations can have important consequences on a firm's perception and performance, especially due to major events such as product recalls. None so was more in the news than Toyota's recall crisis. Product recalls can have a significant impact on firm's sales and financial value (Chen, Ganesan and Liu 2009). Using a unique dataset of online conversation data (for 4 categories) and a set of techniques such as Synthetic Control Method (Abadie et al. 2010) and Vector Autoregressive Models, the authors first test the Halo effect, i.e., whether negative/positive conversations about an attribute (e.g., Toyota's "Safety" attribute) lead to more negative/positive conversations for an independent attribute of the same brand (Toyota's "Fuel economy" attribute). Second, it tests the 'competitive halo effect. It tests if negative/positive conversations about a brand (e.g., Toyota) on one attribute lead to more negative/positive conversations for another brand (for example: Honda) on the same attribute. The authors find that Halo effects exist in online conversations and discuss the managerial implications.

2 - Modeling the Immediate and Long-term Effectiveness of Location-targeted Mobile Marketing Channels

Xueming Luo, Eunice & James L. West Distinguished Professor of Marketing, University of Texas at Arlington, S West Street, Arlington, TX, United States of America, luoxm@uta.edu, Zheng Fang, Wei Li

Mobile marketing enables firms to deliver advertising messages to customers where they are mostly likely to purchase. This study explores the role of location-targeted mobile marketing channel (LTA) in affecting consumer adoption of new technologies and generating sales. The authors use daily cinema sales data on more than three million customers from one of the world's biggest mobile companies. The developed time-series models reveal that LTA can predict and affect mobile sales in the short and long runs. In addition, the sales impact of LTA is asymmetrically larger for the heavy user segments, but moderate for the light user segment with a long decay. The results also indicate a stronger sales impact of LTA relative to online pop-up window ads, especially in terms of the cumulative sales.

3 - Informational Value of Social Tagging Networks

P.K. Kannan, University of Maryland, College Park, MD, United States of America, pkannan@rhsmith.umd.edu, Hyoryung Nam

Social tagging is a new way online users categorize and share web content with keywords and is becoming a fast-growing alternative to traditional search systems. With this system, content is organized and shared through user-generated keywords, "tags", and the networks of tags present a semantic interrelationship between the content. The rich associative information in social tagging networks provides marketers with opportunities to readily infer consumers' attitudes, perceptions, preferences, and schema. This paper investigates how information contained in social tags predicts and tracks the financial valuation of firms, using the data collected from a social bookmarking website, del.icio.us for 61 firms across 16 industries. The authors find that brand asset metrics based on social tags explain variations in the unanticipated stock return after controlling for the firm's accounting metrics (unanticipated sales growth and unanticipated increase in return on assets) and that the informational value of social tag metrics varies across brands. Specifically, the authors find that an increase in social attention and connectedness to competitors is positively related to stock return for less prominent brands while for prominent brands associative uniqueness and evaluation valence are more significantly related to stock return. The proposed social tag metrics can provide firms with solutions to track and mine the intangible brand assets and further serve as a new way to evaluate and predict a firm's financial performance.

4 - More Than Numbers: Marketing Information Disclosures and IPO Pricing

Raji Srinivasan, Associate Professor of Marketing, University of Texas-Austin, Red McCombs School of Business, Austin, TX, United States of America, raji.srinivasan@mccombs.utexas.edu, Robert Parrino, Nicholas Crain

Firms routinely disclose both quantitative reports of marketing spending and qualitative reports of their marketing programs. A question that has been unexplored in the literature is whether the value relevance of disclosures of marketing spending (R&D and advertising spending) differs from qualitative disclosures of firms' marketing. The authors examine this issue in the context of pricing of Initial Public Offerings (IPOs), a context where there is quantitative disclosure of firms' marketing spending and qualitative marketing disclosures. The authors hypothesize that disclosures of firm's R&D and advertising spending and marketing content in the IPO prospectus, will independently and jointly affect the IPO price update, defined as the difference between the midpoint of the price range in the initial IPO prospectus and the offer price to investors. The authors test the hypotheses using a sample of 707 high technology U.S. IPOs between 1996 and 2007. They use computerized text analysis of marketing content in the IPO prospectus. Independently, R&D spending decreases and marketing content increases price update; jointly, R&D spending and marketing content increase price update. Advertising spending has no effect on IPO price update. Additional analysis indicates that after controlling for IPO price update, marketing information disclosures, whether quantitative or qualitative, have no effect on IPO initial returns. The results are robust to alternative measures and samples. The findings have implications for marketing theory and managerial practice.

■ TA16

16- St. George A

Game Theory Strategy I

Contributed Session

Chair: Sherif Nasser, Assistant Professor of Marketing, Washington University in St Louis, 1 Brookings Drive, St Louis, MO, 63130, United States of America, nasser@wustl.edu

1 - The Advantages of Underestimating the Competition

Jennifer Cutler, Doctoral Candidate in Marketing, Duke University, 100 Fuqua Drive, Durham, NC, 27708, United States of America, Jennifer.Cutler@duke.edu, Richard Staelin

"Never underestimate the competition", is an adage so widespread in business literature that it has nearly become accepted as axiomatic. Yet, robust behavioral research shows that managers have a bias towards just that behavior; they systematically underestimate the skill of others. To explore whether such a bias towards underestimating competitors is as damaging as conventional wisdom suggests, we develop a theoretical model built upon the premises of bounded rationality that compares the long-term payoff ramifications of different opponent estimation biases. Using dynamic two-player games as a foundation, we define a game structure as the infinite set of all possible game trees of a given length and complexity for which payoffs are drawn randomly from a continuous distribution. We define each player's skill as the number of periods into the future he can reason through. Bias is captured by defining directional error in a player's beliefs about his opponent's skill. We derive the expected payoffs for any game structure and skill set for each type of bias, then prove inequalities in the effectiveness of each bias as a function of contextual parameters. We find that, when calculation is costly, overestimation is strictly dominated by other strategies over the entire parameter set. Furthermore, the relative advantages of underestimation bias increase when players are more skilled, when the game is highly complex, and when there is a strong first mover advantage. Our results suggest that, contrary to popular belief, managers may be better advised to avoid overestimating the competition.

2 - Optional versus Standard Features

Alex Kim, Assistant Professor, Long Island University, 720 Northern Blvd, Brookville, NY, United States of America, alex.kim@liu.edu, Subramanian Balachander, Tansev Geylani, Esther Gal-Or

Competing brands differ in the extent to which they offer a feature as standard or optional on their product variants. In this paper, we study the competitive basis for this difference in brands' product line strategies. Specifically, we analyze the relationship between a brand's quality image and its propensity to offer a more differentiated, wider product line, starting from a relatively stripped-down base model to a more feature-rich model. We consider a duopoly model with two vertically differentiated firms, and demonstrate that when the quality differential between the firms is sufficiently large, the unique equilibrium has the low quality firm providing both a base product and the option to upgrade it with a feature, whereas the high quality firm offers the feature as a standard component of its product. Hence, our model suggests that higher quality firms are likely to have narrower product lines. An empirical analysis of the US passenger car market supports this prediction.

3 - Inter-temporal Pricing Strategy with Product Concept Demonstration

Taewan Kim, Syracuse University, 721 University Ave., Syracuse, NY, 13244, United States of America, tkim21@syr.edu, Eunkyu Lee

Trade shows are popular venues for firms to showcase their innovative activities to their industry cohorts and to the general public. One of the important effects of such pre-launch demonstrations is that some buyers may choose to wait for the new model launch instead of purchasing a currently available model without a delay. Little research has been done regarding how this delayed purchase behavior affects the firm's marketing strategy for the old and new models. In this study we develop a two-period model to analyze the inter-temporal strategic interactions in a firm's pricing strategy for the old and new models with product concept demonstration. Our analysis provides new insights into the interplay of product positioning and product concept demonstration that induces varying degrees of purchase delay while shaping the firm's dynamic pricing strategy. Interestingly, we find that product concept demonstration can bring the new product's price lower than that without a demonstration, and that the amount of delayed purchases induced by the product concept demonstration is greatest at very low or high levels of product substitutability, exhibiting a U-shaped pattern. Our results indicate that engaging in pre-launch product concept demonstration is not always the optimal strategy for the monopolistic firm.

4 - Competing on Turnaround Time under Demand Uncertainty

Sherif Nasser, Assistant Professor of Marketing, Washington University in St Louis, 1 Brookings Drive, St Louis, MO, 63130, United States of America, nasser@wustl.edu, Danko Turcic

In fast moving, seasonal industries such as fashion, firms need to decide on the degree to which their manufacturing systems are flexible or rigid. A rigid system may rely on less costly overseas suppliers but requires production commitments before demand characteristics are fully revealed. A flexible system, however, may rely on more costly but more nimble domestic suppliers. We investigate an industry in which firms sell fashion goods and face uncertainty about which of the possible product designs will be a fashion "hit" and which will be a "flop". Firms can choose from two possible manufacturing systems: flexible and rigid. Under a flexible (rigid) system, the firm commences production once (well before) the hit and flop are revealed and bears a high (low) marginal cost. We first study a monopoly and identify the conditions under which a monopolist chooses the rigid or the flexible system. Next, we study a duopoly and identify conditions, under which a rigid (flexible) manufacturer prefers to compete against another rigid (flexible) manufacturer. Our results indicate that firms may choose asymmetric production strategies and that adopting a rigid system may lead to higher equilibrium price.

Thursday, 10:30am - 12:00pm

■ TB01

01- Essex Ballroom South

Search Marketing - I

Cluster: Internet and Interactive Marketing

Invited Session

Chair: John Hauser, Kirin Professor of Marketing, Massachusetts Institute of Technology, Sloan School of Management, E62-538, 77 Massachusetts Avenue, Cambridge, MA, 02139, United States of America, hauser@mit.edu

1 - Do Display Ads Influence Search?

Pavel Kireyev, Harvard Business School, Soldiers Field Road, Boston, MA, 02163, United States of America, pkireyev@hbs.edu, Sunil Gupta, Koen Pauwels

Consumers typically experience multiple exposures to online advertising before deciding to click on a paid search ad or display banner pertaining to the firm. Traditional ROI metrics provided by search engines and display ad networks do not capture prior cross-channel ad exposures, thereby limiting managers to rely on heuristic judgment to account for possible spillover effects in search and display advertising. We develop an econometric model to investigate synergies across online marketing channels using data on the marketing mix actions of a bank interested in acquiring customers through its website. We find that exposure to display advertising significantly affects consumers' propensity to subsequently click on a paid search ad. Our model maps the dynamics of this display-search spillover effect and captures the profit impact of overlap in the reach of display ad networks. An empirical application conducted by the bank, which involved using internet cookie data to trace consumers' paths from exposure to conversion, supports our findings. We implement an optimization procedure for resource allocation across synergistic online advertising channels. This research provides managerial guidelines for optimal budgeting and sheds light on the click attribution problem in online marketing ROI measurement.

2 - Competitors' vs. Focal Keywords: An Empirical Analysis of Sponsored Search Advertising

Xiaomeng Du, PhD Candidate, Peking University, Room 416, Building 4, Zhongguanxinyuan, Beijing, China, fancia814@gmail.com, Meng Su, Rui Pan, Xiaona Zheng

One of the main research streams in search engine marketing examines how the characteristics of keywords influence their performance such as click-through rate (CTR), conversion rate (CR), cost per click (CPC) and rank, and further influence the advertising campaign's financial performance, such as total orders and profit. However, little existing research distinguishes focal keywords (representing a firm's own products and services) from competitor's keywords (containing the business names and brand names of the firm's competitors) and evaluates the different effects and performance of these two types of keywords. The purpose of this paper is to examine the strategic difference of between competitors' keywords and focal keywords, and to study the influence of other keyword characteristics on the performance of the advertising campaign. Our data includes daily information of keyword advertisement campaigns from a large global B2C company during 90 days. Specifically, it includes 168,627 observations from a total of 1,874 unique keywords. We build a nonlinear simultaneous equation model to address the endogeneity problem dwelled in the estimation equations of CTR, CR, CPC and Rank and use the iterated GLS ('IZEF) estimator to identify the parameters. Our results suggest that the optimal advertisement design for focal keywords and competitors' keywords should be differentiated. Specifically, if a firm plans to advertise for its focal keywords, it should pick up longer keywords, and choose more exact matched keywords, because those keywords actually bring higher click-through rate, higher conversion rate and profit. Conversely, if a firm plans to advertise its competitors' keywords, it should pick up shorter keywords, and use broad match type to achieve higher profit.

3 - To Buy or Not to Buy? A Two Stage Model of Within Site Search

Ammara Mahmood, PhD Student, Said Business School, University of Oxford, Oxford, United Kingdom, ammara.mahmood@sbs.ox.ac.uk, Catarina Sismeiro

The authors introduce a two stage dynamic model to study the within site purchase and search behavior of online customers visiting one of the largest European online travel agencies. The authors highlight the importance of visitors' browsing experience and information search as predictors of purchase outcomes. Using a nested model of purchase incidence and carrier choice, the authors find that spatial price variation results in greater search, while the number of flight options positively influences purchase incidence. The authors find that active involvement in the search process increases the likelihood of purchase, however, once customers exit without making a purchase they are less likely to purchase in subsequent visits to the website. Consumers are also found to exhibit learning during search as they update internal reference prices based on observed prices and are more likely to buy when prices are below their reference point. Furthermore, expected expenditure and flight characteristics are key determinants of airline choice. Observed heterogeneity in search behavior also influeces the purchase decision. The authors test the robustness of their results by comparing the search model with a base model without pre-purchase behavior. Compared to the search model, the base model overestimates price sensitivity and results in poor fit. The authors also compare the predictive performance of the proposed search model in a holdout sample and find that models calibrated on all site visitors have superior prediction than models calibrated on a subset of purchasers. Implications for travel websites in particular and websites in general are also discussed.

4 - Morphing Banner Advertising

John Hauser, Kirin Professor of Marketing, Massachusetts Institute of Technology, Sloan School of Management, E62-538, 77 Massachusetts Avenue, Cambridge, MA, 02139, United States of America, hauser@mit.edu, Robert Bordley, Gui Liberali, Glen Urban, Erin MacDonald

Bayesian methods enable a website to infer cognitive styles and other segmenting variables from a consumer's clickstream. Morphing enables the website to learn (near optimally) which look and feel (website morphing) or marketing tactics (banner morphing) to serve to each consumer segment in order to maximize outcome measures such as click-through, brand consideration, or purchase. Morphing methods work best on high-traffic websites with tens of thousands of unique visitors – on such websites consumer-to-consumer discounting is low, the future is valued highly, and it takes such large samples for the learning to reach steady state. This paper describes the first large-sample random-assignment field test of banner morphing – over 100,000 consumers viewing over 450,000 banners on CNET.com. (Previously published evaluations were based on predictive simulations using priming-study data.) Click-through rates almost double relative to a control on behaviorally-relevant webpages. We supplement the CNET field test with a focused experiment on an automotive information-and-review website called Consumer Research Power. The focused experiment replaces the expected-Gittins'-index strategy with a direct-measurement longitudinal design which tests the premise of morph-to-segment matching. Banners matched to cognitive styles and the stage of the consumer's buying process increase click-through rates, brand consideration, and purchase likelihood relative to a control.

■ TB02

02- Essex North Center

Customer Analysis and CLV - II

Cluster: Internet and Interactive Marketing

Invited Session

Chair: Peter Fader, University of Pennsylvania, Wharton School, 3730 Walnut Street, Philadelphia, PA, 19104, United States of America, faderp@wharton.upenn.edu

1 - Predicting Partial Customer Churn in Retail: On the Value of the Purchasing Sequence

Vera Miguéis, University of Porto, Rua Dr. Roberto Frias, Porto, 4200-465, Portugal, vera.migueis@fe.up.pt, Dirk Van den Poel, Ana Camanho, João Falcáo e Cunha

Currently, in order to remain competitive companies are adopting customer centered strategies and consequently customer relationship management (CRM) is gaining increasing importance. In this context, customers retention deserves particular attention in the grocery retail sector. By using accurate churn prediction models companies can target potential churners in retention marketing campaigns. This paper proposes a model for partial churn detection in grocery retail sector that includes the similarity of the sequence of products first purchase with churners and non-churners sequences as explanatory variable. We model the sequence of first purchase events by means of Markov for Discrimination. Two data mining classification techniques are used in this study: Logistic regression and Random forests. It is analyzed a real sample of approximately 95.000 new customers taken from the data warehouse of a European retailing company. The area under the receiver operating characteristic curve and percentage of correctly classified customers are used to assess the performance of the model proposed and to compare the prediction ability of the classification techniques used. The empirical results reveal the relevance of the inclusion of the products sequence likelihood in the partial churn prediction models, as well as the supremacy of Logistic Regression when compared with Random Forests.

2 - The Power of Second "Customer Lifetime Value"

Yashoda Bhagwat, Georgia State University, 35 Broad Street, Suite 400, Atlanta, GA, 30303, United States of America, ybhagwat1@gsu.edu, V. Kumar, Alan Zhang

Traditionally firms have focused on acquisition and retention efforts to grow and maintain their customer base. Recently firms have also started to allocate resources to customer reacquisition efforts. Of interest to the firm is identifying which defected customers are worthy of reacquisition resources. This paper aims to help managers choose who to target with reacquisition tactics by modeling each lost customer's Second Lifetime Value (SLTV). By modeling how profitable

customers will be in their "second lifetimes" and how long they will remain customers with the firm, managers will have a much better understanding of which customers are worthy of reacquisition resources. By modeling SLTV this paper also explores how a customer's behavior in his or her first lifetime is related to his or her second lifetime value. Specifically, this paper studies whether the reason for defection has implications for whether that customer is likely to respond positively to winback strategies and how profitable he or she will be in the second lifetime. While the SLTV of customers is of importance to firms it may undervalue the potential of a customer to contribute to the firm. A customer can contribute to the firm through his or her own transactions but can also contribute to the firm by recruiting new customers through referrals and thus increasing his or her engagement value (Kumar et al 2010). Hence, this paper also investigates how the reason for defection is related to a customer's Second Lifetime Referral Value. The findings of this paper will enable managers to determine which of their lost customers are worthy of reacquisition efforts, how to target them with differential winback strategies, and how to extract more value from reacquired customers.

3 - A Study on the Empirical Validation of Probabilistic Customer-base Analysis Models

Evsen Korkmaz, Rotterdam School of Management, Burgemeester Oudlaan 50, Rotterdam, 3062 HB, Netherlands, ekorkmaz@rsm.nl, Roelof Kuik, Dennis Fok

In Internet retailing, customers may regularly shop at the same site. However, if the customer decides to stop shopping at the site, he will not inform the retailer. A probabilistic customer-base analysis model may be used to infer which customers are still active at a certain moment in time, given the purchase history. However, as the dropout process is not observed, these models are relatively complex in terms of their estimation methods. Furthermore, they sometimes do not perform substantially better than heuristics. In this study, we carry out an empirical validation of the most established probabilistic models in the literature: Pareto/NBD, BG/NBD, the Hierarchical Bayes Pareto/NBD, and the recently proposed PDO model. We compare these models to a number of heuristics using three data sets, one from a Dutch online grocer, second the well-known CDNOW data set and the third from a Turkish grocery retailer. We focus on two dimensions of the models. The first dimension is the models' ability to distinguish active customers from inactive. The second dimension is predicting transaction numbers on the individual as well as the customer-base level. We show which model should be used under which general circumstances. The general conclusion is that e-retailers are advised to use different types of models and heuristics in order to get better predictions. This holds especially for lifetime estimates.

4 - Bringing Heterogeneity into Customer Equity Calculations

Peter Fader, University of Pennsylvania, Wharton School, 3730 Walnut Street, Philadelphia, PA, 19104, United States of America, faderp@wharton.upenn.edu, Bruce Hardie, Yuzhou Liu

Since the pioneering work of Gupta et al. (2004), researchers have explored the idea of estimating current-customer equity (CCE) using company-reported summary data. One key assumption of this work is that of constant retention rates. However this assumption does not hold in practice, and we know that failing to account for cohort-level retention-rate dynamics leads to systematically biased estimates of CCE. One reason why researchers have not captured these retention-rate dynamics is the belief that we need longitudinal data for each cohort of customers in order to estimate the parameters of any formal model of contract duration (such as the beta-geometric distribution). We show that this need not be the case. In fact, under certain assumptions, all we require are data on the number of new subscribers and the total number of subscribers for each period. However, it does assume that we have these data from the time the service of interest was launched on the market, which is not met in most settings. We propose a solution to this problem of left-censoring that involves "backcasting" the arrival of new subscribers. We illustrate our methodology using data from Netflix.

■ TB03

03- Essex North West

Social Media - Commerce & Context

Cluster: Internet and Interactive Marketing

Invited Session

Chair: Mark Elsner, University of Cologne, Albertus Magnus Platz 1, Cologne, Germany, elsner@wiso.uni-koeln.de

1 - Corporate Social Media: Which Impact Have Online Conversations on Firms' Blogging Effectiveness?

Cornelia Caprano, University of Zurich, Plattenstrasse 14, Zurich, 8032, Switzerland, cornelia.caprano@business.uzh.ch, Florian Stahl, Hans Peter Wehrli

The growth of social media and the decreasing effectiveness of traditional marketing have lead to a surge of interest in using corporate weblogs for marketing purposes. Despite the potential of corporate social media to increase the visibility of brands, products and services without spending millions of dollars in advertising, companies still struggle in finding an effective and traffic generating communication strategy for corporate weblogs. In this paper we analyse the impact of user-generated comments and online conversations between firms and (potential) customers on the attractiveness of corporate weblogs. In particular, we quantitatively analyze the formal as well as content-related characteristics of feedback triggered weblog conversations and their effects on weblog readership measured in the number of visitors and page views. Using a unique cross-sectional sample of corporate blogs of twelve Global Fortune 500 companies, we derive empirical insights about the impact of conversational activity on weblog traffic. The findings of our study provide several insights how micro-conversations on corporate social media such as weblogs can lead to an engagement with current as well as potential customers.

2 - How is the Purchase Motive for Social Commerce Formed?

Byunghui Shim, Korea University Business School, Anam-dong, Seongbuk-gu, Seoul, Korea, Republic of, bhshim@gmail.com, Tae Ho Song

Since the success story of Groupon in the United States, Social Commerce has been rapidly spreading out around the world. Social Commerce markets have also been showing a steep growth domestically, focusing on the social shopping type of businesses, and there is a drift towards having accelerated competition with the participation of conglomerates as well. This study examines to guide those social commerce businesses how to survive in this heated social commerce markets by looking into the process of the formation of purchase motive for social commerce through the comparison with Internet Shopping Malls. The result of the path analysis using AMOS is as follows. First of all, unlike the Internet Shopping Malls in which utilitarian value affects purchase intention relatively more than hedonic value does, it is identified that in Social Commerce, hedonic value affects the purchase intention more than the utilitarian value does and thus there is a clear difference between the consumers' value forming their buying motives in those two different types of commercial transactions. Second of all, among the factors that affect purchase intention, the impact of the perceived price and the consumers' collectivist inclination when perceiving hedonic value has appeared to be significant only for Social Commerce, and the impact of the perceived scale and reputation on perceiving utilitarian value has appeared to be greater for Social Commerce than for Internet Shopping Malls. For the case of the impact of perceived price on utilitarian value, contrary to expectations, it was not appeared to be greater for Internet Shopping Malls than for Social Commerce. Lastly, it has been identified that utilitarian value is the preceding factor that forms hedonic value.

3 - When to Buy and When to Redeem?: Consumer Learning with Daily-deal Coupons

Minjae Song, Simon Business School, Box 270100, University of Rochester, Rochester, 14627, United States of America, minjae.song@simon.rochester.edu, Eunho Park, Byungjoon Yoo, Seongmin Jeon

Recently, daily-deal sites, starting with Groupon, have attracted a lot of Internet traffics. Daily deals are sold in a coupon format through daily-deal sites with at least fifty percent discount. For deals to be on, it requires the predetermined minimum number of buyers to commit to purchase, and once deals are on, all purchasers have the same time window for redeeming coupons. In this paper we use consumer-level panel data from one of the major daily-deal sites in Korea to analyze how consumers change their purchase and redemption behaviors as they become more experienced. In particular, we test whether the purchase and redemption times of more experienced consumers are statistically different from less experienced ones. We find that more experienced consumers tend to buy before deals are turned on. We argue that this is evidence that consumers become less dependent on other people's commitment. This implies that consumers maximize their own utilities rather than a social utility. A utility-maximizing individual should not care how many people have committed to buy at the time of her click because there is no extra benefit of waiting for a deal to be turned on. We also find that more experienced consumers tend to redeem their coupons later. This finding suggests that consumers dislike congestion in redeeming coupons and try to avoid it in their next redemptions. Based on these findings we argue that Groupon's group-purchase feature will become less effective over time and that the redemption congestion, which is an inevitable by-product of the group-purchase feature, will become a challenge in its future success.

4 - Community Management: A New Marketing Perspective for Social Media?

Thomas Stenger, France, University of Poitiers, 20 Rue Le Troubadour, 86022 Poitiers, Francetstenger@iae.uni-poitiers.fr

Both academics and practitioners have emphasized the tremendous marketing potential of social media. It should also be observed that the rules of participation on social media sites are not as obvious to brands (e.g. Nestlé versus Greenpeace, March 2010). One of the main answers, to fit in with the 'social media culture, is found in just two words: "Community Management". The 'Community Manager" has appeared as the new appointment to take on the challenges of all brands and companies within social media. Who are these community managers? What are their roles and their missions? How is community management used to establish brand presence and participation on social media? This paper proposes an exploratory study to define the logic and practice of community management as part of new marketing practice for brands on social media. Initially this article relies on a literature review dedicated to community

and management within the context of e-marketing. In the second part, an online monitoring of the professional's blogs and main Twitter accounts (in France), and an analysis of sixteen community manager interviews published online are studied in detail, in order to understand the contours of community management as defined by the professionals themselves. Finally, the third and main part shows the results of qualitative research based mainly on in-depth interviews carried out with 13 community managers. The interviews enable us to think more clearly about the modalities of presence and participation for brands on social media and also illustrate how community management has become a new issue for marketing.

5 - What's in a Story? Factors Influencing the Popularity of Online Content in Social Media

Mark Elsner, University of Cologne, Albertus Magnus Platz 1, Cologne, Germany, elsner@wiso.uni-koeln.de, Lara Lobschat, Werner Reinartz

Social media are increasingly influencing public opinion about companies, products and brands. Therefore, marketers are interested in understanding the processes that lead to high degrees of visibility for certain online content. Such a better understanding can help companies establish early-warning systems for potentially threatening content or create marketing messages that will be exchanged between users and in the best case go viral. However, so far, only limited knowledge exists as to which factors cause popularity in social media settings. In this context of user-promoted online content, we propose a two-stage propagation process. In the first stage, the egocentric network structure of the submitter plays a determining role for a story to achieve popularity. In the second stage, however, the main drivers of popularity are content-specific factors. In our approach, we focus on the second stage and construct and implement a measurement tool for subjective story coding that incorporates a diverse set of distinct aspects of content as well as different emotional states evoked by the respective content. Additionally we control for submitters' network size, structure and activity in the propagation process. Importantly, our results build on both, user-generated as well as traditional media content. The findings of our study indicate a mediating role of arousal on the popularity of online content. Further, we observe significant effects of different creativity dimensions as well as aspects of content's newsworthiness on users' subsequent propagation behavior.

■ TB04

04- Courier

Consumer Behavior - Preferences

Contributed Session

Chair: Sergio Moccia, Doctoral Student, University of Mainz, Jakob-Welder-Weg 9, Mainz, Germany, moccia@marketing-science.de

1 - Satisfaction and Construal Level Theory: An Empirical Investigation

Wei Zhang, Assistant Professor of Marketing, Iowa State University, College of Business, Ames, IA, 50011, United States of America, wtzhang@iastate.edu, Ajay Kalra

Construal Level Theory (CLT) posits that psychological distance plays a role in shaping judgments and decision making. All evidence so far has been from experimental studies. We test the influence of CLT on quality choice and satisfaction judgments using data of hotel reservations from an internet booking site. For a full rational consumer, her construal level should be irrelevant to her judgments. By proposing an economic model where consumers' choices of hotels and satisfactions are driven by their utilities, we derive two testable predictions based on CLT. In our proposed model, since consumers' construal levels influence both their purchase decisions and satisfaction ratings, we use a two-step limited information maximum likelihood estimation procedure which proves to be superior compared to a one-step full information maximum likelihood procedure. Consistent with CLT, we find that higher construal leads to selection of higher quality hotels. In addition, we find that as distance increases, consumers are more negative in their evaluations. The results suggest that exogenous factors such as CLT, completely outside the purview of managers, influence satisfaction judgments.

2 - Happily (Mal)Adjusted: Cosmopolitan Identity and Expatriate Adjustment

Amir Grinstein, BGU, Beer-Sheva, Beer-Sheva, Israel, gramir@bgu.ac.il, Luc Wathieu

As an increasing population identifies itself as cosmopolitan, we examine whether the cosmopolitan identity involves openness and adaptability to new environments, or instead favors maintaining a global lifestyle that persists across environments. Based on a field study of expatriates, we find that the expected duration of sojourn is a critical moderator of cosmopolitan behavior. In short duration sojourns, cosmopolitans adjust more to new environments than non-cosmopolitans. In long duration sojourns, non-cosmopolitans adjust more to the host country while cosmopolitans tend to retreat into a global lifestyle. We find that these adjustment choices are correlated with well-being, in contradiction with the existing literature on expatriates, which has suggested that adjustment should be the preferred behavior regardless of consumer identity.

3 - When Consumers Feel Distant From the Product: The Negative Effect of Product Package Cover on Consumer Product Evaluation

Jung min Jang, Doctoral Candidate, Korea University, 145, Anam-ro, Seongbuk-gu, Seoul, Korea, Republic of, happy_min@korea.ac.kr, Eun-Young Park, Song-Oh Yoon

Research has demonstrate that partitioning of product options leads to controlled consumption, increased perceived variety. These results are due to the different psychological bracketing of choices, that is, partition makes the same sets of options look more different from one another. We suggest that the effect of physical partition on psychological distance can be extended to the perceived relationship between consumer and product. We hypothesize that when product is wrapped with(vs. without) a cover, people feel more distant from the product, yielding lower purchase intention and reduced consumption quantity. We show that this effect occurs only with experts whose concrete mental representation makes them sensitive to the feasibility aspects of the choice. Study 1 demonstrates that the participants with previous experiences with the presented chocolate reported a lower sampling intention, lower purchase likelihood when the chocolate was presented in a box with(vs. without) a plastic cover. However, there was no such difference in the responses of the inexperienced participants. Further, the effect was mediated by the experienced participants' psychological closeness to the chocolate. Study 2 generalizes the findings to donation behavior. The participants with frequent donation experiences felt distant to the donees when the communication material was presented in an opaque versus a transparent envelop, leading to a lower donation intention and lower donation amount. However, no such differences occurred for those with low donation experiences. The results provide an understanding of how consumers respond to certain features of product package and provide implications for marketers seeking to increase the effectiveness of marketing communication.

4 - The Preference for Scarcity: How the Behavior of Conformists Change When They are Faced With Limited Editions

Sergio Moccia, Doctoral Student, University of Mainz, Jakob-Welder-Weg 9, Mainz, Germany, moccia@marketing-science.de, Oliver Heil

The marketing literature often assumes that snobs have a preference for rather unique products, while conformists have a preference for products of a more popular nature. At the same time, however, Western consumers have a preference for being unique or individualistic. Not surprisingly, consumers are often confronted with advertising which highlights the exclusivity or uniqueness of a product. Such "scarcity tactics" of firms can be seen to attest for a general preference for unique products. This is especially the case when people are faced with limited editions. We argue that limited editions are not only perceived as unique but also as popular and thus attract both, snobs and conformists. We conducted four experiments in which people choose and rate various product alternatives with different degrees of limitations (different cars) presented to them. Notably, the only difference between these product alternatives (cars) rested in limitations pertaining to supply and demand, but not in the quality or value characteristics. We found support for our conjectures and are now in the process of analyzing how preferences change if we allow for quality perceptions.

■ TB05

05- Essex Center

Networks and Marketing: New Perspectives and Ideas

Cluster: Special Invited Sessions

Invited Session

Chair: Andrew Stephen, Assistant Professor, University of Pittsburgh, Pittsburgh, PA, United States of America, astephen@katz.pitt.edu

1 - The Structure of Online Diffusion Networks

Dan Goldstein, Yahoo! Research, New York, NY, United States of America, dan@dangoldstein.com, Duncan Watts, Sharad Goel

With the increasing availability of network and behavioral data – from what we buy, to where we travel, to whom we know – we are now able to observe and quantify social processes to a degree that would have seemed impossible just a decade ago. These new microscopes into human activity not only have substantive implications for the social sciences, including economics, sociology, and psychology, but also raise challenging computational questions in large-scale data analysis. Leveraging these new data sources and computational tools, in this paper we discuss the diffusion patterns that arise in six online domains, which in aggregate involve millions of adoption events and billions of individual-level interactions. Though the relationship between interpersonal networks and diffusion is important to a wide range of social and economic problems, including new product adoption, changes in social norms, and success in cultural markets, until recently it has been prohibitively difficult to accurately measure the structure of these networks. In all six cases we study – and in contrast to prevailing theories of diffusion – we find that multi-step cascades are relatively rare, with almost all adoptions occurring within one generation of the seed. Correspondingly, we find that the average size of diffusion events is surprisingly small, with each seed typically leading to less than one additional adopter.

2 - How Interest Shapes Word-of-mouth Over Different Channels

Jonah Berger, Assistant Professor, University of Pennsylvania, Philadelphia, PA, United States of America, jberger@wharton.upenn.edu, Raghuram Iyengar

Consumers share word-of-mouth face-to-face, online, and through various other channels. But do these channels shape what people talk about, and if so, how? Three studies demonstrate that the expected continuity of the conversation channel impacts what gets discussed. While one might expect that more interesting products are talked about more than boring ones, this is only true in discontinuous conversation channels (e.g., online posts or text). In these channels, pauses between conversational turns are expected, so people have time to select and craft what they say. In channels where conversations are expected to occur more continuously (e.g., face-to-face or on the phone), however, there is less time to selectively pick what one talks about. Consequently, more interesting products are not talked about more frequently than less interesting ones. These findings shed light on what drives word-of-mouth and how companies can design effective word-of-mouth campaigns.

3 - Ideation Experiments in Social Networks

Peter Zubcsek, University of Florida, Gainesville, FL, United States of America, pzubcsek@ufl.edu, Jacob Goldenberg, Andrew Stephen

A growing trend in marketing is for firms to tap the apparent wisdom of groups of consumers to generate sets ideas for new products and ways to improve existing products. Recently, this approach has led to online communities where consumers submit ideas that are discussed, elaborated on, and criticized by other consumers (e.g., Dell's Ideastorm.com, MyStarbucksIdea.com). The networks linking consumers in these communities are very dense, however it is not obvious this is optimal for generating the most innovative ideas. This research examines how network structure affects idea innovativeness in the context of networked new product ideation. We report results from a series of experiments whereby groups of participants contributed product ideas over a multiple rounds. Participants were situated within networks such that they could see ideas submitted by other participants to whom they were connected. The network structures were manipulated to allow us to examine how individuals' local networks – their size (degree) and interconnectedness (clustering) – affected how innovative participants' ideas were. We find that having more sources of inspiration (i.e., higher degree and thus more neighbors) does not necessarily improve one's ideas. In fact, more sources of inspiration can lower one's innovativeness when their neighbors are connected to each other (i.e., a negative interaction between degree and clustering). This effect is moderated by the nature of the ideation task with respect to how general or specific it is. Given that current marketing best practice is to allow consumers participating in large online ideation communities to be densely interconnected to many others (i.e., high degree and clustering), our results have important implications for managers.

4 - What Shapes Positive and Negative Sentiment Towards a Brand in Social Media? A Network Perspective

Felipe Thomaz, University of Pittsburgh, Pittsburgh, PA, United States of America, fct2@pitt.edu, Andrew Stephen, Vanitha Swaminathan

The purpose of this research is to examine brand sentiment, and evaluate the impact of brand networks on volume of brand word-of-mouth as well as brand sentiment. Specifically, we investigate how characteristics of the word-of-mouth network in which a brand is embedded influences the volume and valence of word-of-mouth. We construct time-varying networks of brands that are linked if they are mentioned by the same source(s) around the same time. This allows us to quantify, over time, brands' positions relative to each other in a social media information network. We examine various characteristics of brand's positions in this network (e.g., degree centrality, closeness centrality, clustering) and how they influence volume and valence of online buzz. We also examine the impact of these network characteristics on various financial stock market metrics including abnormal stock market returns, idiosyncratic risk, and systematic risk. The model is tested using longitudinal data on brand sentiment over multiple brands in two product categories.

■ TB06

06- St. George B

Consumer Response to Green Marketing

Contributed Session

Chair: Manoshi Samaraweera, Assistant Professor of Marketing, University of Central Oklahoma, College of Business,100 N.University Dr., Edmond, OK, 73034, United States of America, gsamaraweera@uco.edu

1 - Psychological Reactance to Forced Adoption of Green Behaviors: Attitudes and Compliance

Judy Frels, Associate Professor of Marketing, Audencia Nantes School of Management, 8 Route de la Joneliere, Nantes, 44312, France, jfrels@audencia.com, Olga Kapitskaia

As governments and other institutions seek to reduce carbon emissions through regulation of individual behavior, we study the impact of these regulations and an individual's environmental concern on attitudes and intentions to comply with the regulation. This research was inspired by events in the European Union following its 2006 mandate that all homes have a 'smart meter installed by 2020. While certain countries were able to deploy the meters almost seamlessly (Italy and Sweden), others faced significant consumer backlash (the Netherlands). Using both qualitative and quantitative research methods in France, we explore what can happen when individuals are forced to adopt an environmental behavior. As expected, we find that regulations that restrict an individual's freedom can invoke psychological reactance (Brehm 1966). Also as expected, an individual's environmental concern is associated with both his attitude and his intent to comply with the regulation. However, we find that the impact of psychological reactance on an individual's intentions to comply with the regulation is completely mediated (suppressed) by the person's attitude toward the message regarding the regulation. Thus, an individual may report that he intends to comply with a regulation although he holds a negative attitude about the message. How do consumers cope with these negative attitudes that are inconsistent with their behavior? Are there offsetting behaviors that occur to regain freedom (Peltzman 1975)? Alternatively, are there communication strategies that can lessen the psychological reactance of the regulation and decrease negative attitudes? What role do norms and identities play in influencing attitudes and intentions around green behaviors (Gershoff and Irwin 2011)?

2 - Crowding-out the Brand? – Brand Effects of Nonprofit Organizations Due to Incentives for Donations

Ann-Christin Langmaack, Universität Hamburg, Welckerstr.8, Hamburg, 20251, Germany, ann-christin.langmaack@uni-hamburg.de, Edlira Shehu, Michel Clement

This research investigates whether providing incentives (e.g., monetary incentives) for voluntary donations such as blood donation influence brand personality and attitude towards nonprofit brands. Brand personality differentiates nonprofit organizations in an increasingly competitive market. Managers of nonprofit organizations (e.g., Blood Donation Services of the German Red Cross) mostly avoid monetary incentives because they fear potential negative influences on perceived brand attitude and trust. Both, attitude and trust have a high managerial relevance for brand and direct marketing strategies of nonprofit organizations. We address this question by investigating experimentally (a) whether incentives influence brand personality and attitudes towards brands of nonprofit organizations and (b) whether potential brand effects influence the intention to donate. In a 3x2 experimental design we vary incentives along three scenarios (no compensation, non-monetary and monetary) for a nonprofit and for a for-profit organization. Using structural equation modeling we test the effects of our experimental treatments, brand personality, and brand attitude on the intention to donate. We control for motives to donate according to the theory of planned behavior. Against common expectations of nonprofit organizations that a monetary incentive could negatively influence the brand personality and hence the likelihood to donate, we find significant positive direct effects of monetary compensations on (a) the intention to donate and (b) brand personality dimensions. However, no mediation effect of incentives and brands on the intention to donate can be discovered.

3 - Impact of Spokes-character Types and Gender in 'Green Advertising'

Aditya Mishra, Research Scholar, IBS, Shankerpally, R.R. District, Hyderabad, AP, 501504, India, aditya.s.mishra@gmail.com, Ainsworth Bailey

The use of spokescharacters in advertising has become a ubiquitous practice, leading to various studies of this phenomenon. These include studies related to the types of spokescharacters used and their effectiveness: Among the spokescharacters that have been used by brands are human and animated-human spokescharacters. Both types have been used to deliver various messages, including social responsibility messages, on behalf of brands. Surprisingly, however, little research has looked at the effectiveness of using human versus animated-human spokescharacters in delivering certain types of messages. The aim of our exploratory study is to assess the use of human and animated-human spokescharacters in green advertising. In particular, the study investigates the impact of spokescharacter type on believability of ads that use green message; attitude toward ads that use green messages; receptivity to green advertising messages; and patronage of companies using green advertising. In addition, the study also examines whether the gender of the spokescharacters interacts with spokescharacter type to impact these dependent variables. The study uses a 2 (spokescharacter type: human vs. animated-human spokescharacter) x 2 (gender of spokescharacter: male/female) between-subjects experimental design. Findings from the study have implications for brands that may want to use spokes-characters in their green marketing campaigns. The study also has research implications, as it seeks to expand our understanding of the different factors that impact consumer response to spokescharacters in advertising.

4 - Look 'GREEN': Using Font Color & Symbols to Boost Percieved Environmental Friendliness

Manoshi Samaraweera, Assistant Professor of Marketing, University of Central Oklahoma, College of Business,100 N.University Dr., Edmond, OK, 73034, United States of America, gsamaraweera@uco.edu, Mohammad Abuobead, Jeanetta Sims

In this study, we examine packaging strategies that can potentially boost the sales of environmentally friendly products. Specifically, we investigate whether using green (vs. black) color fonts and including a symbol reflecting the environment on the product label will enhance consumers' perceptions regarding the "greenness" of the product, increasing their intentions to purchase it. In addition, we also examine whether such packaging strategies would work better when a premium price is charged for the green product. We employ a 2 (font color: black, green) x 4 (symbol: no symbol, brand logo, flower, tree) x 2 (price: no price premium, price premium) between-subject design to test the impact of the aforementioned packaging strategies. Using two environmentally friendly products relevant to students, we collect data from student participants using a questionnaire booklet which contains a picture that corresponds to the study condition. Using Mplus, we estimate a moderated-mediation model that simultaneously assess the effects of font color, symbols and the interactive effects of price on consumers' perceived product "greenness" and purchase intentions. Preliminary results will be available to be presented at the conference. [Note: Although the primary focus of the investigation depicts a treatment of including a symbol reflecting the environment vs. not including such a symbol, for exploratory purposes, we include 4 conditions with the objective of testing questions such as: Would including a symbol reflecting the environment work better than including the brand logo? And, would including a tree (as the symbol of the environment) work better than including a flower – or vice versa?]

■ TB07

07- St. George C

User-Generated Content and Word-of-Mouth

Cluster: Special Invited Sessions

Invited Session

Chair: Yuchi Zhang, University of Maryland, College Park, MD, 20742, United States of America, yuchizhang@gmail.com

1 - Promotional Reviews: An Empirical Investigation of Online Review Manipulation

Dina Mayzlin, Assistant Professor, Yale University, New Haven, CT, United States of America, dina.mayzlin@yale.edu, Yaniv Dover, Judith Chevalier

During the last decade, we have witnessed the proliferation of online consumer reviews of products and services. While reviews have been shown to be impactful, the authenticity of online user reviews remains a concern because, on many sites, firms can manufacture positive reviews for their own products and negative reviews for their rivals. The presence of undetectable fake reviews may have at least two deleterious effects on firms and consumers. First, consumers who are fooled by the manufactured reviews may make suboptimal choices. Second, the presence or potential presence of biased reviews may lead consumers to mistrust reviews. This results in consumers relying on review opinions less than they would if they could be assured that the reviews were unbiased. In this paper, we undertake an empirical analysis of promotional reviews, examining both the extent to which fakery occurs and the market conditions that encourage or discourage promotional reviewing activity. Specifically, we examine hotel reviews, exploiting the organizational differences between two travel websites: Expedia.com, and TripAdvisor.com. While anyone can post a review on TripAdvisor, a consumer could only post a review of a hotel on Expedia.com if consumer actually booked at least one night at the hotel through the website. Thus, the cost of posting a fake review on Expedia.com is quite high relative to the cost of posting a fake review on TripAdvisor. We examine differences in the distribution of reviews for a given hotel between TripAdvisor and Expedia. We examine three hypotheses. First, drawing from the literature on organizational form, we examine owner-operated independent hotels, franchisee-operated chain hotels, and company-operated chain hotels. We show in a simple model that the net gains from promotional reviewing are likely to be highest for the owner-operated independent hotels, lowest for the company-operated chain hotels, and intermediate for the franchisee-operated chain hotels. Second, conditional on writing a negative review for a competitor, the hotel derives the greatest benefit from writing a fake review for the next-door competitor. Third, following Mayzlin (2006), we hypothesize that lower quality hotels have more incentive to engage in promotional reviews. Our empirical results are consistent with review manipulation.

2 - Do Online Reviews Lead to Better Choices?

Yuchi Zhang, University of Maryland, College Park, MD, 20742, United States of America, yuchizhang@gmail.com, David Godes

We ask whether online reviews help consumers to make better decision. We study the relationship between online reviews and satisfaction in a setting with online ratings in an observable social network with both uni- and bi-directional ties. This allows us to distinguish informational effects (impact of past online reviews on posted ratings) from reputational effects (impact of creating an ideal self image on posted ratings). Our results suggest that the effect of information on consumers' satisfaction is dependent on the source and the relationship. At the aggregate level, exposure to more reviews is associated with better consumer choices (higher future ratings). However, at the individual level, increasing the number of anonymous outgoing ties (individuals they follow) as a source of information leads to worse choices while increasing the number of familiar ties (friends) results in better choices. We also find significant reputational effects, where consumers tend to post more negatively if their reviews are available to a larger audience.

3 - On Medium and Message – Multichannel Word of Mouth

Renana Peres, The Jerusalem School of Business Administration, University of Jerusalem, Israel, Mitchell J. Lovett, Roni Shacher

When consumers spread word of mouth, they choose both the content of the message, as well as the channel through which the message is going through. In this work we focus on the content-channel coupling, where content relates to the brands and the sentiment discussed in the conversation, and the channel is face-to-face, telephone, blogs, user forums and Twitter. We present a theoretical framework which argues that the message-channel match is created due to the combined influence of three factors: the people involved in the conversation; the appropriateness and effectiveness of the channel in conveying the message; and contextual constraints. We conducted a massive data search on 700 US brands from 16 different categories. For each of these brands we collected data on the perceived brand characteristics (collaborating with Decipher Inc. and the Brand Asset Valuator of Young and Rubicam), the offline word of mouth through face-to-face and phone conversations (from the Keller Fay Group), and the online word of mouth through blogs, user forums, and Twitter messages (using the Buzzmetrics tool of Nielsen online). Our preliminary analysis finds a tight medium-message matching, word-of-mouth differs greatly between channels, in both the brands which are discussed and the valence. We use these differences explore various aspects of the influencing factors of our theoretical framework.

4 - Spatio-temporal Clustering in Car Category/Brand Switching

Keren Haddad-Leibovich, Hebrew University, Jerusalem, Israel, kerenya@gmail.com, Jacob Goldenberg, Sai Sundarakrishna, Daniel Shapira

Car purchase decisions typically involve individual needs and preferences in the context of a specific economic situation. Previous research accounting for the many factors underlying car type choice has focused mainly on vehicle features and buyer characteristics, including price, size, power, operating cost, transmission type, reliability (Train and Winston 2007, Mannering, Winston and Starkey 2002), income, age, family size, urbanity level (Berry et al. 1995, 2004), vehicle model type, transaction type (Silva-Risso and Ionova 2008), and attitude and lifestyle (Choo and Mokhtarian, 2004). Word of mouth processes have also been suggested as shaping car type choice(Urban, Hauser and Roberts, 1990), and recent findings show evidence of a social influence effect in new car purchases (McShane, Bradlow and Berger,2012). In this work we focus on vehicle category and brand switching. Based on data from the US automotive industry on 0.5 million new car purchasers in a two-year period, including significant information on previous owned vehicle, we find high levels of spatio temporal clustering both on the category level (e.g., a switch from a sedan to an SUV, from a mid-size car to a pickup truck, etc.) and on the brand level (e.g., from Chevrolet to Honda). Using Knox test statistics (Knox,1964) for epidemiological effects, we find significant spatio-temporal clustering of category switching in 43 out of 47 states, and significant clustering of brand switching in 40 states. Interestingly, the spatio-temporal clustering of category switching is stronger than for brand switching in 33 states, on the same levels of time and space. We investigate the drivers for this phenomenon and model it.

■ TB08

08- Adams

Structural Models of Sports Marketing

Cluster: Special Invited Sessions

Invited Session

Chair: Timothy Derdenger, Assistant Professor, Carnegie Mellon University, Tepper School of Business, 5000 Forbes Avenue, Pittsburgh, PA, United States of America, derdenge@cmu.edu

1 - Do Super Bowl Advertisements Affect Brand Shares?

Wesley Hartmann, Stanford University, Graduate School of Business, Palo Alto, CA, United States of America, Hartmann_Wesley@gsb.stanford.edu, Daniel Klapper

Measuring the effects of brand advertising is incredibly challenging because of complicated dynamics over time and a lack of exogenous variation to distinguish causal effects from the correlations between market shares and advertising that arise from the brand's inherent incentive to set advertising in response to market conditions. We consider brand advertising in the setting of the NFL's Super Bowl telecast. The Super Bowl is advantageous for measuring advertising for a number of reasons. First, the high ratings, averaging over 40 percent in major media markets between 2004 and 2008, and societal focus on the ads themselves have the potential to create significant jumps in the "advertising stocks" of even major brands. Second, while a brand can choose to advertise during a given Super Bowl, it cannot choose how many impressions it receives in each market, so the ratings received in each media market are purely a function of how much the local population wants to watch the Super Bowl. Third, the local media market variation in Super Bowl exposures also varies within market over time. We document that this within-market variation in Super Bowl viewership is at least partly attributable to the performance of the local NFL team. With this significant and exogenous variation in Super Bowl advertising exposures we test whether brand shares are affected accordingly. We run our analysis using Nielsen ratings and the brand shares for cola and beer as measured in the IRI marketing dataset. We are currently seeking out the sales data for other categories of Super Bowl advertisers.

2 - Brand Equity Development in Asymmetric Alliances: The Case of the Bowl Championship Series

Michael Lewis, Emory University, 1300 Clifton Road, Atlanta, GA, 30322, United States of America, Michael_Lewis@bus.emory.edu, Manish Tripathi

While the marketing literature contains a substantial body of research focused on the benefits and limitations of strong brands, there is relatively little research focused on the processes by which strong brands are created. In this research, we focus on the development of brand equity in the culturally important context of college football. This non-traditional branding application provides an opportunity to study brand equity formation because time-series data is available both on performance and consumer demand. The context is also of interest because organizational elements such as conference affiliations and the Bowl Championship Series may influence a school's brand building investments.

3 - The Dynamic Advertising Effect of Collegiate Athletics

Doug Chung, Yale University, New Haven, CT, United States of America, doug.chung@yale.edu

I measure the spillover effect of intercollegiate athletics on the quantity and quality of applicants for institutions of higher education in the United States, popularly known as the "Flutie Effect". I treat athletic success as a stock of goodwill that decays over time, similar to that of advertising. A major challenge is that privacy laws prevent us from observing information about the applicant pool. I overcome this challenge by using order statistic distribution to infer applicant quality from information on enrolled students. Using a flexible random coefficients aggregate discrete choice model, that accommodates heterogeneity in preferences for school quality and athletic success, and an extensive set of school fixed effects to control for unobserved quality in athletics and academics, I estimate the impact of athletic success on applicant quality and quantity. Overall, I find that athletic success has a significant impact on the quantity and the quality of applicants. However, students with lower than average SAT scores tend to have stronger preference towards athletic success, while students with higher SAT scores have greater preference towards academic quality. Furthermore, the decay rate of athletics goodwill is smaller for students with lower SAT scores, suggesting that the goodwill created by intercollegiate athletics resides more extensively with students of low ability compare to their high ability counterparts. But surprisingly, athletic success impacts applications even among academically stronger students.

4 - The Informative and Prestige Effects of Celebrity Endorsements

Kevin Chung, Carrnegie Mellon University, Tepper School of Business, Pittsburgh, PA, United States of America, kevinchung@cmu.edu, Timothy Derdenger, Kannan Srinivasan

We study the informative and prestige effects of celebrity endorsements. The prestige effect is assumed to uniformly prevail across all endorsed products if the effect exists, while the informative effect is assumed to be present only in products characterized as credence goods. By utilizing aggregated golf glove and golf ball sales data from 1997 to 2009, we separate out the two effects by maintaining that Tiger Woods' endorsement effect on golf balls consist of both the informative and prestige effects while any effect on the golf glove category can only come from the prestige effect. By implementing this identification strategy, we find that Tiger Woods' endorsement effect on Nike golf ball was primarily informative during his earlier career while both the prestige and the informative effects were present after his second signing of the endorsement contract in 2005.

■ TB09

09- Helicon

Conjoint Analysis I

Contributed Session

Chair: Sascha Voekler, Chair of Marketing and Innovation Management, Brandenburg University of Technology Cottbus, Erich-Weinert-Str. 1, Building 10, Cottbus, 03046, Germany, sascha.voekler@tu-cottbus.de

1 - Lead Users and Non-lead Users: Preferences Measured by Conjoint Analysis

Alexander Sänn, Brandenburg University of Technology Cottbus, Chair of Marketing and Innovation Management, Erich-Weinert Str. 1, Building 10, Cottbus, 03046, Germany, alexander.saenn@tu-cottbus.de, Daniel Baier

Since the development of the web the lead user method and conjoint analysis are facing new challenges in an online world. This paper combines the lead user approach and conjoint measurement to generate breakthrough innovations using survey techniques. We assume that the separation of lead users and non-lead users within conjoint analysis can lead to breakthrough innovations. The new approach will extend traditional conjoint analysis and adaptive conjoint analysis by a lead user identification technique based on a former approach by Lüthje, Herstatt and von Hippel in 2005. The new approach uses the mountain bike area as an application example. Fostered on a previous measurement by S‰nn and Baier 2011 lead user innovations were evaluated by leading customers and ordinary cyclists in an offline and online environment. In preparation of the survey information from hot spots and professionals were gathered and aggregated to standard and lead user attribute-levels. For the empirical setting customers from target, analogue and foreign markets were personally interviewed using traditional conjoint measurement techniques in a first step in an offline context. The second step added respondents from online discussion boards. According to the separation of user groups, the resulting overall conjoint measurement is influenced by the high amount of non-lead users, who tend to prefer general innovations more often. So the extension leads indeed to different preferred attribute-levels and increases the conjoint performance for radical innovations. Therefore a strategy is provided to develop breakthrough innovations via online measurement.

2 - Product Design Optimization: A Comparison of Genetic, Ant Colony And Bee Algorithms

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Since product design optimization via conjoint analysis became popular in the early 1980s [4], many heuristic algorithms, especially swarm intelligence and genetic algorithms [3], were developed for that kind of optimization problems. The reason for their usage is because problem formulations often are NP-hard [6]. Swarm intelligence and genetic algorithms offer an alternative for large-scale problems to reach near-optimal solutions, without constraining the problem formulations immoderately [1]. In the presentation, genetic [7],ant colony [1] and bee colony algorithms [5] are compared. For comparison, simulated conjoint data for different product design settings is used. For generation of the data, a Monte Carlo design similar to the one applied in [1] is implemented. For product design optimization, a new approach to the share-of-choice problem, the bee colony optimization algorithm [8], will show its performance and it will be evaluated if that approach is superior to a genetic and an ant colony algorithm. All three algorithms were implemented with the statistical software package R. Two of them, the genetic and the bee colony optimization algorithm had to be adapted to the share-of-choice problem first [2]. The purpose of the comparison is to provide an assistance, which algorithm should be applied in which product design setting.

■ TB10

10- St. George D

New Product Adoption I

Contributed Session

Chair: Tilo Halaszovich, Assistant Professor, University of Bremen, Hochschulring 4, Bremen, 28359, Germany, tilo.halaszovich@uni-bremen.de

1 - Who Wins the Convergence War? The Effects of Core Competency on Convergence Product Sales

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Recently, rapid technology advancements have created a competitive business environment, especially in consumer electronics. In particular, the high tech products are functionally converging into a common product form. However, the existing research has generally focused mainly on service/network convergence and research on product convergence remains limited. In addition, their focus is also limited to consumer side. Thus, this research investigates the effect of the manufacturer's characteristics on the sales of convergence product. Especially, we focus on the effects of a firm's original capability and manufacturing experience of convergence product. Our findings indicate that a firm with the original capability in manufacturing the main functions of convergence product has greater competitive advantages, such as inherent phone function, rather than the one in manufacturing the added function of the product, such as camera. However, a firm with the manufacturing experience of the added product has greater competitive advantages, than a firm without it.

2 - Diffusion of Smartphones: The Case of Venezuela and the United States

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The aim of this paper is to compare the diffusion of smartphones in Venezuela and the United States (US) within Rogers' (2003) diffusion of innovation theory and to provide an explanation for the differences and similarities using Hofstede's (1967-2009) cultural dimensions framework. The approach takes the form of utilizing national and international organization databases and reports like Nielsen, Pew Research Center, International Communication Union, the National Commission of Telecommunications for the Bolivarian Republic of Venezuela (CONATEL), among other to provide insight into how smartphones have penetrated these markets and to predict where this technology is heading. The paper describes the state of mobile communications in the Venezuela and the US and found that differences between Venezuelan and US mobile users derived from their own needs and preferences as well as the policies and company offerings available to them. The paper found that while a variety of smartphones are used in the US, BlackBerry holds a virtual monopoly in Venezuela due to Venezuela's collectivism and polychronic time orientation, which fosters a communication style that explains Venezuela's uniform adoption of BlackBerry smartphones. On the other hand, individualism and monochronic time orientations, predominant in the US, explain a more fragmented smartphone market in the US. Other cultural dimensions and their implications are discussed. The rapid adoption and penetration rates of smartphones suggest that understanding the variables that affect diffusion may provide competitive advantage and help discover cultural insights to successfully penetrate new markets with new products or services. Recommendations for future studies are discussed.

3 - Modeling the Effects of Demographic and Social Factors on Diffusion of Innovation

Kapil Agrawal, The LNMIIT, Rupa Ki Nangal, Post-Sumel, Via-Jamdoli, Jaipur, India, kapil.06@lnmiit.ac.in, Harsh Kushwah, Ashish Goyal, JB Shukla

In this paper, a non-linear mathematical model is proposed and analyzed to study the effects of demographic factors such as immigration, emigration and intrinsic growth rate of population on diffusion of innovation. In the modeling process, it is also assumed that social influence factors affect favorably the thinking process of non adopters about the innovation. Thus, the problem of innovation diffusion is governed by three dynamic variables, namely, the density of non-adopters' population, the density of adopters' population and the cumulative density of social influence factors. The stability theory of differential equations and numerical simulations are used to analyze the model. The model analysis shows that adopters' population density increases as the density of non-adopters' population increases due to immigration and intrinsic growth of population but it decreases due to emigration.It is also shown that as the cumulative density of social influence factors increases the density of adopters' population increases.

4 - Skim or Penetrate? Setting the Right Price at the Right Time for New FMCG Products

Tilo Halaszovich, Assistant Professor, University of Bremen, Hochschulring 4, Bremen, 28359, Germany, tilo.halaszovich@uni-bremen.de, Raimund Bau

Among the marketing mix decisions pricing is often regarded as the single most important and additionally most critical variable of the 4Ps; particularly with regard to new product introductions into low involvement markets like the typical fast moving consumer good (FMCG) markets. In the new product literature pricing decisions are mostly regarded as a choice between setting skimming or penetration prices. Advocates of both strategies can be found in the literature. Nevertheless, a deeper understanding of the role of prices in new FMCG product introductions is still missing. It is often argued that a high degree of innovativeness can be regarded as a determining factor for skimming prices. This is typically missing in FMCG markets. Here, most new products are line extensions with minor variations of the core product. Does this mean that skimming prices and thereby improved margins are not realizable in FMCG markets? To improve the understanding of the role of product prices of new FMCG products the authors develop a dynamic panel model with allows measuring the impact of pricing strategies over the first year of introduction. Based on scanner-panel data, the model is fitted to three samples of new FMCG launches from Germany, Italy, and France. The results show that the role of price depends on the time elapsed since the introduction and thereby on the percentage of trial purchases vs. repurchases. Moreover, optimizing the pricing strategy of a FMCG launch can be used to postpone the point in time when a new product reaches its market share saturation level and thereby gaining further growth potentials.

■ TB11

11- Empire

National Brands and Private Labels

Contributed Session

Chair: Raphael Thomadsen, Assistant Professor, University of California-Los Angeles, 2135 Prosser Ave, Los Angeles, CA, 90025, United States of America, raphael.thomadsen@anderson.ucla.edu

1 - Consumer Perception of Multi-category Private Labels

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A number of studies seek to explain the expansion of private labels. Among demand-side reasons, other studies examine the roles of store loyalty, value pricing or national brand imitation. We consider the role of umbrella branding in an experimental analysis of multi-category purchase behavior. Consumers' perception of private labels offered by the same retailer across product categories is thought to be an important determinant of store-brand penetration. Our first hypothesis is that consumers perceive private label brands in different categories as fundamentally the same quality. Thus, they apply the same behaviors toward one private label product to all private label products across categories. Second, we test whether consumers perceive distinctions between the different tiers of private labels. We gather data through an incentive-compatible choice-based-conjoint (CBC, Louviere, et al 1988) laboratory experiment conducted using 200 participants recruited from the general population. Participants were offered a budget of $40, and could use some of their money to purchase one of several bundles of goods. Participants faced 12 bundle choices containing milk, cereal and ice-cream, each product either being a national brand or a private label. Each subject also completed a survey in which they will record their demographic data and general questions regarding their shopping behavior, store loyalty and propensity to purchase private labels. Results show that consumers transfer their perception across categories for store brands but made a distinction between store brands tiers applying different behaviors between these two types across categories. This distinction has never been made in previous studies and we believe that retailers could benefits from them.

2 - Value Seeking Under Competition: Impacts of Wal-Mart Entry and Economy Store Brand Introduction

Satheesh Seenivasan, Lecturer, Monash University, Department of Marketing, S7, Sir John Monash Drive, Caulfield East, Melbourne, Vi, 3145, Australia, satheesh.seenivasan@monash.edu, Debabrata Talukdar

Rapid rise of Wal-Mart supercenters in recent years has necessitated an understanding of the implications of supercenter entry and development of strategies to compete with supercenters. In this paper, we investigate the brand level impact of supercenter entry and examine the effectiveness of economy store brands as tools in competing with supercenters. We employ before and after with control group analysis, using data from a natural experiment in which the focal supermarket chain in our study introduced a new line of economy store brands following entry of Wal-Mart supercenters near several of its stores. Our results indicate that the focal supermarket chain experienced significant loss in sales after the entry of supercenters; but regained most of its lost sales after introducing economy store brands. Further, an examination of the purchase history of economy store brand buyers indicates that a vast majority of them are former buyers in the focal chain who defected after Wal-Mart entry. The profitability of economy store brands are comparable to that of regular store brands and the focal retailer's category profits also increased after economy store brand introduction. Overall, our results indicate that offering increased value proposition through economy store brands can help a retailer in competing with Wal-Mart supercenters.

3 - Extending Private Labels into a Premium Range: Antecedents and Consequences

Anne ter Braak, K.U. Leuven, Naamsestraat 69, Leuven, Belgium, anne.terbraak@econ.kuleuven.be, Inge Geyskens, Marnik G. Dekimpe

Premium private labels (PLs) are considered one of the hottest trends in retailing. Even though premium PLs provide higher margins, retailers do not feel the need to introduce premium PLs in every category in the store. Using GfK scanner panel data on four Dutch retailers, we study both antecedents and consequences of a retailer's premium PL offering. We find that retailers are more likely to carry premium PLs in categories where the market structure is characterized by a lower standard PL share but higher NB concentration, and with a more proliferated assortment in terms of standard PLs. However, retailers are also aware of the crowding effect at very high levels of PL proliferation. Further, premium PLs are more likely to be observed in categories in which national brands' (NBs) marketing conduct consists of less advertising, deeper price promotions, and a lower price premium towards standard PLs. In addition, when deciding in which categories to carry a premium PL, retailers consider the prevailing practice of the premium PL pioneer. Finally, while the category's growth potential did not have an effect, premium PLs are more likely in categories with a variety-enhancing role for the retailer (i.e., with a higher penetration level and a longer interpurchase time). Next to the antecedents, we examine the (normative) performance consequences of a retailer's premium PL offering. To estimate the success of a premium PL, retailers need to gauge not only how successful the premium PL is per se, but also to what extent this demand comes at the expense of (cannibalizes) their other products. Hence, we also study the effect of a premium PL introduction on both the retailer's national share of the category and its total PL share in the category.

4 - Push vs. Pull: The Case for 50-50

Raphael Thomadsen, Assistant Professor, University of California-Los Angeles, 2135 Prosser Ave, Los Angeles, CA, 90025, United States of America, raphael.thomadsen@anderson.ucla.edu, Minha Hwang

Purchase shares of major national-brands in consumer packaged-goods industries vary substantially across stores, both between markets and within markets. This paper measures the extent to which this variation in national-brand purchase shares depends on store-specific supply decisions, which are traditionally within the purview of trade marketing. We first demonstrate the extent to which purchase shares of the top two national brands across 6 different categories vary across markets, accounts (defined as chain-market interactions) and stores: market-level variation accounts for almost 55% of the variation in market shares across stores, while account-level and store-level variation explain an additional 20% and 9% of the variation, respectively. We then measure the extent to which assortment, pricing, feature and display decisions affect the purchase shares of the top national brands. We find that relative prices and assortment shares are the two most-important push factors in determining a brand's purchase share. We then measure the extent to which the variation in top national-brand market shares across markets and stores is explained by these push factors. We find that, on average, approximately 50% of the variation across stores, as well as 50% of the variation across markets, can be attributed to these push factors. These results demonstrate the importance of supply-side trade marketing on a brand's purchase shares. Given a literature that has emphasized the strong persistence of market shares across time, our results suggest that a significant mechanism for this persistence must be enacted through store-level supply effects.

■ TB12

12- Parliament

Sales Force

Contributed Session

Chair: Tom Steenburgh, Harvard Business School, Morgan Hall, Soldiers Field, Boston, Ma, 02163, United States of America, tsteenburgh@hbs.edu

1 - Control Patterns in Sales Organizations

Dominique Rouziés, Professor, HEC Paris, 1 Avenue de la Liberation, Jouy en Josas, 78351, France, rouzies@hec.fr, Vincent Onyemah, Barton Weitz

Anecdotic evidence and recent research studies question the existence of "pure" sales force control systems. Most firms seem to use hybrid systems. The constitutive elements of these hybrid sales force control systems exhibit patterns that we uncover with Latent Class Analysis (LCA). This paper develops a conceptual framework to explain the resulting patterns and how they differ on some outcome variables such as sales performance. Two different metaphors for sales force control (military and family) are derived from the analysis of a survey of salespeople in 22 countries and 29 corporations. Results indicate that salespeople facing sales force control systems mirroring the family metaphor (i.e., where sales managers manage salespeople through trust and risk sharing) outperform salespeople facing sales force control systems mirroring the military metaphor (i.e., where sales managers give directions to salespeople and reward them consequently) after controlling for selling experience, sales force size and geographic scope of operations. We also find that the drivers of performance are different depending on the pattern. In one group, rather than monitoring salespeople, supervisors are better off sharing the risk in order to increase performance. In the other group, supervisors are better off being more directive and rewarding salespeople with higher levels of fixed salary rather than motivating them though incentive compensation. We discuss the implications of these configurations for future research.

2 - Identifying the Appropriate Functional Form of an Aggregate Sales Response Function

Sonke Albers, Professor of Marketing and Innovation, Kuehne Logistics University, Brooktorkai 20, Hamburg, 24057, Germany, soenke.albers@the-klu.org

Except for textbooks there is little discussion in articles published on the estimation of aggregate sales response functions. Albers (IJRM 2012) shows that this can lead to serious biases and suboptimal budgeting decisions. He advocates investigating the true shape with the help of non-parametric analyses and visual inspection. It is shown for several data sets from the pharmaceutical industry with sales influenced by detailing effort that the functional form matters. Only if the functional form meets theoretical considerations, is statistically appropriate and is plausible for the manager s/he will accept budgeting recommendations based on it.

3 - Relationship Organization and Price Delegation: An Experimental Study

Noah Lim, Associate Professor, University of Wisconsin-Madison, 975 University Avenue, Madison, WI, 53705, United States of America, nlim@bus.wisc.edu, Sung Ham

We experimentally examine if price delegation is an optimal sales strategy when the relationships between managers and salespeople are organized to allow for noncommittal requests for price delegation by salespeople and/or nonbinding bonuses awarded by managers. The results show that behavior by managers and salespeople is strongly driven by social preferences and that the way relationships are organized can affect the strength of these social preferences, leading to significant effects on economic outcomes.

4 - The Effect of Sales Compensation Incentives on Customer Quality in Service Environments

Tom Steenburgh, Harvard Business School, Morgan Hall, Soldiers Field Rd., Boston, Ma, 02163, United States of America, tsteenburgh@hbs.edu, Vineet Kumar

The compensation plans set by firms to incentivize their salesforce has strong implications for the types of customers acquired. In a typical product sales environment, the revenue is a booked by the salesperson upon interaction with the customer. However, in long-term service-based environments, customers derive continual value from the service, and may choose to terminate the relationship at any time. We use data on salesforce compensation from a service-based environment to determine how sales people change their customer acquisition patterns when moved from an acquisition-based compensation metric to a customer lifetime value (CLV) based compensation metric. We specifically investigate how they allocate effort across both stages of the sales process and across different types of customers. Our findings have implications for compensation design and monitoring of salespersons in continuing service contexts.

■ TB13

13- North Star

Auctions

Contributed Session

Chair: Peter Popkowski Leszczyc, Professor, University of Alberta, Marketing, Edmonton, AB, T6G2R6, Canada, peter.popkowski-leszczyc@business.ualberta.ca

1 - Losing the Loser's Curse and Reclaiming My Endowment: The Dynamics of Sequential Auctions on eBay

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Bidders in online auction (can) update their behavior (Willingness to pay and bidding time) based on the experiences or the outcome of the prior auction. By tracking individual bidders' bidding behaviors on the auctions for the identical items, we empirically confirm that two psychological effects from different studies, experience of a leading bidder (pseudo-endowment) and losing of the immediate auction (loser's curse), trigger dynamics in bidders' behavior. Furthermore we show that when both experiences are combined the changes in behaviors are more pronounced and that such emotional effects carry over to the successive auction and contribute to large portion of behavioral changes among eBay bidders. Therefore these two psychological effects bear out beyond the laboratory experiment. In addition we jointly examine other sources of bidders' behavioral dynamics such as individual and auction specific and external factors and our findings are parallel with previous ones.

2 - The Value of Reputation in an Online Freelance Marketplace

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We study the role of reputation in online freelance marketplaces — websites that match buyers of electronically deliverable services with sellers or freelancers. These websites typically follow a reverse auction format, where buyers auction jobs and sellers bid for jobs, and buyers pick a winner based on bid price, bidder reputation, and other considerations. While online freelancing has grown tremendously in the last few years, it faces the classic `information asymmetry' problem — employers face uncertainty over the quality of the bidders or sellers in the market (vice-versa), and as shown by Akerlof (1970), this can lead to market collapse in the absence of a robust reputation mechanism. Using data from a leading online freelance firm, we specify and estimate a structural model of buyer behavior where buyers trade-off bidders' price and reputation. We also take into account the dynamic considerations that buyers face in online reverse auctions — each period, a buyer may choose a bid from her current set of bids or wait for better bids in the future. We find that buyers are forward looking and that they place significant weight on bidder reputation. Using our estimates, we present some counterfactuals on the dollar value of bidders' reputations.

3 - From Winner to Loser - Overpaying as a Process Across Multiple Auctions

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Currently, auction platforms such as eBay host more than 100 million auctions per day only in the U.S. Besides the fact that auctions can lead to efficient outcomes (Milgrom 1989) previous research also shows that auctions may lead to undesirable outcomes, such as overpaying (Malmendier and Lee 2011, Ku et al. 2005), i.e. when the winner's total payment is higher than the prize value. Findings from auction literature suggest that overpaying occurs within the auction as a result of the "bidder's heat" caused by escalation of commitment, rivalry and time pressure (Ku et al. 2005, Malhotra 2009). This paper investigates the development of overpaying as a process across multiple auctions. Similar to Adam et al. (2011) or Ding et al. (2005) we suppose that auction outcomes, especially emotions due to winning or losing, can affect bidding behavior in subsequent auctions. Analyzing bidding history data from a pay-per-bid auctioneer we find that particularly those bidders who successfully (positive consumer surplus) won multiple times in the beginning of their bidding history tend to leave the auction platform with an overall negative outcome. This finding corresponds to gambling research which says that 75% of the gambling addicts particularly won in the beginning of their "career".

4 - A Study of Bidding Behavior in All-pay Auctions

Peter Popkowski Leszczyc, Professor, University of Alberta, Marketing, Edmonton, AB, T6G2R6, Canada, peter.popkowski-leszczyc@business.ualberta.ca, Eman Haruvy

The all-pay auction is an increasingly popular auction format with the potential to generate higher revenues than the standard ascending bid format. Little theory exists about optimal bidding strategies and the known theory does not correspond to observed bidding patterns. In particular, under mainstream auction theory, jump bids are not expected to arise. We begin by noting that a key missing ingredient in the theory is endogenous participation. We then derive simple theoretical predictions about jump bids in light of their role as entry deterrents, and show the implications for prices and revenues in all-pay auctions vis-à-vis regular auctions. In two field studies we provide pairwise characterizations of price, revenue and bidding aggression in auctions that involve identical products in different auction formats. Paired auctions are sequential in one study and simultaneous in another. We find that bidding aggression, winning prices and revenues correspond to our predictions. We then examine individual bidding behavior and find that individual bidders behave in a manner consistent with the theory. Finally, we examine the role of jump bids as effective entry deterrents and find strong evidence to support this notion.

■ TB14

14- Defender

Advertising and Unique Topics

Contributed Session

Chair: Ming-Chih Tsai, National Chung Hsing University, No.250, Guoguang Rd., South Dist., Taichung City, Taiwan - ROC, mctsai@cba.ua.edu

1 - Is There a Dark Side of Adgames? – The Impact of Losing the Game

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Although adgames are increasingly attracting significant research interests, consumer reactions with regard to the outcome of adgames have been largely ignored. This limited research is remarkable in particular because the player's mood, which can influence consumer behavior, is possibly affected by the outcome of the game. However, it would be too easy to conclude that the adgame has only to be easy enough, allowing anybody to win the game, to create positive effects for the brand. The theory of the flow experience postulates that a special level of challenge is necessary to experience flow. Furthermore, the flow experience might also be influenced by the outcome of the game. Because one prerequisite of experiencing flow is the congruence of skills and challenges and because winning a game often depends on the players' skills, a relationship between game outcome and flow experience seems likely. A lab experiment was conducted to study the effects of a game's outcome on the player's mood, brand attitude and game attitude as well as the experience of flow (N = 95; between-subject design: game lost vs. game won vs. no induction of the game outcome). The results show that the outcome of an adgame has a significant effect on players' mood, on the oppor-tunity to experience flow, and on the attitude toward both the game and the advertised brand. Although the study reveals that winners are in a better mood than losers and have an increased likelihood of experiencing flow and of perceiving both game and brand more favorably, the losers' attitude toward the brand does not change significantly after playing the game. Managerially speaking, it seems that in the case of adgames, the brand always wins.

2 - An Empirical Analysis of Distance Measures for Hierarchical Clustering of Images

Sarah Frost, Brandenburg University of Technology Cottbus, Erich-Weinert-Str. 1 Building 10, Cottbus, 03046, Germany, sarah.frost@tu-cottbus.de, Daniel Baier

Due to the steadily increasing number of multimedia data like images or videos which are available for marketing research, it is necessary to adapt traditional marketing techniques to this new marketing data basis (Frost/Baier). Clustering images is useful for market segmentation which bases on customers' multimedia data, e.g. clustering users of consumer-opinion platforms (e.g. holidaycheck.com), where uploaded images can be used to classify consumers additionally to demographic data. Another area of application is the classication of advertisement. It is possible to position brands by their advertisement on perceptual maps automatically to check whether the advertisement strategy is too close to competitive brands. We evaluated this method with advertisement for German beer. Our work shows which distance measures are appropriate for hierarchical clustering of images. We compare traditional marketing measures, like the Euclidean or Manhattan distance, with distances from the area of image retrieval (IR), like the Earth Mover's Distance (EMD) (Rubner et al. 2000). Furthermore we present our own distance measure: the Increasing Radius Algorithm (IRA). We compare results by the help of the adjusted Rand Index and show that our algorithm performs almost as good as the best of the image retrieval distances while needing much less computation time (Huber/Arabie 1985).

3 - Diffusion Patterns and Role of Anteceding Predictors-evidence From Chinese Automobile Industry

Xi Chen, China University of Political Science and Law, 27 Fuxue Road, Beijing, China, chenxi@cupl.edu.cn

In this paper, using monthly passenger vehicle registration data ranging from January 2008 to June 2011 across 31 provinces in China, I try to understand the diffusion patterns of Chinese passenger vehicles across the country with a growth curve modeling approach. For the first phase, I investigate the diffusion with a number of widely applied innovation diffusion models. I then compare their performance in explaining power. For the second phase, I quantify the impact of a series of demographic variables of each province in China, herein show why the market potential, diffusion speed of automobiles across different provinces are so different and what are key predicting antecedents.

4 - Antecedents and Consequences to Contract Manufacturing Services Marketing Intent: An Exploratory Investigation in the IC Manufacturing Service Context of Taiwan

Chengter Ted Ho, Associate Professor, National Kaohsiung University of Applied Sciences, Dept. of Ind. Engineering & Management, 415, Chien-Kung Road, Kaohsiung, 807, Taiwan - ROC, hoc@cc.kuas.edu.tw, Hsi-Chi Teng, Saji K B, Uma Nair S

The ever shrinking nature of window of opportunity inherent in high-tech product marketing practice and the ensuing compulsions on marketers to reduce the time-to-market has laid the foundation for contract manufacturing services marketing (hereafter referred to as (CMS marketing'). The practice of CMS marketing has accumulated serious momentum in the country of Taiwan during late 1990s, especially in the Integrated Circuits (IC) manufacturing industry segment of Taiwan. The IC manufacturing services industry segment of Taiwan is presently being reckoned as one of the most important global hubs that operate with admirable efficiency, effectiveness, and economy in the global market. Although the future of this segment looks very promising, there are several bottlenecks that need careful attention of the CMS marketers. The preliminary study conducted by the researchers in the Kaohsiung region of Taiwan has confirmed the scope for an exploratory investigation of serious nature in the emerging economies context. The specific objectives of the present study therefore include: (i) to understand the potential antecedents and consequences to the CMS marketing intent, and (ii) to explain how will they lead to positional advantage and firm performance. The methodology employed for the study include a focused literature survey, followed by an expert survey involving the senior managers from the IC manufacturing service segment of Taiwan. The present paper reports the preliminary outcomes of the study with the support of a theoretical framework, which is being presently considered for empirical validation. The study significantly contributes to high-tech product marketing theory and practice.

5 - Industrial Customer Satisfaction and Switching Behavior–threshold Model with eB2B Market

Ming-Chih Tsai, National Chung Hsing University, No.250, Guoguang Rd., South Dist., Taichung City, Taiwan - ROC, mctsai@cba.ua.edu, Wei-Che Hsu, Chien Hao Huang, Chieh-Hua Wen

The satisfaction paradox that customer satisfaction does not necessarily ensure customer retention was few testified in industrial settings. Different from consumer market, the industrial satisfaction is classified into two categories as transaction and relational satisfactions presenting different implications for customer retentions. However, the relationship between the satisfactions and the resultant switching effects are unexplored and the analytical model is absent. Accordingly, the study aims to develop threshold model to analyze the industry satisfaction and switching behavior. eB2B market is chosen as a case study using a large scale of statistics data collected from 108 Taiwanese manufacturers on reveal preferences. Based on past literatures and exploratory factor analysis, eleven measurements are identified to represent transactional and relational satisfactions. While fitting the data into disaggregate binary choice model, two variables from each dimension are examined significant. It concludes both transactional and relational satisfactions are important for customer retention. These four variables present a very similar effect on customer choice, but different effects on switching behavior. Information risk and joint product planning are more significant than the product searching and bargain practice improvement for customer switching, in particular for the new customers. Old customers, on the other hand, present a lower threshold on information risk but slightly higher value on customer searching than the new customers. Switching probabilities by variable are also measured based on the parameters calibrated. It provides useful information for eB2B to better justify their customer retention strategy.

■ TB15

15- Great Republic

How the Stock Market Alters Company Strategies

Cluster: Special Invited Sessions

Invited Session

Chair: Vivian (Yue) Qin, PhD Candidate, Duke University, Fuqua School of Business, Durham, NC, United States of America, yq19@duke.edu

Co-Chair: Simone Wies, PhD Candidate, Maastricht University, Department of Finance, Maastricht, Netherlands, s.wies@maastrichtuniversity.nl

1 - The Myopic Management of Intangible Assets: Evidence and Long-term Consequences

Vivian (Yue) Qin, PhD Candidate, Duke University, Fuqua School of Business, Durham, NC, United States of America, yq19@duke.edu, Christine Moorman

Human resources theories view employees as key organizational assets and argue that employee satisfaction can improve retention and motivation as well as enhance customer loyalty and satisfaction. Both influence future firm earnings. Since investors rely on current employee satisfaction to form expectations about future earnings (Edmans 2011), inflating current rankings can lead to higher current stock prices. Therefore, it follows that managers have an incentive to artificially inflate their rankings on publicly-available employee satisfaction measures (e.g., Fortune Best Place to Work rankings). To do so, they could strategically cut expenditures for other intangible assets, such as the management of customer relationships even if this comes at the costs of long-term performance. We present evidence that some firms engage in this type of "myopic management of intangible assets" around the yearly release date of Fortune's "Best Place to Work" rankings. In particular, firms with higher list rankings also report lower than normal spending on customer relationship management. Although investors may realize that firms can undertake certain strategies to artificially inflate rankings, they are unable to adequately identify and de-value the firms doing so. Hence, firm value rises in the short-term. Unfortunately, cutting expenditures on customer relationships has a negative effect on stock market performance over the long run. This is because investors learn, over time, that different combinations of employee satisfaction and customer satisfaction have different implications for future earnings. Given such learning, investors adjust the initial mispricing and devalue the firm.

2 - Firm Innovation and the Ratchet Effect Among Consumer Packaged Goods

Christine Moorman, Duke University, Fuqua School of Business, Durham, NC, 27708, United States of America, moorman@duke.edu, Simone Wies, Natalie M. Mizik, Fredrika J. Spencer

We consider how firms influence their stock market valuation by timing the introduction of innovative new products. Our focus is on the innovation ratchet, a process where firms try to achieve a pattern of innovation introductions showing improvement in introduction levels over time. We document that public firms have an incentive to use an innovation ratchet strategy by comparing the innovation timing decisions across samples of public firms, private firms, and firms that transition from private to public during our study period. Our calendar-time portfolio analyses indicate that public firms using an innovation ratchet strategy outperform firms that introduce all of their innovations at once or firms that smooth the introduction of their products to be consistent. Because ratcheting firms may delay some product introductions, firms using an innovation ratchet strategy may also suffer potential income losses. However, we document that the stock market rewards of ratcheting outweigh these losses. Finally, we identify firm and market characteristics that influence the likelihood a firm will engage in an innovation ratchet strategy.

3 - Learning That Pays: Stealth Strategies for Alliance to Acquisition

Matthew Manary, PhD Candidate, Duke University, Fuqua School of Business, Durham, NC, United States of America, matthew.manary@duke.edu, Christine Moorman

Company acquisition strategies are expensive and fraught with risk. In fact, most fail. To reduce the risk of failure, firms take action to learn about acquisition targets. Forming a strategic alliance is one method to learn about a potential target. Doing so creates costs, however. Specifically, strategies that signal future acquisition intentions trigger financial investors to bid up the value of the target, entice additional bidders to step in, and give competitors advanced notice of the strategy. So what aspects signal to investors that acquisition may be on the mind of alliance partners? Our initial research indicates there are both structural and human factors at play that firms use and investors observe. When investors see these factors, they anticipate and price in the unannounced acquisition at the time of alliance announcement, even if the acquisition is not signaled in any other way by the partnering firms. So then, what low-cost options are available to firms trying to learn about a potential acquisition target? This paper offers one solution – the use of stealth (i.e., unobservable) strategies. The stealth strategies we propose and verify across allying firms in the pharmaceutical, software, and electronics industries involve the unobserved movement of employees – and their specific embedded knowledge – between firms. These strategies allow for knowledge transfer and learning that lead to acquisition, but because investors do not observe them, they mitigate the acquiring firm's problem.

■ TB16

16- St. George A

Game Theory in Marketing I

Cluster: Special Invited Sessions

Invited Session

Chair: Jeffrey Shulman, Assistant Professor, University of Washington, Foster School of Business, Seatle, WA, United States of America, jshulman@u.washington.edu

1 - Product Diversion to a Direct Competitor

Jeffrey Shulman, Assistant Professor, University of Washington, Foster School of Business, Seatle, WA, United States of America, jshulman@u.washington.edu

A manufacturer will often limit competition among downstream partners by authorizing only a select group of retailers to carry its product. Interestingly, there are industries in which the authorized retailers help to create an additional competitor by diverting units to an unauthorized seller. Prior research proposes that diversion will not be optimal unless the diverted units are sold in new markets and expand demand. However, anecdotal evidence suggests that retailers sell to unauthorized sellers who then steal customers from the diverting retailer. This paper demonstrates in an analytical model that diversion from authorized retailers to an unauthorized direct competitor can occur even without previously viewed necessary conditions. In fact, diversion can represent a prisoner's dilemma whereby retailers diminish their own profit by selling to the unauthorized direct seller. The unauthorized direct seller earns greater profit by procuring fewer units from retailers than it could profitably sell to consumers even though such an order results in an equivalent increase in the quantity sold by the retailers. In an extension analyzing diversion by two vertically differentiated authorized retailers, the inferior retailer diverts more units and has greater total sales than the higher quality retailer, though fewer sales to consumers.

2 - The Impact of Organized Retailing on Unorganized Retailing in Emerging Economies

Kinshuk Jerath, Carnegie Mellon University, Tepper School of Business, 5000 Forbes Avenue, Pittsburgh, PA, 15213, United States of America, kinshuk@cmu.edu, S Sajeesh

We study the impact of the emergence of organized retailing on unorganized retailing in developing countries using a game-theoretic model. Our research explains certain counterintuitive phenomena reported in recent empirical studies on retailing in emerging markets that had baffled retail analysts. For instance, we find that the unorganized retailers who survive after the entry of organized retailers charge higher prices and make larger profits than before, and the total profitability of the unorganized retailing sector can increase after the organized retailers' entry. We also find various other interesting results; for instance, the price charged by unorganized retailers increases as the fraction of consumers with storage capabilities (i.e., consumers who can purchase from the organized retailer in bulk) increases. Our research can provide guidance to retailers and policy planners.

3 - Should a Firm Favor a Winner or Loser of a Contest: A Dynamic Contest Approach

Jiwoong Shin, Yale University, New Haven, CT, United States of America, jiwoong.shin@yale.edu, Robert Ridlon

Should a firm favor a weaker or stronger player in a contest? Despite a widespread emphasis on rewarding the best employees, managers continue to tolerate and even favor poor performers. Contest theory reveals that evenly matched contests are the most intense, which implies that a contest designer can maximize each player's effort by artificially boosting the underdog's chances. We apply this type of "handicapping" to a two-period repeated contest between employees, in which the only information available about their abilities is their performance in the first-period. In this setting, employees are strategic and forward looking, such that they fully anticipate the potential impact of the first-period contest result on the second period contest, and thus adjust their behaviors accordingly. The manager also fully considers these strategic behaviors of employees when the manger decides her optimal handicapping policy. If employees' abilities are sufficiently different, favoring the first-period loser in the second period increases total effort over both periods. However, if abilities are sufficiently similar, the opposite result occurs: Total effort increases most in response to a "reverse handicapping" strategy that favors the first-period winner.

4 - The Impatient Innovator

Juanjuan Zhang, Massachusetts Institute of Technology, E62-537, 77 Massachusetts Avenue, Cambridge, MA, United States of America, jjzhang@mit.edu

Companies sometimes terminate innovation projects that still offer positive continuation value. I aim to understand this phenomenon using a principal-agent model. In this model, a firm hires an agent to conduct innovation activities. The chance of discovery depends on the unknown fertility of the project and the private effort of the agent. As the project progresses without discovery, the firm and the agent's beliefs about the project's fertility deteriorate. In particular, believing that no discovery emerges in spite of the agent's effort, the pessimistic firm will offer the agent a generous bonus for discovery to motivate him to work. However, this bonus creates a dynamic incentive to shirk. By shirking today, the agent privately knows that the lack of discovery could be partly attributed to his lack of effort, and hence perceives a more optimistic chance of earning this generous bonus tomorrow. In other words, shirking allows the agent to not only drag on until tomorrow but also do so profitably. The firm in turn must offer another large bonus to motivate the agent to work today. As a result, the firm may prefer to commit to terminating the innovation today even though it has positive continuation value for tomorrow.

Thursday, 1:30pm - 3:00pm

■ TC01

01- Essex Ballroom South

Search Marketing - II

Cluster: Internet and Interactive Marketing

Invited Session

Chair: Dinah Vernik, Assistant Professor of Marketing, Rice University, 6100 Main Street, Houston, TX, 77005, United States of America, vernik@rice.edu

1 - Optimal Bidding in Multi-item Multi-slot Sponsored Search Auctions

Kartik Hosanagar, The Wharton School, 3730 Walnut Street, 552 Jon M. Huntsman Hall, Philadelphia, PA, United States of America, kartikh@wharton.upenn.edu, Vibhanshu Abhishek

We study optimal bidding strategies for advertisers in sponsored search auctions. In general, these auctions are run as variants of second-price auctions but have been shown to be incentive incompatible. Thus, advertisers have to be strategic about bidding. Uncertainty in the decision-making environment, budget constraints and the presence of a large portfolio of keywords makes the bid optimization problem non-trivial. We present an analytic model to compute the optimal bids for keywords in an advertiser's portfolio. To validate our approach, we estimate the parameters of the model using data from an advertiser's sponsored search campaign and use the bids proposed by the model in a field experiment. The results of the field implementation show that the proposed bidding technique is very effective in practice. We extend our model to account for interactions between keywords, in the form of positive spillovers from generic keywords into branded keywords. The spillovers are estimated using a dynamic linear model framework and used to jointly optimize the bids of the keywords using an approximate dynamic programming approach. This is the first paper that incorporates the interactions between keywords in the bidding strategy. Using a field experiment we show that incorporating the spillover effect increases the performance of the bidding strategy.

2 - Bid Jamming

Yi Zhu, University of Southern California, 3660 Trousdale Parkway, ACC 306E, Los Angeles, CA, United States of America, zhuy@usc.edu, Shijie Lu

Bid jamming is a practice in Generalized Second-Price (GSP) auctions that allows an advertiser at the lower position to raise her bid to accelerate the depletion of her competitor's budget, thereby taking a better position. This paper examines the impact of bid jamming on advertisers' bidding behavior as well as search engine. Our analysis yields several interesting results: (1) Bid jamming is most likely to occur when advertisers' budgets are insufficient and close. (2) The impact of bid jamming on search engine revenue is indefinite. When the position competition is less intense, that is, when the low-value advertiser sets a relatively small budget, the threat of bid jamming decreases search engine revenue because advertisers shade their bids to prevent the competitors' jamming behavior. However, when the competition is more intense, bid jamming encourages advertisers to bid more aggressively, thereby transferring more surpluses from the winning advertiser's budget to the search engine. (3) Bid jamming provides an alternative explanation for the "position paradox," under which the high-value advertiser settles in the lower position. Because of the fear of being jammed, the high-value advertiser prefers to stay at the lower position when her budget is relatively small. (4) By examining advertisers' endogenous budget decisions, we find an inverse U-shaped relationship between the search engine revenue and the advertisers' marginal budget cost. These findings provide a justification for Google's recent effort in helping small-sized advertisers' budget expansion by exclusively offering these advertisers a low interest rate credit card. Several important managerial implications for both search engines and advertisers are discussed.

3 - Competing Position Strategies for Related Keywords in Paid Search Market

Shuai Yang, University of Connecticut, Marketing Department, School of Business, 2100 Hillside Road, U1041, Storrs, CT, 06269, United States of America, syang2@business.uconn.edu, Joseph Pancras, Yiping Song

Paid search advertising has become the predominant form of online advertising, and advertisers routinely grapple with the crucial issue of selection of appropriate advertisements. In the paid search market, advertisers tend to bid for a few "hot" keywords which tend to have a large number of impressions and clicks, but which also tend to be expensive. Consumers, on the other hand, tend to use some related keywords in their search behavior. Therefore advertisers will effectively compete with other advertisers across a set of related keywords. The industry practice in search advertisement bidding is to utilize automated bidding agents that automatically place bids in very short periods of time (often of a few milliseconds) based on preprogrammed bidding rules. This leads to several important and interesting strategic questions for firms seeking to improve their search advertising results. In this paper we investigate strategies for advertisers that are appropriate to differentiate them from their rivals in a multi-keyword, multi-firm paid search market. We test our model by using the 3-year daily data from paid search advertising on Google.cn, the leading search engine in China, spanning all keyword advertisements from five online air ticket vendors. Our results highlight the importance of matching between relevant search information of keywords and Unique Selling Proposition (USP) of paid search ads in explaining click-through rate. In addition, firm competition in both the focal keyword and related keywords also affects click-through rate. Finally, our study helps firms use appropriate keyword and advertisement strategies to improve click-through rates of paid search ads.

4 - Competing Position Auction

Dinah Vernik, Assistant Professor of Marketing, Rice University, 6100 Main Street, Houston, TX, 77005, United States of America, vernik@rice.edu, Zsolt Katona, Woochoel Shin

Keyword search advertising has grown to be a very important form of online advertising. Its importance is expected to grow further in the current economic downturn. We examine the effects of competition between advertising platforms on the advertisers' bidding strategies and choice of platform. We develop a model in which advertisers can choose from two competing advertising platforms, each offering multiple advertising slots. To sell these slots, each platform holds a distinct position auction. In the position auction, both platforms rank advertisers by the order of the product of relevance and bid amount, as is the case in practice. We derive each advertiser's valuation for a particular position from consumers preference for advertisers. Given these mechanisms, advertisers choose which position auction to participate in and how much to bid. Further, we analyze platform's strategy to attract the most profitable advertiser. Our results on the advertiser and platform strategies shed light on more realistic description and understanding of the phenomenon in the increasingly competitive online advertising platform market.

■ TC02

02- Essex North Center

Promotion & Customer Response Analysis

Cluster: Internet and Interactive Marketing

Invited Session

Chair: Eric Schwartz, University of Pennsylvania, Wharton School, 3730 Walnut Street, Philadelphia, PA, 19104, United States of America, ericschw@wharton.upenn.edu

1 - Coupon Optimization – Making Coupons Personal

Dwight Mouton, SAS, 500 SAS Campus DR, R4311, Cary, NC, 27513, United States of America, dwight.mouton@sas.com

Whether online, through mail or at the register, there is a science to making sure that a coupon is relevant to each customer. Many retailers or their vendors use segmentation, modeling and prioritization to select coupons. Only a few are using mathematical optimization, but they are getting huge returns in both efficiency gains and profitability. Interestingly there are two very different goals depending on the organization. Retailers want to maximize redemption to bring in customers. Coupon vendors want to maximize the number of coupons. On top of these are contracts with the manufactures, budget constraints and customer preferences. In this paper we will look at two different cases where optimization is used to solve very different goals and account for conflicting business rules.

2 - Customers' Dynamic Response to a Direct Couponing Program

Ignacio Osuna, Inalde Business School, Autopista norte Km 7 Costado occ, Bogota, Colombia, ignacio.osuna@inalde.edu.co, Jorge Gonzalez, Julian Villanueva

While some firms have been reluctant to put customer analytics at the core of their marketing strategy, others have embraced it. The latter firms have tried to personalize their marketing with the purpose of increasing customers' lifetime value. One of such marketing actions is the implementation of a direct couponing program (DCP) based on customer's data, collected through loyalty cards. A DCP entails that the same customer might be impacted over time with promotional coupons; that the coupon is delivered to a targeted customer, that it can be customized to some extent, and that there is a discount that is aimed to trigger a sales effect. We study the DCP for a mid-size European food retailer, analyzing whether these program have a positive impact and also how they produce that impact. Our unique frequent-shopper database contains records of more than 393,000 customers that were targeted with a DCP in a period of 95 weeks. We use VAR modeling since most of our variables are endogeneous and because studying the time dynamics of promotional effects is critical. We find cross-selling coupons have an effect in the following week after a coupon's delivery, while having a post-promotion dip. Up-selling coupons have a significant effect on sales that lasts for eight weeks, and do not have any post-promotion dip. The effect on sales from both coupon types is driven mainly by an increase in the average ticket; however, there is also an increase in the store visit frequency for the up-selling coupons. Finally, we find that heavy users of a DCP stay longer with the retailer and have greater coupon response compared to occasional users, especially in coupons using frequently purchased brands.

3 - Are Free Trial Customers Worth Less Than Regular Customers?

Hannes Datta, PhD Candidate, Maastricht University, P.O. Box 616, Maastricht, 6200 MD, Netherlands, h.datta@maastrichtuniversity.nl, Bram Foubert, Harald van Heerde

Many service firms acquire customers by offering free trials. A key question to a firm reviewing its customer base is whether the value of customers acquired by a free trial promotion is different from the value of regular customers. However, there is surprisingly little research on the value implications of free trial acquisition. Another pressing issue is how marketing activities can be used to target free-trial customers and regular customers, to enhance their retention rates and thereby their Customer Lifetime Value (CLV). To address these questions, we need to understand how the acquisition mode (via trial or not) affects the consumer decision making process for the usage and retention of a service. An important consideration is that many services include two components: flat-rate services (e.g., watching TV programs) and pay-per-use services (e.g., watching videos-on-demand). While the usage of both services will drive the likelihood the customer is retained, pay-per-use services, in addition, directly generate revenues. This paper develops a model for how consumer retention decisions are driven by free trial acquisition and service usage behavior. We use a system of equations to model the drivers of CLV: retention, usage of flat-rate service, and usage of pay-per-use service. We estimate our model on consumer panel data from a digital TV service. Our data set comprises marketing efforts, demographics, and monthly usage and retention decisions for 22,000 customers that were acquired during a 24-month observation period. Our results show that while free-trial customers are worth 34% less than regular customers, they are much more responsive to marketing activities.

4 - Adaptive Marketing Experiments Using a Correlated Multiarmed Bandit

Eric Schwartz, University of Pennsylvania, Wharton School, 3730 Walnut Street, Philadelphia, PA, 19104, United States of America, ericschw@wharton.upenn.edu, Eric Bradlow, Peter Fader

Firms run experiments to test and learn about marketing actions. However, running many so-called A/B or multivariate tests can be slow and costly, and the results from one test do not necessarily inform what the next test should be. We frame this as an optimization problem, known as the multiarmed bandit, involving the tradeoff between exploring uncertain actions and exploiting what has been learned so far. The problem occurs in a range of marketing domains from personalized website design to targeted direct marketing. To provide new insight on this problem, we use a model-based algorithm to determine an optimal policy of how to run a sequence of tests. In particular, we introduce the reinforcement learning framework to the marketing literature which generalizes to a broader class of problems than that of methods commonly used to solve dynamic optimization problems. Unlike prior methods, our approach accommodates a selection among a potentially large set of different actions. By considering the similarity of those actions, firms can optimally share learning across the actions in the attribute space and can learn about the effectiveness of an action before ever testing it. We discuss the preliminary results from optimal sequential field experiments for email marketing campaigns that were run with a large North American apparel retailer. In addition, via simulation studies, we illustrate how aspects of the problem setting drive performance of various multiarmed bandit problem strategies.

■ TC03

03- Essex North West

Social Media's Impact on Firm Performance

Cluster: Internet and Interactive Marketing

Invited Session

Chair: Ashish Sood, Emory University, 201 Dowman Drive, Atlanta, GA, 30322, United States of America, ashish.sood@emory.edu

1 - The Dynamics of Commercial Media, Social Media, and Market Outcomes

Ho Kim, PhD Student, University of California Los Angeles, Anderson School of Management, 110 Westwood Plaza, Los Angeles, CA, 90095, United States of America, ho.kim.2013@anderson.ucla.edu, Dominique Hanssens

Despite its managerial significance, consumer search is less recognized in academia compared with other consumer-generated media such as blogging. This study includes consumer search volume for new products as a key component of the process by which commercial media and social media influence market outcomes. Guided by distinct features of search and blogging, we develop a system of simultaneous equations that describes the dynamic relationship between advertising, blogging, searching, and revenue. We apply it to a movie panel data set of 159 movies and 71 weeks (60 weeks of pre-launch and 11 weeks of post-launch) .We find several differences in the behavior and impact of blogging and searching, suggesting that each has its own unique role in the marketing of new products. Notably, we find that while search volume has greater contemporaneous effects on revenue, its effect on the next period revenue turns out to be negative. Blogging, on the other hand, has smaller contemporaneous effect on revenue but its positive effect is still found in the next period. Other interesting distinctions between them will be discussed.

2 - Recovering the Actual Impact of Word-of-mouth and Biases in Suppliers' Expectations

Dong Soo Kim, Lecturer, KAIST Business School, 85 Hoegiro Dongdaemoon-gu, Seoul, Korea, Republic of, dustin.d.kim@gmail.com, Duk Bin Jun

In this study, we suggest a framework to investigate and recover the actual impact of extreme online ratings and to understand biases in suppliers' expectations about box office sales, based on the nature of extreme behaviors, willingness to rate and skepticism, and the unique characteristic of the motion picture industry, information symmetry. The suggested framework deals with the following three issues: first, the moderating effect of the decay pattern of the WOM effect, second, the adjustment for the actual impact of extreme ratings, and finally, differences between suppliers' and moviegoers' responses. We apply the suggested framework to the Korean movie data from 2006 to 2009 for an empirical example. The empirical result strongly supports our expectations, which is based on previous behavioral studies.

3 - Shape Analysis of Consumer Reviews: Evolution of Volume, Valence, and Dispersion

Ashish Sood, Emory University, 201 Dowman Drive, Atlanta, GA, 30322, United States of America, ashish.sood@emory.edu, Wolfgang Jank, Mayukh Dass, Yue Tian

Consumer reviews are becoming increasingly important in consumers' purchase decision process and in the success of new products. Prior literature acknowledges that consumer reviews impact product sales but are divided on the impact of the three metrics – valence, volume, and dispersion of consumer reviews – on product sales. The underlying thesis of the current paper is that these differences in findings are driven by the evolution of these metrics over time. Traditional models, which do not account for this evolution (shape) may fail to incorporate potentially vital information, and thereby lead to divergent conclusions. In this paper, using 511,972 online movie reviews collected from Yahoo and IMDB on 405 movies released from Feb. 1999 to Dec. 2010, we seek answers to the following questions: 1) Do consumer reviews matter? Can consumer reviews be used to predict box office sales? Can managers influence the impact of consumer reviews? 2) How to quantify consumer reviews? Which metric – valence, volume or dispersion is more informative? 3) How do consumer reviews evolve? Does the shape matter? Does the shape of one metric influence the shape of another? We use functional data analysis to study the above questions, including the interactions among these eWOM metrics.

■ TC04

04- Courier

Consumer Behavior I

Contributed Session

Chair: Kimmy Wa Chan, Assistant Professor, Hong Kong Polytechnic University, Department of Management and Marketing, M801 Li Ka Shing Tower, Hong Kong, Hong Kong - PRC, mskimmy@polyu.edu.hk

1 - Moderating Role of Customer Participation on Corporate Reputation and Customer Citizenship Behavior

Harmeen Soch, Associate Professor, Punjab Technical University, Kapurthala-Jalandhar Highway, Kapurthala, Pb, 144601, India, harmeensoch@yahoo.com, Nidhi Aggarwal

Customer citizenship behavior (CCB) is increasingly gaining importance in the marketing literature. Deriving its roots from organizational citizenship behavior literature and advancing the existing knowledge on customer participation, CCB includes the extra-role behavior of a customer where he helps other customers voluntarily. Customers are knowledgeable and empowered and are demanding their participation in production and purchase of goods. Customer-based corporate reputation enhances the commitment of the customers towards the organization by providing them guarantee of high-quality services and honesty in service delivery. It has been seen that higher the reputation of a firm, higher the CCB exhibited by a customer. There is a gap in the existing literature wherein the degree of customer participation and risk type has not been studied for their moderating effects on CCB. In line with this, the present study looks at the moderating role of risk (social and temporal) and degree of customer participation on the relationship between customer-based corporate reputation and CCB. Data from 500 customers shopping at supermarkets was collected using a well-drafted pretested 7-point Likert Scale. The scale was subjected to standard psychometric procedures for refinement and validation. Exploratory factor analysis followed by confirmatory factor analysis was employed to confirm the fit of data to the sample. Structural equation modeling (SEM) was used to confirm how well the proposed theory was fit to the driving theory. It was found that customer-based corporate reputation has a positive effect on CCB. Risk and degree of customer participation have a significant influence on the relationship between customer-based corporate reputation and CCB.

2 - Use of Brand Symbolism in Teenagers: Evidence from a Modern-conservative Country

Asli Kuscu, Bogazici University, Bebek, Istanbul, Turkey, asli.kuscu@yahoo.com

The literature presents evidence that individuals in the postmodern society are struggling to construct and maintain a self-concept through a rapidly changing, highly fragmented environment. Thus, marketers, who are in need to understand the creative consumer, searching and producing identities while consuming, should turn to the interaction between self-concept and the symbolic use of goods and brands. This paper analyzes over a structural model the influence of product symbolism on congruence perception and loyalty for both individualist and collectivist teenagers within a modern - conservative society. Individualist and collectivist teenagers differ in their levels of self-esteem, self-monitoring, and self-consciousness reflecting different congruence relationships, which at the end result in different levels of loyalty. Though there are numerous studies investigating the impact of congruence on loyalty, those studies are either conducted in an individualist or collectivist society and none of them has incorporated those as salient social identity dimensions. Kumru and Thompson (2003) have postulated that both dimensions are influential in the identity formation of teenagers in Turkey, so it is worth exploring their influence in the formation of brand loyalty. In addition to that, almost all studies have used utilitarian products; however, taking a post-modernist approach this study considers the symbolic meaning of brands. Further, studies investigating the relationship between brand symbolism and image congruence for teenagers are scarce contrary to the fact that teenagers are primary recipients of most marketing efforts and studies show that brand loyalty and brand relationships start to develop at very early ages (Gilbert, 1957).

3 - Do Consumers' Knowledge and Attitudes Determine Their Perceptions and Willingness-to-pay for GSCM?

Bowon Kim, Professor, KAIST Graduate School of Management, 87 Hoegiro Dongdaemoon-Gu, Seoul, 130-722, Korea, Republic of, bwkim@kaist.edu, Kwangtae Park

In this research, we explore how consumers' willingness to pay (WTP) for the green product is determined. Kim, et al. (2011) already showed that the firm's effort for green supply chain management (GSCM) enhances the consumers' willingness to pay for the firm's product. Therefore, our focus in this research is to look into how consumers' demographics and behavioral attributes affect the relationship between firm's GSCM efforts and consumers' willingness to pay. We suggest two models. In the first model, we put forth that consumers' behavioral attributes directly affect their WTP and also indirectly influence the WTP via their perceptions on the firm's GSCM activities. In the second model, we propose that consumers' demographics have a direct effect on their perceptions on the firm's GSCM activities and also an indirect effect via their behavioral attributes. Using the survey data from 300 consumers, we show whether the propositions in the two models are significantly supported. The research result has nontrivial managerial implications. In addition to Kim, et al. (2011)'s conclusion that it indeed pays off for the firm to try to implement more 'green supply chain strategy, our research result helps managers to focus on specific consumers' demographics and their behavioral attributes that will be eventually more effective in enhancing the WTP.

4 - Service Unfairness is Not Good? The Mediating Roles of Envy, Benign Envy, and Boundary Conditions

Kimmy Wa Chan, Assistant Professor, Hong Kong Polytechnic University, Department of Management and Marketing, M801 Li Ka Shing Tower, Hong Kong, Hong Kong - PRC, mskimmy@polyu.edu.hk, Chi Kin(Bennet) Yim

While a large body of research has testified the advantages of offering preferential treatment in building loyalty of targeted customers, scant research has focused on the perceived service unfairness from the view of those non-recipients. This research aims to illuminate a complete understanding of the impacts of service unfairness (i.e., viewing preferential treatment received by others) on non-recipient consumers by considering the underlying mechanism of their emotional experiences (envy and benign envy) and the boundary conditions of the level of similarity that the focal customers perceived with the recipients of preferential treatment (customer-customer similarity) and with the employees who offer the preferential treatment (customer-employee similarity). Using data collected from a laboratory experiment and a survey in the context of clothing retail stores, this research confirms the underlying mechanisms of envy and benign envy in mediating the effect of service unfairness on the non-recipient consumers' behavioral outcomes including cooperation with the staff, purchase intent, and negative WOM toward other customers. Moreover, results on moderation reveal a differential pattern of the impacts of customer-customer similarity and customer-employee similarity. Specifically, customer-customer similarity magnifies (attenuates) the positive impact of service unfairness on envy (benign envy) whereas customer-employee similarity magnifies the positive impact of service unfairness on both envy and benign envy. Additional analyses on mediated moderation are also conducted to uncover the complex relationships among the proposed constructs.

■ TC05

05- Essex Center

Meet the Editors I

Cluster: Special Invited Sessions

Invited Session

Chair: Remi Trudel, Assistant Professor, Boston University, School of Management, Boston, MA, United States of America, rtrudel@bu.edu

1 - Meet the Editors I

Editors of leading journals for marketing academics will present their editorial policies and perspectives. The following editors are represented: Marketing Science: Preyas Desai; Journal of Marketing Research: Tulin Erdem; Journal of Marketing: Jeff Inman; Journal of Consumer Research: Brian Ratchford; Management Science: Pradeep Chintagunta; Information Systems Research: Chris Dellarocas.

■ TC06

06- St. George B

Health Marketing - Behavior

Contributed Session

Chair: Daniel Shapira, Ben-Gurion University, Guilford Glazer Faculty of Management, Beer Sheva, Israel, shapirad@bgu.ac.il

1 - How do Health Claims Influence Product Choice Behavior? – An Experimental Study

Yasemin Boztug, Georg-August-University Goettingen, Platz der Goettinger Sieben 3, Goettingen, 37073, Germany, boztug@wiwi.uni-goettingen.de, Klaus G. Grunert, Liisa Laehteenmaeki

Eating healthy becomes more and more popular. Food companies react on this demand by providing health related information on product packages. Front- or back-of-pack places can be used to give information on nutrient ingredients. One way giving information about the healthiness of a product is using an additional "health claim". Health claims advertise specific benefits of a product. The usage of health claims in countries of the European Union is determined through EU legislation (Regulation (EC) 1924/2006). We conducted an experimental study to determine if and how health related information influence the product choice behavior of consumers. Consumers in five European countries took part in our internet based experimental study. They were asked to make choices in three product categories, namely bread, yoghurt and pork chops. They made several choices between four products with varying product attributes, as e.g., price, color, and claim type. We estimated a latent class choice model to account for consumer heterogeneity. We found three respectively four consumer segments for the different product categories. In each product category, we found one consumer segment, for which health claims plays a significant role for choosing a product. Further analysis showed that the segments can be characterized by home country of the consumer, if any children life in the household and several consumer specific attitudinal characteristics, as e.g., their eating behavior. Additionally we will analyze the willingness-to-pay for healthy products based on our choice data.

2 - Can Anchoring Effects be Used to Increase the Consumption of Fruit and Vegetables?

Iris Versluis, PhD Candidate, Erasmus School of Economics, P.O. Box 1738, Rotterdam, 3000 DR, Netherlands, versluis@ese.eur.nl, Philip Hans Franses

Consumer preferences can be context dependent and thus can be manipulated by changing the reference points. This phenomenon whereby choice processes can be influenced is known as anchoring. In Europe and the US, insufficient fruit and vegetable consumption is a major concern, and we investigate if the anchoring effect is also present in the context of f&v consumption, and if it is, whether it could be used in efforts to promote f&v consumption. Our study examines a carefully selected representative sample (N=409) of the Dutch population. Each respondent is confronted with one daily diet card, which is randomly selected from a set of four cards. Each card has a different amount of f&v. Respondents indicate how they evaluate this amount and to what extent they intent to eat more, the same, or less f&v than the amount shown on the card. Other included variables are actual f&v consumption, evaluation of own consumption compared to others, and nutrition knowledge. Our findings show a strong anchoring effect. The evaluations and intended intake levels of f&v depend heavily on the card shown to the respondents. We furthermore find evidence that respondents tend to take the amount of f&v shown on the card as the average amount that other people consume and base their evaluation on the belief whether they consume more, the same or less f&v than others. We interpret our findings as that it implies that by changing people's reference points just before they go for grocery shopping or make a choice in a restaurant, their perception of the desired amount of f&v, and subsequently their choices, can be influenced. We further examine this conjecture in a range of experiments and our preliminary findings suggest various practical implications that are also useful for marketing purposes.

3 - Digital Healing: The Role of Mobile Health Apps in the World of Health 3.0

Balaji Krishnan, Associate Professor, University of Memphis, 303 FCBE, Innovation Drive, Memphis, TN, 38152, United States of America, krishnan@memphis.edu, Ankit Kesharwani

The convergence of mobile technology with an evolving healthcare industry has ushered a wave of disruptive innovations that bring a paradigm shift in healthcare delivery services - Health 3.0. Health 1.0 was about content and focused on portals providing information to consumers. Health 2.0 was focused around communities that patients and their physicians contribute to thus providing a two way communication but provided generic information. Health 3.0 is about coherence of health information and active participation from users itself leading to two way communication which is specific to each patient. This study deals with the diffusion of mobile health apps covering a wide array of physical and mental health issues. Digital natives (DN) are users born after 1980 and have grown up with digital devices. DNs are developing N-fluence networks which in the context of healthcare can be reduced to three degrees of influence. Moreover, N-fluence networks have their own social structure: you have your best friends, your larger circle of acquaintances in your social network, plus the

world. Using social network analysis followed by discrete hazard model, an actor-based model of referral network will be analyzed allowing for adopters' neighborhood effects (geodesic distance), informational cascades (apps download figure and average rating), socio-metric opinion leadership effect (indegree), WOM behavior (outdegree), e-WOM (consumer reviews) and marketing efforts (detailing efforts). This research will help understand the efficacy of mobile technology enabled health education and could be used by health care managers and by public policy advocates. Further, the research will lead to an understanding of the factors determining the success of apps in general.

4 - Fashion Models and the Overweight Epidemic

Daniel Shapira, Ben-Gurion University, Guilford Glazer Faculty of Management, Beer Sheva, Israel, shapirad@bgu.ac.il, Oded Lowengart, Amir Heiman

The proportion of overweight and obese individuals in developed countries has increased dramatically in the past four decades, increasing health risks and the cost of public and private healthcare. Overweight and obesity is an epidemic shared by many segments of the population with a noticeable overweight rates increase among young women that has risen from 21.2% in the early 1960s to 51.5% in the early 2000s (Wang and Beydoun 2007). At the same time the body size of fashion models has decreased during the same period (Sypeck et al. 2004). The lower the weight of models, the lower the weight of the ideal figure to which consumers compare themselves. Previous literature links this decline in the weight of fashion models to eating disorder symptoms especially among young women (e.g. Ahern et al. 2008). In this paper, we argue that the thin ideal model has an indirect accelerating effect on the epidemic of overweight among youngsters, in general and adolescent females, in particular. Namely, the thinner the model, the greater the overweight epidemic. We introduce an economic model in which the individual decision of calorie consumption is affected by two reference points: the weight of the ideal beauty (thin body size) and the median weight of the population. When these reference points are far apart, the thin ideal point becomes an unreachable goal and, hence, loses its ability to be a restraining force against weight gain. This leads to a continuous increase in the median weight of the entire population. Additionally, managerial applications and policy implications are discussed.

■ TC07

07- St. George C

Social Influence and Profitability

Cluster: Special Invited Sessions

Invited Session

Chair: Michael Haenlein, Associate Professor, ESCP Europe; Arison School of Business, IDC, Paris, France, haenlein@escpeurope.eu

Co-Chair: Barak Libai, Associate Professor of Marketing, Interdisciplinary Center (IDC), Arison School of Business, Herzliya, Israel, libai@idc.ac.il

1 - Differential Adaptive Diffusion: Understanding Diversity and Learning Whom to Trust in Viral Marketing

William M. Rand, Professor, University of Maryland, Van Munching Hall, College Park, MD, United States of America, wrand@umd.edu, Hossam Sharara, Lise Getoor

Viral marketing mechanisms use the existing social network between customers to spread information about products and encourage product adoption. Existing viral marketing models focus on the dynamics of the diffusion process, however they typically: (a) only consider a single product campaign and (b) fail to model the evolution of the social network, as the trust between individuals changes over time, during the course of multiple campaigns. In this work, we propose an adaptive viral marketing model which captures: (1) multiple different product campaigns, (2) the diversity in customer preferences among different product categories, and (3) changing confidence in peers' recommendations over time. By applying our model to a real-world network extracted from the Digg social news website, we provide insights into the effects of network dynamics on the different products' adoption. Our experiments show that our proposed model outperforms earlier non-adaptive diffusion models in predicting future product adoptions. We also show how this model can be used to explore new viral marketing strategies that are more successful than classic strategies which ignore the dynamic nature of social networks.

2 - The Social Costs of Knockoffs: Consumer Disengagement From Cultural Innovations

Gil Appel, Tel-Aviv University, Tel Aviv, 69978, Israel, gilappel@post.tau.ac.il, Barak Libai, Eitan Muller

In recent years there is an increased interest in how the need for uniqueness affects consumer decision making. The need for uniqueness' social influence is especially evident for cultural innovations such as trends or fashions, where the existence of an excessive number of users can lead some consumers to disengage from the product. In this study we investigate how the need for uniqueness affects consumers' disengagement patterns, and thus, their overall profitability, throughout the life-cycle of a cultural innovation. We examine the behavior of the market using an aggregate approach as well as an individual-level simulation approach, looking at the life cycle of several cultural innovations to help calibrate the model. We show how profitability can be affected by the counterfeit of a product, even when no cannibalization or brand image dilution occurs, and how, in contrast to typically examined innovations, a high state of advertising or word of mouth can drive disengagement from the product and result in a negative effect on the value of the innovation to the firm.

3 - How Customer Referral Programs Convert Social Network Capital into Economic Capital

Christophe Van den Bulte, University of Pennsylvania, Philadelphia, PA, United States of America, vdbulte@wharton.upenn.edu, Sam K. Hui, Bernd Skiera, Philipp Schmitt

Customers acquired through a referral program may generate higher margins and exhibit lower churn compared to customers acquired through traditional means. Social network theory suggests that the margin differential stems from a "better matching" mechanism where homophily between referrers and referrals creates a temporary information asymmetry between referrals and traditional customers, and that the churn differential stems from a "social enrichment" mechanism where the relation between a customer and the firm is strengthened by the presence of a third party who is connected to both and so embeds the dyad into a closed triad. The present study provides evidence of these two mechanisms in the context of retail bank's customer referral program. We analyze about 2,000 referrer-referral customer dyads and a random sample of about 4,000 customers acquired through traditional means. The findings indicate that referrer-referral customer dyads exhibit homophily not only in observable demographics but also in unobserved traits associated with superior customer profitability. Also, the initial margin differential is greater if the referral and referrer have the same age, gender, or marital status. Finally, both the margin and churn differential vanish after the referrer leaves the bank. These findings indicate that better matching and social enrichment are indeed two mechanisms through which firms can leverage their existing customer networks to gain new customers that exhibit higher margins and lower churn, and so convert social capital into economic capital.

4 - Social Interactions in Customer Churn Decisions: The Impact of Relationship Directionality

Michael Haenlein, Associate Professor, ESCP Europe; Arison School of Business, IDC, Paris, France, haenlein@escpeurope.eu

The impact of social factors on individual-level decision making has been a subject of regular interest within the marketing discipline. Yet, research that has analyzed social interactions and social contagion has, to a very large extent, relied on the use of undirected networks and therefore does not take account of the direction in which influence takes place. This may be problematic, since incoming and outgoing relationships are likely to differ in their importance for social processes. This manuscript intends to provide a contribution in this area by focusing on the importance of relationship directionality when analyzing social interactions in customer churn decisions, i.e., situations where two or more social contacts decide to leave the company either simultaneously or soon after each other. Using the customer base of a mobile phone provider, I rely on call detail records to investigate churn behavior of 3,431 focal actors. I provide evidence for social interactions in customer churn decisions and show that the loss of a social contact who has previously been a customer of the same provider leads to a significant and substantial increase in the hazard rate. Yet, this effect is limited to churn among outgoing relationships only and churn among incoming relationships has no significant impact on focal actor churn. This research therefore provides evidence that social effects do play a role in customer retention but that the direction of ties needs to be taken into account.

■ TC08

08- Adams

Recent Developments in Structural Learning Models

Cluster: Special Invited Sessions

Invited Session

Chair: Andrew Ching, University of Toronto, Toronto, ON, Canada, andrew.ching@rotman.utoronto.ca

1 - A Structural Analysis of Marketing-mix, Publicity and Correlated Learning: The Case of Statins

Hyunwoo Lim, University of Toronto, Toronto, ON, Canada, hlim@rotman.utoronto.ca, Andrew Ching

When Lipitor enter the statin market (a major class of anti-cholesterol drugs), it did not establish any direct clinical evidence on the heart disease risks reduction. On the other hand, three incumbent statins had already established such direct clinical evidence. Despite this disadvantage, Lipitor had expanded its market share rapidly since its entry, and became the market leader in two years. If physicians intend to reduce the patients' risks of heart disease, these prescribing patterns are hard to apprehend. To explain this fact, we argue that since statins work in a similar mechanism, when physicians encounter incumbents' clinical evidence, they infer that Lipitor, which is most effective in lowering cholesterol among all statins, would also reduce heart disease risks most effectively. We develop a structural model of correlated learning to capture the above intuition.

We define a variable, "efficiency ratio", which measures how efficiently a drug can translate reduction in cholesterol into reduction in heart disease risks. We assume that physicians learn about the efficiency ratio for each drug from clinical trials and detailing, and that physicians' initial prior are correlated across drugs. Consequently, by the time when Lipitor is introduced, physicians are able to use the clinical trials done by the incumbents to update their beliefs about Lipitor's efficiency ratio. Because of this, the correlated learning may potentially allow late entrants to gain late mover advantages. On the other hand, our model also allows for switching costs, which capture first mover advantages. Our estimation results therefore quantify these two counteracting effects, which potentially allow us to shed light on how a late entrant should pick his entry date optimally.

2 - Cellular Service Demand: Biased Beliefs, Learning, and Bill Shock

Michael D. Grubb, Massachusetts Institute of Technology, Sloan School of Management, Cambridge, MA, United States of America, mgrubb@mit.edu, Matthew Osborne

We estimate a model of consumer plan choice, usage, and learning in cellular-phone services on a detailed panel data set of individual bills. Our model allows consumers to learn about how much they value cellular services. We infer consumers' predictions of their future cellular usage from plan choices, and compare these predictions to actual usage. We find that on average consumers underestimate their average tastes for calling (mean bias), underestimate their own uncertainty about their average tastes (overconfidence), and underestimate the monthly variation (projection bias) in their tastes for usage. Counterfactual experiments show these biases cost consumers $49 per year. Our paper also advances structural modeling of demand in situations where multipart tariffs induce marginal price uncertainty at the time consumers make consumption choices. Our approach is based on novel evidence that consumers are inattentive to past usage in such settings. Holding prices fixed, we find that the FCC's proposed bill-shock regulation requiring users be notified when exceeding usage allowances would cut revenues 8% and increase average consumer welfare by about $21 per year. We find that bill-shock regulation is particularly effective because consumers are biased. Absent consumer bias, the regulation would only increase average consumer welfare by less than $2 per year. These findings change when we allow firms to optimally respond to the bill shock regulation: in that case, firms adjust prices so that the regulation has almost no effect on profits, leading to an overall reduction in consumer welfare of about $25 per consumer.

3 - An Empirical Model of Industry Dynamics with Common Uncertainty and Learning From the Past Actions of Competitors

Nathan Yang, University of Toronto, Toronto, ON, Canada, nathan.yang@utoronto.ca

This paper advances our collective knowledge about the role of learning in retail agglomeration, and its implications on market structure. Uncertainty about new markets provides an opportunity for learning from others, where one firm's past entry decisions signal to others the potential profitability of risky markets. The setting is Canada's hamburger fast food industry from its inception in 1970 to 2005, for which simple analysis of unique hand-collected data reveals empirical patterns pointing towards retail agglomeration. The notion that uninformed potential entrants have an incentive to learn, but not informed incumbents, motivates an intuitive differences-in-differences approach that separately identifies learning by exploiting asymmetries in the way potential entrants and incumbents react to spillovers. This identification strategy confirms that information externalities are key drivers of agglomeration as the learning effects exceed the non-learning effects by roughly 30%. Passing the data through an estimated dynamic oligopoly model of entry/exit with common uncertainty about demand, learning through entry, and learning from others, highlights some differences between actual industry dynamics (with uncertainty and learning) and counterfactual industry dynamics (without uncertainty and learning). These comparisons reveal that an industry with uncertainty is initially less competitive than an industry with certainty, but catches up over time as rival incumbents soften the impact of uncertainty via informational spillovers. Uncertainty contributes to the entry cost, as there are many instances in which chains enter markets they would have avoided had they not faced uncertainty. Finally, the premium for full information constitutes at least 2% of their total value.

4 - Learning and Network Effects within Social Networks

Mantian (Mandy) Hu, New York University, Stern School of Business, New York, NY, United States of America, mhu@stern.nyu.edu, Sha Yang, Daniel Yi Xu

Behaviors are contagious in the way that the behavior of one's peers affects the probability that s/he engages in that same behavior. Previous empirical findings revealed that customers are more likely to switch mobile network operators (MNOs) if more of their contacts from the same operator switch. Building on this, we propose a dynamic structural model with strategic interpersonal interactions to identify the underlying behavioral mechanisms. On one hand, customers will infer quality signals from the switching decisions of their contacts and learn about the alternative MNOs. And on the other hand, the switching decisions may also affect the customer's utility through a local network effect in that the more contacts a customer has, the higher is the benefit generated. Thus, our framework merges three research areas, i.e. learning from own experience, social learning, and local network effects. It is the first research to incorporate a learning framework within a social network context where customers are forward-looking and decisions are endogenously made. The model is solved using a two-step dynamic programming algorithm. We present an empirical application of this framework to 2008 data from a mobile network operator in a European country. We find that in the current context social learning is more informative than learning from own experience. Moreover, simulations reveal that about two-thirds of the network elasticity, the ratio of the percentage change of customer retention probabilities to the percentage change of network sizes, can be attributed to local network effects and one-third to social learning effects.

■ TC09

09- Helicon

Conjoint Analysis II

Contributed Session

Chair: Ely Dahan, Researcher, University of California-Los Angeles, Medical School, 2542 Cardigan Court, Los Angeles, CA, 90077, United States of America, elydahan@gmail.com

1 - Context Dependence as a Driver of Preference Dynamics

Robert Rooderkerk, Tilburg University, Warandelaan 2, Tilburg, 5037 AB, Netherlands, R.P.Rooderkerk@uvt.nl, Berk Ataman

In most product markets, real or simulated, consumers repeatedly choose from sets of different products. There is ample evidence in the literature that consumer preferences evolve over the course of such repeated choices. Existing studies have advanced our knowledge by relating preference dynamics to a variety of sources such as firms' marketing actions. The authors propose context dependence in the presence of changing choice set composition as an additional driver of preference dynamics. To gain insight into the phenomenon, they calibrate a dynamic heterogeneous probit model with time-varying parameters on data obtained from a choice-based conjoint experiment. The results indicate that consumers temporarily adjust their time-varying global preferences based on the local and background decision contexts to form local preferences. In addition, the findings reveal that the local decision context becomes more influential than the background decision context when consumers are more familiar with the product. The authors also find that incorporating these contextual influences leads to a substantial increase in estimation and predictive fit. Finally, the authors illustrate how firms can design more profitable product lines by accounting for context dependence of consumers.

2 - Bayesian Rapid Optimal Adaptive Design: Applications Comparing Risky and Intertemporal Choice Models

Debajyoti Ray, PhD Candidate, California Institute of Technology, 1200 E California Blvd, MC 136-93, Pasadena, CA, 91125, United States of America, debray@gmail.com, Colin Camerer

Marketing research relies critically on the ability to conduct efficient and informative experiments to test competing hypotheses. Efficient experimental designs use sequences of choice tests in which theories make different predictions. The idea is to rapidly choose a "best" (most-informative) test for each trial based on a subject's previous responses. A specialized marketing example is adaptive choice based conjoint methods for product design. Our algorithm searches through all designs in a large set to select the most informative test. Beliefs are updated based on the outcome of previous experiments, to dynamically optimize future designs. Our algorithm uses a novel Equivalence Class Edge-Cutting (EC2) criterion with the following benefits: 1) EC2 satisfies the mathematical property of Adaptive Submodularity. This leads to guarantees of near-optimality, even when designs are chosen myopically. In contrast, current methods like Information Gain can perform arbitrarily worse when responses are error-prone. 2) EC2 can be implemented using lazy evaluation, leading to orders of magnitude speedup. Very large design spaces can be searched in seconds (which would be infeasible for current techniques). We test different theories of risky choice on experimental subjects. These theories include several parameters, making it difficult to choose Bayesian-optimal sequences using standard methods. Empirical results demonstrate heterogeneity, and some theories are shown to fit choices poorly. We also present a second application to distinguish models of Intertemporal choice. Finally, we check whether subjects can or do deliberately misstate preferences in early trials in order to create better future choices (manipulating the procedure).

3 - Direct Comparison of Utility Maximization and Disutility Minimization in Conjoint Analysis

Berry T. Cox, Rice University, P.O. Box 2392-MS 531, Houston, TX, 77251, United States of America, coxb@rice.edu, Amit Pazgal, Seethu Seetharaman

Microeconomic theory posits that utility maximization and disutility minimization will yield the same choice when analyzing consumer preferences based on the assumption that consumer preferences are complete and transitive. Behavioral choice literature has demonstrated that these underlying assumptions are often violated. The authors test these assumptions in a choice based conjoint environment in which some respondents are asked to choose their most preferred alternative, others are asked to choose their least preferred alternative, and others are asked to indirectly ordinally rank each set of alternatives. The results demonstrate that, in a multinomial logit setting, maximizing utility is not necessarily the same as minimizing disutility when utilizing stated preference methods.

4 - Adaptive Best-worst Conjoint (ABC) Analysis

Ely Dahan, Researcher, University of California-Los Angeles, Medical School, 2542 Cardigan Court, Los Angeles, CA, 90077, United States of America, elydahan@gmail.com

Conjoint analysis respondents can choose the best and worst of four alternatives without much more effort than in CBC. We apply the best-worst method to full-profile conjoint stimuli, and improve questioning efficiency by employing adaptive questioning. Utility functions with 7-10 parameters can be estimated instantaneously at the individual level with as few as 10-17 tasks. While CBC with four options-at-a-time produces only three paired comparisons, Best-worst with four options generates five of the six possible paired comparisons. So ABC is 66% more efficient than CBC even without adaptive questioning. This inherent efficiency advantage of best-worst questioning is further enhanced through adaptive questioning based on transitivity of preference. Transitivity may resolve even more paired comparisons than direct questioning. For example, with 16-full-profiles, there are 16 x 15 / 2 = 120 possible paired comparisons. ABC typically requires 13 best-worst questions to estimate a utility function with 7-9 parameters. Each of the 13 tasks directly resolves 5 paired comparisons (though some redundancy is likely, so they may not all be unique pairs), so direct questioning resolves at most 60 pairs (5 x 12). The remaining 60+ paired comparisons are resolved through transitivity. The Adaptive element of ABC is based on choosing the four stimuli to show in each best-worst task based on maximizing the number of unresolved pairs. The presentation will highlight results about: ïInternal consistency ïEstimation ïRespondent reactions to this system.

■ TC10

10- St. George D

New Product Adoption II

Contributed Session

Chair: Carlos Hernandez Mireles, University of Southern California, Marshall School of Business, 3660 Trousdale Parkway, Los Angeles, CA, 90089, United States of America, carlos.h.mireles@gmail.com

1 - The Effects of Platform and Consumer Lifecycles on Content Sales in a Platform-mediated Market

John Healey, University of Maryland, 5103 Edgewood Rd, College Park, MD, 20740, United States of America, jhealey@rhsmith.umd.edu, Wendy Moe

Using data from the video game market, we demonstrate the importance of considering both consumer and platform lifecycles effects on content sales within platform-mediated markets. We theorize that early adopters of the platform product will purchase more content than later adopting consumers. In addition, we theorize that consumers who have recently purchased a console will be more likely to purchase content, with a decline over the consumer lifecycle due to a variety of factors. We find strong support for both consumer and platform lifecycle effects on content sales. Consumers who purchase earlier in a console lifecycle, and are considered more innovative, and recent adopters purchase more content. These results suggest that firms in a platform market need to consider when in both the platform and consumer life cycles their current customers purchased their consoles when evaluating installed base effects. Specifically, our results suggest that content firms should expect higher sales per member of the installed base earlier in the console life cycle when the installed base is considered more "innovative". Our results also suggest that content firms should release content in times when many consoles have recently been sold, to take advantage of consumers early in their lifecycle.

2 - The Dynamics of New Product Feature Usage

Tingting Fan, PhD Student, New York University, 40 West 4th Street, Room 921, New York, NY, 10012, United States of America, tfan@stern.nyu.edu, Eitan Muller, Peter Golder

We study the dynamics of new product feature usage by collecting longitudinal data on individual consumer usage of two new products — Renren.com (China Facebook) and smartphones. We develop a conceptual framework of usage adoption and explore the product feature usage patterns, including usage frequency and duration, over different usage stages. With the longitudinal data, we identify the factors driving the usage process including feature, user, and environmental characteristics, and the interactions among these factors. In particular, we study two spillover effects across features: 1) contemporary spillover effects — how the current usage of one feature influences current usage of other features, and 2) cumulative spillover effects — how the cumulative past usage of one feature influences current usage of other features. A dynamic structural model is used to address users' forward-looking behavior. Our research enhances the conceptualization of the usage adoption process by developing a conceptual a framework of new product usage adoption. It also enhances our knowledge on the dynamics of product feature usage by exploring the usage patterns over different usage stages. In addition, our research provides new insights for managers about promoting deeper and broader new product usage adoption, designing and improving their products based on consumer usage experience.

3 - Modeling New Product Trial and Early Repeat Purchase: An Individual-level Multi-product Approach

Carmen Liutec, PhD Student, University of Houston, 4800 Calhoun Road, Melcher Hall 375M, Houston, TX, 77204, United States of America, c.liutec@gmail.com, Rex Du, Edward Blair

We develop a novel approach for modeling new product trial and early repeat purchase behavior, and we apply this approach in the context of consumer packaged goods. Our approach takes advantage of the cross-individual, cross-product, cross-time data that is increasingly available from retail customer relationship management programs as well as research panels. It enables us to account for differences in consumers' intrinsic preferences for new products as well as their responsiveness to marketing variables, during both trial and early repeat purchases. By leveraging these uncovered individual differences, we attempt to achieve three goals. First, we aim to improve the accuracy of post-launch sales forecasts based on data from a period that can be as short as two to three months, tapping into the fact that each individual trial or early repeat purchase observed during the post-launch period sends a different signal about the new product's sales potential. Second, we aim to provide more informative diagnostics for managers to act upon (e.g., how to re-position the new product or target it for a particular consumer segment). Finally, we aim to establish empirical regularities regarding consumer responses to new products (for example, how an individual's willingness to try new products may be related to his tendency to make repeat purchases, or how consumer price sensitivity may differ between trial and repeat purchases).

4 - A New Hazard Model with Causal Effects: A Study of the Sales-price Crash in New Products Diffusion

Carlos Hernandez Mireles, University of Southern California, Marshall School of Business, 3660 Trousdale Parkway, Los Angeles, CA, 90089, United States of America, carlos.h.mireles@gmail.com, Gerard Tellis, Georgios Effraimidis

We introduce a new statistical development in hazard modeling. Specifically, we present a new tri-variate simultaneous equation model of hazard rates that allows us to model and measure the time-varying causal effect of the occurrence of each event on the others. Moreover, our model incorporates dependence through unobserved factors and lagged durations and we also control for right truncation. We introduce a Bayesian specification and an estimation routine that relies on Gibbs sampling. In addition, we present the identification results of our model. We apply the tri-variate hazard approach to a rich database that concerns 1,725 new products. The products in our data exhibit a sudden and dramatic drop in both their sales and prices, phenomena that we call "the sales-price crash". Prices fall permanently to a lower level while sales may show a modest recovery. Our simultaneous hazard model will allow us to identify the time-varying causal effects between the time to sales crash, the time to sales recovery, and the time to price crash. Our preliminary analyses provide several new insights that suggest an asymmetric effect between price cuts and sales crashes. Deep price cuts decrease the probability of a sales crash even when the sales crash is driven by seasonal factors. Finally, we find that quality and several other factors drive the observed heterogeneity in the hazard rates of the sales-price crash. Our results are managerially relevant because we measure the effectiveness of price cuts in deterring a sales crash and this is of particular interest for managers in the high-tech and fashion industries.

■ TC11

11- Empire

Channel Governance and Contracting I

Contributed Session

Chair: Jong-Ho Lee, Korea University Business School, Anam-Dong, Seongbuk-Gu, Seoul, Korea, Republic of, jongholee@korea.ac.kr

1 - The Consequences of Misaligned Formal Contracting for Relational Contracting

Jon Bingen Sande, Associate Professor, BI Norwegian Business School, Nydalsveien 37, Oslo, NO-0442, Norway, jon.b.sande@bi.no, Sven A. Haugland

Transaction cost economics suggest that formal contracts that are aligned with transaction attributes are more efficient than formal contracts that are misaligned with transaction attributes. However, little is known about how misalignments affect performance outcomes, and when it matters most. We theorize that misalignments between formal contracting and transaction attributes undermine relational contracting, and that formal contracting has positive but diminishing effect on relational contracting when it is used as a rational response to the underlying transaction attributes (we call this "well-aligned formal contracting"). We test these ideas by using a dataset of 305 buyer-supplier relationships in the Scandinavian wood industry in two ways. First, we as-sess the effect of well-aligned formal contracting and misalignments on relational norms, a type of relational contract. Second, we test the differential effects of well-aligned formal contracting and misalignment on two performance variables: cost reductions and end-product enhancements. Realization of these two performance outcomes requires different levels of relational contracting, and we therefore expect

stronger negative effects of misalignment on end-product enhancements than on cost reductions. By using a two-step control function approach that accounts for the endogeneity of formal contracting, our hypotheses are largely supported. The findings show (1) that misaligning formal contracts with transaction attributes undermines relational norms, (2) that misalignments matter more for end-product enhancements than for cost reductions, and (3) that well-aligned formal contracting has a positive but diminishing effect of end-product enhancements.

2 - Can Bargain Power Paradox Institutionalize Fair Trade Ethics? A Consequential Evidence

Po-Fan Tsai, National Chung Hsing University, No.250, Guoguang Rd., South Dist., Taichung City, Taiwan - ROC, frank_bon2005@hotmail.com, Ming-Chih Tsai, Wei-Che Hsu

Issues concerning channel power abuse have been long addressed in marketing ethics. Today, the prevailing supply chain management may serve as a cornerstone institutionalizing ethical conduct considering its inherent bargain power paradox that reduces superiority of stronger member. Thus, this study aims to provide a normative model examining the ethical institution in supply chain for fair trade. In following the definition of fair trade, we identify fresh agri-foods distributed between growers and supermarket as a real case for study. Nash's game theory and generalized linear interacting model are used to assess bargain power by supply chain interdependence in a dyadic relationship, based on consequential theory that uses objective outcomes verifying ethics theory. In total, the data collected contains 11,300 transactions and 60 pairs of food/supply chain relationship. The analysis result indicates through ethical supply chain behaviors, expansion in pie and pie-slice can both be experienced. Retailer and growers are not playing a zero-sum game in supply chain. The retailer uses bargain power when task interdependence is low, but forbears from it when interdependence is high. As a key aspect in fair trade, the revenue allocated to growers may exceed the revenue generated when the grower operates alone. Although the pie-slices allocated to growers decrease along with increase in supply chain coordination, the overall increase in pie compensates for the smaller share of profit received. Finally, the benefits created through coordination may also include the safer foods that form another business ethical conduct for public health.

3 - Does it Make Relational and Financial Sense to be a Responsive Strategic Supplier?

M.Abrahim Zaka, PhD Candidate, Nyenrode Business School, 2nd Floor AH Building, Breukelen, Netherlands, a.zakakhan@nyenrode.nl

Does having responsive strategic suppliers create sustainable value for the buyer-supplier relationship? The evidence from within the marketing literature is mixed. Closer collaboration with a strategic supplier is known to influence risk, and relational outcomes, but this influence is does not always create benefits for both the buyer and their supplier. For business to business strategic relationships, shared benefits are important, because if channel partners in a relationship do not enjoy reasonable benefits it could be detrimental to the relationship. In this study we examine how strategic supplier responsiveness creates value for both the buyer and the supplier through the mediator of idiosyncratic relational risk. We used survey data (n=164) from listed and unlisted companies from the USA and used structural equation modeling for our analysis. The primary finding of interest is that a supplier's responsiveness (market orientation) is negatively associated with a buyer's idiosyncratic relational risk. This challenges the widely held belief that risk and market orientation are positively related. In tandem, the authors also find that being responsive reduces the supplier's risk in terms of repurchase likelihood by their strategic buyer. At the end of this paper, we discuss the managerial and academic implications.

4 - The Interaction Effect of Formal Control and Social Control on B2B Performance

Jong-Ho Lee, Korea University Business School, Anam-Dong, Seongbuk-Gu, Seoul, Korea, Republic of, jongholee@korea.ac.kr, Jin Hwa Rhee, Jae Wook Kim

Relational governance is a very important issue because it can affect the performance of a firm in an exchange relationship. Thus, corporate competitiveness can be heavily dependent on how well they manage their buyer-seller relationships. Extant studies provide contrasting results about the best control mechanism, formal control or social control, with little known about their interaction effect. Whilst studies from the substitutes' perspective support the choice of only one control method, the complements' perspective suggests us to utilize both. The purpose of this study is to investigate the interaction effects of the two control mechanisms by considering problems of each control identified from the literature. This study divides the B2B contract (formal control) into two provisions (transactional and relational) and examines the interaction effect of social control on each provision. This study also seeks to investigate the moderating effects of environmental uncertainty, transaction duration, and whether it is a domestic or international transaction. B2B performance was measured through relational quality and supplier's contribution on the buyer's financial outcome. Data were collected through a questionnaire to purchasing managers in SMEs. Results show significant interactions between relational provision of contract and social control. In the international buyer-seller relationship context, interactions between relational provision and social control show significant results for both relational quality and perceived financial performance. The results suggest managers optimal control mechanisms are based on the environmental conditions of the transactions. Further results along with academic and managerial implications will be given.

■ TC12

12- Parliament

Sales Force Control Mechanisms

Contributed Session

Chair: James Hess, University of Houston, Dept of Marketing & Entrepreneurship, 334 Melcher Hall, Houston, TX, 77204-6021, United States of America, jhess@uh.edu

1 - A Dynamic Sales Force Model

Olivier Rubel, University of California-Davis, One Shields Avenue, Davis, CA, United States of America, orubel@ucdavis.edu

Sales agents' strategic behaviors can cause inefficiencies. To understand effort strategies, we propose a dynamic principal-agent model. We characterize the optimal policies using stochastic calculus and provide new managerial insights.

2 - Multi-product Pricing and Sales Incentives with Demand Interaction

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

We derive optimal prices and sales incentives of a principal-agent model with demand interaction between two products - a mature product with lower value, cost and uncertainty in buyer receptivity than a newer product. The products may be either complements or substitutes and the noises may be either positively or negatively correlated. When demands are independent, we show that sales incentives are lower and profits are higher for the newer product. This is also true under negative correlation causing an "insurance effect" for the salesperson leading to greater incentives for both products. Increase in incentives is however greater for the more profitable mature product. Positive correlation up to a point, on the other hand, leads to lower incentives since a common noise makes it riskier for the salesperson. The drop in incentives is greater for the mature product. Beyond a point, positive correlation leads to higher incentives for the new product and even negative incentives for the mature product. We show a similar effect when the products are substitutes or complements. Incentives for both products increase as substitutability (complementarity) increases (decreases). However, unlike the effect of correlation, changes in substitutability or complementarity have no economic impact on the agency. While positive (negative) correlation decreases (increases) the agency value resulting in lower (higher) efforts, prices and profits, product complementarity or substitution has only a mechanical effect on incentives and do not affect efforts, prices and profits. Our research contributes to the principal-agent literature on salesforce compensation by analyzing the relationship between optimal pricing and incentives and how they are affected by product and noise interactions.

3 - Expert Peers in Team Production

Jeff Boichuk, Doctoral Student, University of Houston, 385N 334 Melcher Hall, Houston, TX, 77204, United States of America, jpboichuk@gmail.com, Niladri Syam, Michael Ahearne, Zachary Hall

We build an economic model of team performance, where the effort choice of team members is contingent on the effort choices of other team members. The pattern of externalities among team members is represented by a network, with each member represented as a node and effort spillover between two members depicted as a link between nodes. A major focus of ours is to investigate the pattern of endogenously determined efforts and team performance when the team has an Expert Peer whose input benefits other members. The team also has a Manager who is linked to all other members, including the Expert Peer. We find that the Manager's effort decreases in the number of team members. This is the standard free-riding effect of public goods. A surprising implication of our analysis is that the Expert Peer's equilibrium effort increases even as her spillover to connected agents increases. Total team performance can decrease as the spillover from the Expert Peer is large enough. Team performance increases in the number of agents connected to the Expert Peer. We test the implications of our analytical model with a unique dataset that includes social network, survey, and performance data from the sales division of a global consumer and industrial goods supplier. Our data consists of approximately 30 independent teams, each including a manager, expert peer, and other members. For the structure of ties, we measured the advice network of each team using the roster method. Team performance was measured by the team's total sales, profit margin, and performance evaluations over a two-year period.

4 - Thrill of Victory and Agony of Defeat: Emotional Rewards and Compensation

James Hess, University of Houston, Dept of Marketing & Entrepreneurship, 334 Melcher Hall, Houston, TX, 77204-6021, United States of America, jhess@uh.edu, Ying Yang, Niladri Syam

Incorporating emotions in economic activity is important and our research analyzes how asymmetric agents in imbalanced territories are motivated by economic and emotional forces. Our research questions are: (1) How does a contest compare with a quota when agents' emotions of pride and disappointment are accounted for? (2) How do the optimal efforts and firm profits depend on pride and disappointment in contests and quotas with asymmetric agents? (3) How does handicapping the contest and quota compare with the un-handicapped ones when agents have emotions? Our major finding is that when agent's emotions are taken into account a contest is more profitable than a quota, even without common shocks. This result is new compared to the extant literature which finds that on economic grounds both are equivalent or the quota dominates. Another salient finding is that, when agents' emotions are incorporated the firm may find it better not to handicap the contest and quota. This contrasts with the intuition that handicapping and correcting for imbalance is desirable. The result follows because the firm's profit increases in emotions and handicapping to remove imbalance also removes the impetus for emotions. Our major contribution is the incorporation of emotions into both contests and quotas, and we have experimentally tested our theoretical results.

■ TC13

13- North Star

Research on Media-Platform Marketing and Two-sided Markets

Cluster: Special Invited Sessions

Invited Session

Chair: Murali K. Mantrala, Professor of Marketing, University of Missouri, Trulaske College of Business, Columbia, MO, United States of America, mantralam@missouri.edu

1 - Targeted Advertising in Magazine Markets and the Advent of the Internet

Ambarish Chandra, Assistant Professor, University of Toronto, Rotman School of Management, Toronto, ON, M5S 3E6, Canada, ambarish.chandra@rotman.utoronto.ca, Ulrich Kaiser

This paper examines the extent to which media firms can capture the value created by targeted advertising, and how this ability has changed with increased competition from online sources. We study the magazine industry using data on reader characteristics at individual media outlets. Magazines with a more homogeneous audience charge higher advertising rates, indicating a significant premium for targeted advertising. Moreover, we establish that the returns to targeted advertising according to age and gender increase in readers' Internet use. Our results help to resolve current debates about the effects of targeted advertising. They suggest that the effect of increased Internet penetration may not be as detrimental to traditional media as often claimed, at least on the advertising side. They may also explain why, even within print media, some firms are doing better than others. Our results suggest that traditional media firms may improve their outcomes by focusing on a core profile of readers.

2 - Measuring the Economic Success of Marketing Investments in Two-sided Markets

Tim Kraemer, Doctoral Student, Goethe-University of Frankfurt, Grüneburgplatz 1, Frankfurt, 60323, Germany, tim.kraemer@wiwi.uni-frankfurt.de, Bernd Skiera, Oliver Hinz

High costs have put pressure on marketing departments to provide better information regarding the economic success of marketing investments. This task is particularly difficult in two-sided markets where an intermediary brings together two distinct customer populations; for instance, an E-Commerce company connects sellers with buyers. The investments of the intermediary typically provide direct benefits to only one customer population, but cross-side and same-side network effects allow them to have an impact on both customer populations. The authors develop a model that measures cross- and same-side network effects on new and existing customers on both market sides, and allows intermediaries in two-sided markets to measure the customer equity and the economic success of marketing investments. The empirical study examines an eBay-like E-Commerce platform, measuring the customer equity and the success of marketing investments by analyzing weekly data on 78,180 transactions on the platform from April 2005 to May 2009. The authors find evidence for strong cross-side and same-side network effects, and their results reveal a higher impact of marketing investments on the buyer side to the customer equity than the seller side, even though the intermediary exclusively charges the seller side.

3 - Investigating Advertisers' View of Online and Print Media: Complements or Substitutes?

S Sriram, Assistant Professor of Marketing, University of Michigan, Stephen M. Ross School of Business, Ann Arbor, MI, United States of America, ssrira@umich.edu, Sridhari Sridhar

Faced with declining profits, print newspapers have turned hybrid, catering to both print and online audiences. As a multi-channel platform, the newspaper needs to understand whether readers and advertisers perceive the print and online media-channels to be complements or substitutes. While extant research has focused on understanding this relationship from the perspective of readers, little is known about how advertisers allocate their media dollars between the online and print version. Given that advertisers provide 80% of a typical newspaper's revenue, understanding the perceived relationship between the two media from their perspective is likely to be of great interest. We use advertiser-level data from a large hybrid newspaper in the US from 2005-2010, pertaining to the amount of media dollars purchased across print and online outlets by quarter. We estimate reduced form and theory based models of advertisers' simultaneous advertising expenditure decisions in the two media. Subsequently we draw inferences regarding whether advertisers view the two media as complements or as substitutes. While performing these analyses, we control for possible confounds such as heterogeneity in advertisers' intrinsic preference for each medium, temporal variation in print and online readership, and the general trend in the preference for advertising in the two media.

4 - Social Network Games: An Emerging Platform for Product Placement Advertising

Huazhong Zhao, PhD Student, University of Florida, Gainesville, FL, United States of America, huazhong.zhao@warrington.ufl.edu, Jinhong Xie, Woochoel Shin

Social network games (SNGs) are online multi-player games played through social network websites. SNGs comprise one of the fastest-growing media platforms, now with billions of users. In North America, the SNG market grew 35% in 2011, reaching $1.4 billion (SuperData estimates, August 30, 2011). To exploit this emerging phenomenon, advertisers and game developers have recently experimented with product placement ads in SNGs, attracted by the higher levels of interaction and attention they demand from the user. Traditionally, the bulk of the SNG industry's revenue has come from the sale of in-game items (player assets) which serve to upgrade a player's status (e.g. more power, more wealth, more beauty). One emerging strategy for product placement in SNGs is to offer players free status upgrades in return for the player interacting with a product placed within the game. The more players that engage the placed item, the higher the advertising exposure level would be. Introducing product placement into SNGs creates a new revenue source: payment from advertisers. However, since product placement offers an alternative for game players to advance themselves in game playing, introducing product placement into SNGs imposes the risk of reducing the revenues from the traditional sources, i.e., sales of in-game items. This paper investigates this two-sided market problem and identifies conditions under which product placement in SNGs can be win-win: both creating advertising revenue and increasing sales of in-game items. Our analysis of data from multiple SNG websites provides empirical evidence supporting our theory.

5 - A New Approach for Nonparametric Network Efficiency Analysis

Sridhari Sridhar, Assistant Professor of Marketing, Pennsylvania State University, Smeal College of Business, University Park, PA, United States of America, hari.sridhar@psu.edu, Murali K. Mantrala, Prasad A. Naik

Decision-making units (DMUs) or departments in many companies, e.g., media-platform firms, are networked, i.e., the outputs of some departments serve as inputs to others and vice versa. For example, for newspaper firms, the outputs of the editorial department are inputs to the advertising department and vice versa. Extant approaches for efficiency analysis either ignore the network effects or make parametric assumptions to enable statistical inference on the estimated efficiencies. Hence, we develop a new method that incorporates the network effects and furnishes nonparametric inference on efficiencies. Applying the proposed method to the US daily newspaper industry, we not only demonstrate that it outperforms existing approaches, but also that it yields new insights into department-level efficiencies.

■ TC14

14- Defender

Online Advertising

Cluster: Special Invited Sessions

Invited Session

Chair: Sridhar Narayanan, Stanford University, Stanford, CA, United States of America, sridhar.narayanan@stanford.edu

1 - Measuring Position Effects in Search Advertising: A Regression Discontinuity Approach

Sridhar Narayanan, Stanford University, Stanford, CA, United States of America, sridhar.narayanan@stanford.edu, Kirthi Kalyanam

We investigate the causal effect of position in search engine advertising listings on outcomes such as click-through rates and sales orders. Since positions are determined through an auction, there are significant selection issues in measuring position effects. Correlational results are likely biased due to the selection induced by strategic bidding by advertisers. Additionally, experimentation is rendered difficult in this situation by competitors' bidding behavior, which induces selection biases that cannot be eliminated by randomizing the bids for the focal advertiser. We show that a regression discontinuity approach is a feasible approach to measure causal effects in this important context. We apply the approach to a unique dataset of 23.7 million daily observations containing information on a focal advertiser as well as its major competitors. Our regression discontinuity estimates show that causal position effects would be significantly underestimated if the selection of position were ignored. We find sharp local effects in the relationship between position and click through rates. Interestingly, we find that there are significant effects of position on sales orders only at relatively lower positions. We find that the effects vary across advertisers, a finding that has potential implications for theoretical work on position auctions. We also investigate differences in effects across weekdays and weekends, and across the broad and exact match targeting options offered by Google. An important finding is that while firms may be profitable in a short-term sense in their current positions, they could improve long-term profitability by moving up in the search advertising results.

2 - Here, There and Everywhere: Correlated Online Behaviors Can Lead to Overestimates of the Effects of Advertising

Randall Lewis, Research Scientist, Yahoo! Research, Santa Clara, CA, United States of America, randall@econinformatics.com, David H. Reiley, Justin M. Rao

Measuring the casual effects of online advertising (adfx) on user behavior is important to the health of the WWW publishing industry. In this paper, using three controlled experiments, we show that observational data frequently lead to incorrect estimates of adfx. The reason, which we label "activity bias," comes from the surprising amount of time-based correlation between the myriad activities that users undertake online. In Experiment 1, users who are exposed to an ad on a given day are much more likely to engage in brand-relevant search queries as compared to their recent history for reasons that had nothing do with the advertisement. In Experiment 2, we show that activity bias occurs for page views across diverse websites. In Experiment 3, we track account sign-ups at a competitor's (of the advertiser) website and find that many more people sign-up on the day they saw an advertisement than on other days, but that the true "competitive effect" was minimal. In all three experiments, exposure to a campaign signals doing "more of everything" in given period of time, making it difficult to find a suitable "matched control" using prior behavior. In such cases, the "match" is fundamentally different from the exposed group, and we show how and why observational methods lead to a massive overestimate of adfx in such circumstances.

3 - Synonyms and Sponsored Search Advertising: An Analysis of Exact Match and Broad Match

Amin Sayedi, PhD Candidate, Carnegie Mellon University, Tepper School of Business, 5000 Forbes Avenue, Pittsburgh, PA, 15213, United States of America, ssayedir@andrew.cmu.edu, Kinshuk Jerath, Wilfred Amaldoss

Sponsored search advertising creates a market for buying and selling phrases of the English (or another) language. Prior literature on sponsored search has examined competition among advertisers for a single keyword; however, often there are several synonyms for a given keyword. We study how this affects competition among advertisers and, in turn, the behavior of the search engine. Particularly, we show that, in equilibrium, competing firms may coordinate and bid on different keywords to soften competition. This coordination improves the firms' profits and hurts the search engine. When the firms are asymmetric, the stronger firm may prefer to bid on the "tail keywords" (many keywords but with low volume of search) leaving the "head keywords" for the weaker firms. We show that the search engine can avoid coordination among the firms by introducing "Broad Match." On the surface, it seems that broad match is helpful for advertisers as they tap into a larger pool of customers who may be using any of the synonyms to search for information (market expansion effect). However, we show that using broad match can hurt advertisers' profits as it eliminates their ability to coordinate their keyword choices to soften competition. Yet, because of a Prisoner's Dilemma situation, the firms voluntarily avail the broad match option if offered by the search engine.

4 - Pricing Online Content: Fee vs. Free

Kanishka Misra, Assistant Professor, London Business School, Regent's Park, London, NW14SA, United Kingdom, kmisra@london.edu, Anja Lambrecht

Online content providers trade off between advertising and subscription revenues. They can focus on advertising revenues and forego subscription revenues, or, charge for their content and earn subscription revenues. At the same time, charging for content will likely lead to lower advertising revenues. We build a unique data set from the sports website ESPN.com to study this question. Importantly, ESPN.com offers the majority of content for free but charges a membership fee for a subset of articles. This subset varies by day and by sport. We collect data on the number of free and paid articles per day and sport, as well as the number of unique visitors, page views and time spent for each type of article per day and sport over a 9 months period. We estimate how the number of free and paid articles affects viewership of the site. We empirically quantify the impact of the number of paid articles on the increase in number of subscribers, and the decrease in total page views. We find, on average, the firm does not benefit from charging for their content. However, in periods of high exogenous demand, the firm does benefit such charges. More generally, this suggests that a static policy, such as always charging for all content, or the same amount of content, may not be optimal but that instead firms should consider varying what amount of content they offer for free or against a fee with demand.

■ TC15

15- Great Republic

Top Management Processes and Marketing Investments: The Role of Strategic Flexibility, Incentives, and Social Networks

Cluster: Special Invited Sessions

Invited Session

Chair: Martin Artz, University of Mannheim, Department of Marketing, Mannheim, Germany, martz@bwl.uni-mannheim.de

1 - The Role of Governance Mechanisms in Minimizing Myopic Marketing Investments

Amit Joshi, Associate Professor, University of Central Florida, 4000 Central Florida Blvd.P.O.Box 161991, Orlando, FL, 32816, United States of America, ajoshi@bus.ucf.edu, Gautham Vadakkepatt

Discretionary expenditures such as advertising and research and development are often the primary targets for cuts when firms are trying to artificially boost their bottom line to meet earnings benchmarks. While such manipulation of marketing investments (hereafter referred to as myopic marketing investments) can help meet short-run earnings benchmarks, they are not desirable in the long-run because these activities result in the erosion of marketing assets through pathways such as the dilution of brand equity and a reduced new product capabilities. However, and despite the documented prevalence of myopic marketing investments, there has been no research thus far identifying corporate governance mechanisms that help curb such behavior. Using a unique dataset on a large set of firms, this research addresses this void by empirically examining the efficacy of several corporate governance mechanisms, namely CEO compensation structure, board of directors, analyst coverage, and block holder ownership, in deterring myopic marketing investments. We extend our study to examine how managerial entrenchment, i.e., the embededness of a manager in a firm, moderates the relationship between these corporate governance mechanisms and myopic marketing investments.

2 - Aggressive Marketing Strategy Following Equity Offerings and Firm Value: The Role of Relative Strategic Flexibility

John Hulland, Robert O Arnold Professorship of Business, University of Georgia, Terry College of Business, 104 Brooks Hall, 310 Herty Drive, Athens, GA, 30602, United States of America, jhulland@uga.edu, Kurt Didem

Firms raise significant amount of funds and gain competitive advantage over their rivals through equity financing, namely initial public offerings (IPOs) and seasoned equity offering (SEOs). The authors find that both IPO and SEO firms adopt a more aggressive marketing strategy during the two years following their offering. However, not all equity issuers benefit equally from increased marketing spending. A key moderator of the link between marketing investment and firm value is strategic flexibility of rivals with respect to issuers. In particular, the stock market reacts favorably to an aggressive marketing strategy initiated by issuers competing against rivals with relatively less flexibility, whereas increased marketing expenditures do not translate into higher firm value when rivals have higher flexibility. Furthermore, the authors document that marketing expenditures create value within context: the role of marketing in enhancing shareholder value and the moderating effect of rivals' strategic flexibility are more pronounced in the two-year window following an equity offering than at any other time. Overall, this paper contributes to the nascent literature examining how marketing and finance resources interact around equity offerings, and provides evidence for a potential "contingency theory of marketing-finance interface" (Luo 2008) by documenting that the impact of equity investments in marketing on firm value is heterogeneous across firms and market conditions.

3 - Myopic Marketing and R&D Strategies Utilization: The Role of CMO, CEO, and CFO Personal Compensation Incentives

Martin Artz, University of Mannheim, Department of Marketing, Mannheim, Germany, martz@bwl.uni-mannheim.de, Holger Daske, Natalie M. Mizik

A recent stream of research in marketing and accounting has documented that (1) under certain conditions firms engage in myopic management (i.e., manipulate real operating activities) in order to temporarily inflate earnings and that (2) such manipulation has significant negative consequences for the firm. Standard economic models suggest that private managerial incentives play a significant role in inducing myopia. We examine the role personal compensation incentives of a CMO, CFO, and CEO play in inducing myopic marketing and R&D management. We find that CEO and CFO equity incentives are unrelated to

incidents and severity of myopic marketing and R&D management. CMO equity compensation stake and the age of the CMO (our proxy for CMO expected longevity and planning horizon), on the other hand, are highly predictive of the severity of myopic marketing and R&D cuts. Contrary to common belief that a presence of a CMO in the organization can help maintain the focus on the best interests of customers and marketing departments and would ensure consistent marketing strategy, we find that CMOs do not only enable myopia, but they do in fact further exacerbate the problem as the market-based (i.e., equity) proportion of their personal compensation increases.

4 - Who You Know Versus Where You Compete: How Inter-firm Networks Affect the Success of Technology Startups

Isaac Dinner, Assistant Professor, IE Business School, Madrid, Spain, isaac.dinner@ie.edu, Andrew Stephen

Predicting the success of entrepreneurial startup companies, much like the products and services they produce, can be very uncertain. However, a sense of whether a given startup company will succeed or fail is crucial for multiple groups, including the startup's investors, business partners, employees, and customers. Despite the current boom in startup companies, particularly in the technology industry, very little is known about the factors that affect a startup company's success. This paper uses a novel dataset of technology startup companies to investigate the impact of inter-firm network connections between startups on their ability to attract funding (as an indicator of the startup's expected future value and predicted success). Controlling for known effects on startup success unrelated to their networks, we estimate a multi-state Markov model to determine the impact of managers' professional network connections and inter-firm competition on the likelihood of receiving funding or moving to IPO. We find that management teams' professional connections help their firms attract First Round funding from investors, but that these connections do not help them secure Higher Rounds of funding. Also, firms embedded in denser competitive networks (e.g., competing in hotly contested markets) are more likely to receive both First round and Higher round funding.

■ TC16

16- St. George A

Game Theory In Marketing II

Contributed Session

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

1 - The Effect of Information on Pre-purchase Risk Reduction Tools on Perceptions and Choices in Competition

Amir Heiman, Chairman Department of Agricultrual Economics and Managment, Hebrew University, Department of Agricultrual Economics, Rehovot, 76100, Israel, heiman@agri.huji.ac.il

This study analyzes the effect of provision of information on risk reduction marketing tools on consumers' perceptions and choice processes. This paper focuses on money-back guarantees (MBGs) and prices that are effective in reducing pre-purchase risk. While MBG leniency enhances consumer perception of brands and retail qualities, it is costly; and changes in guarantee strategies are not easily accepted by consumers. We depart from previous literature by considering the effect of asymmetric return (price) policies on consumers' choices. This subject has not been addressed previously in the literature. Specifically we study the effect of entry of international fashion brands that challenge local industry by having more lenient refund policies than the industry standard. We explore the theoretical conditions that lead incumbents to adjust their MBG policies to the new standards, as well as those that lead to the decision to reduce prices and compete on price rather than on the service dimension. Based on experimental surveys, we show that information that compares risk reduction tools affects both consumers' perceptions and their choice processes. Exposure to comparative return information increased the perceptual relationship between risk and its consequences. Consumers' attention to risk results in increas the complexity of the buying process, which now considers the tradeoff between five of six attributes. Our findings suggest that the high-end incumbent is better off not responding, while low-end producers need to reduce their prices.

2 - Keeping Your Enemies Closer

Jeffrey Cai, University of Pennsylvania, The Wharton School,, 3730 Walnut St, JMHH Suite 700, Philadelphia, PA, 19104, United States of America, caicexun@wharton.upenn.edu, Jagmohan Raju

We present an analytical framework for understanding why and when firms who compete aggressively in an existing market, decide to enter a new market via a strategic alliance as opposed to entering independently. Specifically, we investigate conditions under which an alliance mode of entry for two competing firms does better than each firm entering the new market independently. We characterize these conditions in terms of the relative levels of competition and size of the two markets. Our findings suggest that accessing a new market as an alliance dominates independent entry (i) when the competition in the existing market is strong relative to the new market; and (ii) when the new market is large relative to the existing market. We also show how there exists a trade-off between competition and market size under which an alliance does better. We then extend our analysis by allowing for asymmetry between the two competing firms, and showing that there is a smaller set of conditions under which an alliance mode of entry does better.

3 - Making the Grade: Product Quality Reporting by Infomediaries

Nina Baranchuk, Assistant Professor, University of Texas at Dallas, 4449 White Rock Ln, Plano, TX, 75024, United States of America, nina.baranchuk@utdallas.edu, Ashutosh Prasad

This paper seeks to examine the decision of infomediaries, such as movie critics, who report on the product quality of experience goods such as movies. In practice, infomediaries often do not provide a fine-grained, numerical evaluation of the products that they evaluate, but instead their report is in the form of a discrete summary evaluation, such as thumbs up or thumbs down. The report provides useful information to consumers for making their own decision of whether to adopt the product or not. Our interest is to see how this type of grading can best be done from the infomediary's perspective, where we have taken maximization of consumer surplus to be its goal. We assume that the movie has quality drawn from a random distribution and that consumers are heterogeneous in their preference for quality. We derive the quality cutoff that determines the reviewer's assigning a high or low grade. We then extend this result to the case of multiple cutoffs. Finally, we also extend the model to include horizontal differentiation between products and how it impacts the reporting by the infomediary.

4 - Self-service Co-creation: Cooperation or Competition?

Paul Messinger, Associate Professor, University of Alberta, School of Business, Edmonton, AB, Canada, paul.messinger@ualberta.ca, Bora Kolfal, Kursad Asdemir

We examine competition between firms offering service in the presence of consumers who may engage in self-service. Consumers' choice between full and self-service is governed by a tradeoff between the time cost of doing the service themselves and the cost of buying service from a firm (which includes a fee, travel costs, and congestion/waiting time). Firms sell an intermediate good which they may sell without service (the self-service mode), bundle with service (the full-service mode), or give consumers the option of buying service from them or doing-it-themselves (mixed mode delivery). Some outcomes are straightforward – governed by economies of scale in the provision of service. Others are more subtle – particularly whether consumers should be thought of as allies or as a "fifth column" of competitors. A distinctive feature of service markets, incorporated in our model, consists of the interplay among consumers: when many consumers buy service, congestion results. This resulting waiting time (as well as price) serves to equilibrate the market for service. We use this simple game setting to illustrate important possible outcomes in the provision of service. One important outcome, for some parameter configurations, is that both firms offering mixed-mode service delivery may constitute a prisoner's dilemma outcome. Firms have individual incentives for offering mixed mode service, rather than bundled service, because doing so extends the reach of their intermediate product market, without necessitating a concomitant investment in service capacity. But the resulting equilibrium profit arising when both firms offer mixed-mode service delivery may be less attractive for the firms than if they had colluded to both only offer full service).

■ TC17

17- Essex North East

Agent-Based Modeling

Contributed Session

Chair: Curt Stenger, ThinkVine, 10816 Millington Ct., Cincinnati, OH, 45242, United States of America, curt.stenger@thinkvine.com

1 - Simulating a Movie's Box Office Using an Agent-based Modeling Approach

Youngjin Park, Korea University, Seoul, Seoul, Korea, Republic of, yjpark07@gmail.com, Seo II Chaiy

The goal of this research was to simulate the movie industry using an agent-based modeling (ABM) approach. We examined how movies' box offices, which have various movie ratings, genres, and marketing budgets, are determined using an agent-based modeling (ABM) approach. The model developed in this research can be a convenient tool for box office forecasting. We developed the model based on literature reviews and validated it by comparing it with actual box office data within the Korean movie industry. However, it is not reasonable to accept the simulation results directly, since the number of agents is set to 500. Therefore, we examined weekly box office trends and the ranking of all box offices among the movies by comparing the results with real data. Using the ABM approach enabled us to model the heterogeneity for the characteristics of an agent and the interaction between agents. We assumed two types of agents (an opinion leader and normal consumer), different utility thresholds, different time to act on the decision, and different sensitivity to social influences with regards to ABM. Heterogeneity in characteristics of agents makes the model more realistic. Moreover, an agent's behavior influences the other agent's behavior in the model. If neighbors of an agent watch the movie, it will influence the agent's

movie consumption behavior. The simulation results of the model help to understand the movie industry. As the marketing budget increases, number of tickets sold goes up. However, weekly box office trends vary by movie rating.Moreover, the box office of higher rated movies with small marketing budgets can be greater than the box office of those with poorly rated movies with larger marketing budgets.

2 - Cross-selling Behavior of the Sales Force: The Effect of Salesperson-owned Loyalty

Yashar Atefi, University of Houston, C. T. Bauer College of Business, 334 Melcher Hall, Houston, TX, 77204-6021, United States of America, yatefi@bauer.uh.edu, Michael Ahearne, Niladri Syam

The extant literature on salesperson-owned loyalty suggests that the firms risk losing business as a result of losing their key sales people. Using a theoretical model, we contribute to this literature by showing that, even when such salespeople are working with the firm, they do not live up to their revenue making potential by refusing to cross-sell the products of other strategic business units of the firm. However, salespeople with higher levels of organizational identification (OI), are more willing to engage in tasks that benefit the company as a whole. By allowing for OI to enter the equations, we model the level of salesperson's effort invested in cross-selling in a setting of high versus low OI and company-owned versus salesperson-owned loyalty. Some key findings are less cross-selling when low-OI salesperson owns the loyalty of the customer, and more cross-selling with low levels of OI and company-owned loyalty. With company-owned loyalty, the behavior changes in some threshold levels of OI which we find and theorize the rationale behind the phenomenon. We support our hypotheses using a unique data set of survey and performance data obtained from a global industrial goods supplier.

3 - Investigating the Profitability of Multilevel Marketing

Prithwiraj Mukherjee, PhD Candidate, ESSEC Business School, Avenue Bernard Hirsch, BP 50105, Cergy-Pontoise, 95021, France, prithwiraj.mukherjee@essec.edu, Arnaud De Bruyn

Multilevel marketing (MLM) is direct selling where freelance recruits sell products and enlist new sellers from their acquaintances, earning commissions on their own and recruits' sales. Recruits are not paid salaries; rather they incur expenses including subscription and training costs. MLMs are judged to be scams if they rely on enlisting recruits and making money from their expenses rather than selling to outsiders. Many recruits in scams sustain losses rather than the riches promised in MLM brochures. Since extant MLM compensation models do not include recruits' expenses, they do not predict these losses and cannot be used normatively by a prospective recruit to decide whether to join an MLM. They also cannot a priori identify scams based on their commission and expense structure (CES). Our work lets regulators identify scams based on their CES. We build a compensation model that includes recruits' expenses and use an agent-based model to simulate a game of an MLM's growth and sales on a social network. We assign logit decision rules governing each agent's decision to join, and use genetic algorithms to optimize these rules over many iterations of the game, using each agent's net earnings as the criterion for optimization. We find that for a given CES, an upper threshold rule is the fittest. If all agents use this rule, the MLM attracts very few recruits who mostly stay profitable. Up to an optimum value, recruits' expenses act as entry barriers preventing over-saturation of the MLM. Given their CES, scams would not take off if all agents acted optimally. Our method can identify these. If regulators find such an MLM flourishing, they can initiate investigations as to whether it was misleading recruits into joining.

4 - Merging Vector-Autoregression & Agent-Based Models for Consumer Market Simulation of Sales

Curt Stenger, ThinkVine, 10816 Millington Ct., Cincinnati, OH, 45242, United States of America, curt.stenger@thinkvine.com, Koen Pauwels, Rosanna Garcia

Managers today face the challenging task to predict sales growth in an uncertain world where consumers interact through digital media as the firm engages in offline and online marketing. To address this challenge, we combine Vector Autoregressive models (VARs) and Agent-Based models (ABMs) by using VAR-based estimates as inputs to the rules an agent follows in consumer market simulation. We conduct the empirical study with the support of a world-wide FMCG company, which provided historical data to evaluate with a VAR and become the input estimates for the ABM. Both VARs and ABMs have demonstrated their ability to (1) capture emergent behaviors among consumers (including complex media interactions), (2) directly address the issue of time, and to allow behaviors to change over time, and (3) to capture competitive and strategic interactions. In addition VAR benefits include: (1) input relevance (actual sales from all of the firm's customers in a market), (2) throughput treatment of both classic and new funnel metrics (e.g. social media conversations), (3) output flexibility in terms of dynamics (wear-in and wear-out) and permanent effects. Yet, VARs have 2 key limitations that are addressed by ABMS: (1) VARs are backward-looking: (2) VARs are deterministic; they give 1 answer to each what-if analysis instead of different potential paths, network dynamics or equilibria. Similarly, key limitations of ABMs addressed by VARs include: (1) input uncertainty (where do agent rules come from and are they realistic?), (2) throughput uncertainty (the magnitude and timing of marketing and funnel effects). Thus, merging the two methodologies addresses the limitations of both by providing a richer environment within which to conduct consumer market experimentation.

Thursday, 3:30pm - 5:00pm

■ TD01

01- Essex Ballroom South

Search Marketing - III

Cluster: Internet and Interactive Marketing

Invited Session

Chair: Oded Netzer, Phillip H. Geier Jr. Associate Professor of Business Marketing Division, Columbia University, 3022 Broadway, New York, NY, United States of America, on2010@columbia.edu

1 - A New Dynamic Bayesian Space-time Model for Customer Acquisition

L. Katie Yang, University of Pennsylvania, 700 Jon M. Huntsman Hall, 3730 Walnut Street, Philadelphia, PA, 19104, United States of America, yangkl@wharton.upenn.edu, David Bell

Almost all firms acquire customers not only through time but also from disparate geographic locations. Clearly, managers can benefit from understanding the extent to which the space-time acquisition process is systematic. Prior studies document three specific "imitation" effects in new customer acquisition: (1) imitation among proximate customers, (2) imitation across geographically contiguous locations, and (3) imitation among "demographically similar" (but geographically distant) locations. We propose a new dynamic Bayesian time-varying parameter model that incorporates these effects but also includes a novel space-varying component to detect "hot spots". "Hot spots" are locations where the customer evolution process begins and these locations are conjectured to have imitation coefficients that are very different from those for other locations. The model is calibrated on three different Internet retailing data sets in the following categories: groceries, fashion apparel, and eyewear. We offer three new contributions. First, the proposed model has better forecasting properties than recent state-of-the-art benchmarks. Second, we show that imitation behavior in "hot spots" results mostly from within-region contagion and contiguous neighbor effects. In the other areas, i.e., non-hot spots, across-region demographic similarity is the main driver and the other two effects are very limited. Finally, implications for managers are discussed.

2 - Dynamics of Sales and Consumer Online Search: the Case of the U.S. Automobile Market

Ye Hu, Assistant Professor, University of Houston, 4800 Calhoun Rd., Department of Marketing, Houston, TX, 77204, United States of America, yehu@uh.edu, Rex Du, Sina Damangir

Modeling the purchase funnel that leads to the sale of a product has been a central part of marketing research. Unlike purchase data, which can be readily gathered at the point of sale, empirical data on other behavioral stages of the purchase funnel are much harder to come by (e.g., how many consumers have searched information on a product during the past month). As a result, in order to model the impacts of marketing activities on behavioral stages that precede product sales, researchers have largely been limited to using tracking data collected through repeated cross-sectional surveys, which can be costly and time-consuming, let alone all the other usual caveats associated with consumer self-reports. This study demonstrates, in the context of the U.S. automotive industry, how search volume data provided by Google Insights for Search – free to the public and available in real time – can be combined with sales data to model the impact of advertising as the product of two distinct components: 1) its impact on consumer interest in a vehicle model, and 2) its impact on converting consumer interest into purchases. We show that this decompositional approach, implemented through a state-space model that simultaneously examines sales and Google search data, offers several important advantages over models that consider sales data alone. First, the approach improves goodness-of-fit, both in- and out-of-sample. Second, it provides more actionable insight regarding the differential impacts advertising has on consumer interest vs. conversion of that interest into purchases, Finally, consistent with prior research, our approach shows that estimates of advertising elasticity would in general be underestimated if only sales data is considered in a market response model.

3 - A Web Engagement Model Grounded on a Combined Online Behaviour-human Computer Interaction Framework

Antonio Hyder, Assistant Professor of Marketing, Université de Toulouse. Toulouse Business School, Trafalgar, 10, Barcelona, 08010, Spain, antonio.hyder@esec.es, Enrique Bigne

Recent literature on online consumer behaviour (OCB) has suggested that multidisciplinary research is required for achieving progress in this field (Dennis et al., 2010; Taylor and Strutton, 2009). Spink and Jansen (2008) had already claimed that for the development of combined frameworks, greater research is needed across different fields such as business, information science, information systems and human-computer interaction (HCI). Also Dennis et al. (2010) acknowledged the scarcity of literature that combines consumer-oriented research and technology-oriented research into new combined consumer-technology approaches, a requirement for better understanding how consumers behave online. Driven by this disconnection, we compared the HCI research framework of Zhang and Galleta (2006) with the OCB frameworks of Cheung et

al. (2005) and Kwong et al. (2003), revealing a substantial overlap across these two disciplines. Our resulting framework evidences how marketing and systems research overlap across crucial consumer topics such as adoption, information presentation, intention and usability. This evidence is a step forward in the research of new integrative technology-marketing frameworks. Grounded on this multidisciplinary context, we suggest a Web site engagement research model, integrating remote eye tracking (e.g. Bettman et al., 1990), clickstreams (e.g. Bucklin and Sismeiro, 2009) and online surveys (e.g. Lyons et al, 2005). The model was estimated with partial least squares path modeling (PLSPM) with a sample of 336 respondents. Our findings support those of Taylor and Strutton (2009) who argued that the development of partnerships between information systems and marketing researchers are crucial for the progress towards 'the next era of online behavioural research.'

4 - Using Hidden Markov Models to Identify Job Seekers From Social Network Data

Oded Netzer, Phillip H. Geier Jr. Associate Professor of Business Marketing Division, Columbia University, 3022 Broadway, New York, NY, United States of America, on2010@columbia.edu, Peter Ebbes

LinkedIn is the largest professional social network in the world. One of the key motivations for members to use LinkedIn is professional networking and job seeking. At same time, one of Linkedin's primary revenue sources comes from targeting job seekers. LinkedIn allows users to research companies, showcase their skills and talents, and help the right people and opportunities find their way to the job seeking individuals. One of the key challenges for LinkedIn is to identify job seekers. Whether or not a member is a job seeker can be indirectly observed though increased activity on the social networking site, such as profile updates or company searches. In this research we use longitudinal individual-level social network activity data from a large sample of LinkedIn members to identify job seekers. We build a hidden Markov model (HMM) in which the different states correspond to different levels of job seeking, where each state is characterized by a multivariate set of behaviors in the social network site. The model allows us to identify the members' activities on LinkedIn that are most likely to reflect their job seeking status. We use the model to predict the likelihood of each member's job seeking status at any point in time. In addition to the longitudinal social network activity data we leverage a two-wave large-scale survey asking members about their job seeking status to validate the model. The results of our study can help guide LinkedIn in better targeting job seeking members.

■ TD02

02- Essex North Center

Modeling Online Behaviors

Cluster: Internet and Interactive Marketing

Invited Session

Chair: Anocha Aribarg, Associate Professor, University of Michigan, 701 Tappan St., Ann Arbor, MI, 48105, United States of America, anocha@umich.edu

1 - The Adoption of Online Distribution Channels and its Impact on Hotel's Marketing Strategies

Steven Lu, Senior Lecturer, The University of Sydney, Cnr. Codrington and Rose Streets, Sydney, Australia, steven.lu@sydney.edu.au, Yupin Yang, Ulku Yuksel

The popularity of the Internet has created a completely new distribution channel: the online channel, which has influenced firms' marketing strategies in many different industries including the hospitality industry. It has completely changed the way people book their hotel rooms. So far, research has been focusing on leisure travelers, neglecting business travelers. As leisure travelers are usually price sensitive, naturally they go after this new distribution channel, which, as most people expect, might be much cheaper. However, business travelers are price insensitive (but time sensitive), and may still prefer traditional travel agents to book rooms for them. How does this influence hotel's strategies on business traveler segment? Do hotels charge business travelers higher prices to recover some of the discounts they offer to leisure travelers? Or, do business travelers also enjoy the cost saving brought by this new distribution channel? Is price dispersion in each segment wider or narrower? What is the impact on the traditional distribution channels (e.g., telephone and travel agents)? In this study, using the data from a high-end hotel chain in a European country, we investigate how the adoption of an online distribution channel by the hotel chain influences firms' strategies on different segments of consumers and its impact on the traditional distribution channels. During our data period (from 2001 to 2007), the hotel chain adopted the Internet booking system, which became popular very quickly. Our data includes detailed information about price, booking method, customer information and room stayed in the hotel at the daily level, which offers us enough flexibility to figure out the impact of the Internet distribution channel the hotel's marketing strategies.

2 - Let Me Stack Them Up: An Analysis of Internet Marketing Service Contract

Ryan Choi, University of California Irvine, SB335, Irvine, CA, 92697, United States of America, jihungc@uci.edu

We investigate a service contract form known as Fulfillment by Amazon (FBA) that Amazon.com currently offers to its competing third-party merchants who list and sell products using the Amazon.com website. Under this contract, when customers order products belonging to a third party seller, Amazon fulfills the orders on behalf of the third party seller. Additionally, FBA participants can enjoy the main seller's free shipping promotion. Given this real world situation, the goal of this research is to examine how contracts offered by Amazon affect optimal pricing strategies of the third party seller and Amazon. For example, why and when will Amazon offer the FBA? How do market characteristics affect sellers' decisions on offering and accepting the contracts? Does Amazon always need to share the free shipping promotion with the third party seller? We develop a simple game-theoretical model to address these issues. First, we show that Amazon benefits from offering the FBA contract to less differentiated third-party sellers. Amazon uses service contracts as a means of mitigating competition intensity as well as a way to compensate for losses resulting from competition. Second, cost advantage does not affect the decision of the contract offer. Amazon is more likely to offer the FBA promotion if the gap between the sellers' costs is small regardless of which seller has lower or higher costs. Finally, an offer of the free shipping promotion does not affect Amazon's profit level. Rather, it motivates the third party seller to sign up for the contract.

3 - Modeling Competition Among Paid Search Advertisers

Shijie Lu, University of Southern California, 3660 Trousdale Parkway, ACC 306, Los Angeles, CA, 90089, United States of America, shijielu@usc.edu, Sha Yang, Xianghua Lu

In this paper, we propose a structural model and empirically study two types of competition in the context of paid-search advertising, namely keyword competition and position competition. The keyword competition examines advertisers' keyword portfolio decision. The observed advertisers' keyword-entry decisions allow us to derive a set of moment inequalities based on each advertiser's Nash Equilibrium conditions, and back out the cost estimates. The position competition examines the realized cost-per-click (CPC) of those entrants of a keyword at the equilibrium from a generalized second-price auction. One novel aspect of our model of position competition is linking demand (i.e., the click volume) with supply (i.e., the CPCs) through the decay factor, which can be interpreted as the conditional probability of clicking on the next ad. The econometric challenge for estimating such structural model is due to the cross-position correlation on CPCs induced by the order statistics stemmed from the unobserved value-per-click information. We developed an MCMC estimation algorithm to cope with these econometric challenges. Our proposed model is applied to data of 1597 keywords associated with digital camera/video and accessories with complete information on competition. One of the key findings from our empirical analysis is that number of entrants has a strong indirect effect on an advertiser's click volume and CPC, via the decay factor. Ignoring such indirect effect will underestimate an advertiser's expected revenue. In the counterfactual analysis, we investigate the profit implication of two polices to the paid-search host: raising the decay factor by encouraging consumers to engage in more in-depth search/click-through, and providing coupons to advertisers.

4 - Choice Interdependence in a Social Network

Anocha Aribarg, Associate Professor, University of Michigan, 701 Tappan St., Ann Arbor, MI, 48105, United States of America, anocha@umich.edu, Jing Wang, Yves Atchade

With the advent of social network sites, e.g. Facebook, new forms of interactive advertising are designed to take advantage of social networks embedded in these websites. Specifically, these websites have capability to automatically pass on information about a consumer's response to an ad to his/her friends. This interactive feature clearly makes observation of friends' behavior more transparent and facilitates the propagation of the social interaction process. This choice scenario gives rise to a research question of how one can properly model choice interdependence in a social network. We propose a discrete-time Markov chain to model the choice interdependence structure when both choices and their sequence are observed and a Markov Random Field (MRF) when only choices are observed but the choices' sequence is not. We explain how both models can accommodate multiple relations and asymmetry in choice interdependence. We delineate a new approximate sampling algorithm to circumvent the intractable normalizing constant problem in estimating the MRF model. We conducted a novel field experiment that mimics how consumers respond to interactive advertising on a social media site to empirically test the proposed models and estimation algorithm. We compare fits of the MRF and discrete-time Markov chain models. The findings show varying degrees of choice interdependence at the micro (i.e., closely connected friends) and macro (i.e., a reference group) levels, as well as influence asymmetry, across different product categories. Finally, we demonstrate how researchers can derive the posterior probability of an individual having influence on his/her friends in a network. Such a probability measure can be used to identify the most influential individuals.

■ TD03

03- Essex North West

Spillover Effects of New Media

Cluster: Internet and Interactive Marketing

Invited Session

Chair: Junlin Du, Doctoral Student, Indiana University, Kelley School of Business, 1120 S Woodside Drive, Bloominton, IN, 47403, United States of America, duj@indiana.edu

1- Social Advertising

Junlin Du, Doctoral Student, Indiana University, Kelley School of Business, 1120 S Woodside Drive, Bloominton IN 47403, United States of America, duj@indiana.edu

In social advertising, ads are targeted based on underlying social networks and their content is tailored with information that pertains to the social relationship. This paper explores the effectiveness of social advertising using data from field tests of different ads on Facebook. We find evidence that social advertising is effective. However, social advertising is \emph{less} effective if the advertiser explicitly states they are trying to promote social influence in the text of their ad. This suggests that advertisers must avoid being overt in their attempts to exploit social networks in their advertising.

2 - Influence of Product Recommendations on Phantom Effects in an Online Shopping Environment

Jana Luisa Diels, Research Assistant, Humboldt-Universität zu Berlin, Unter den Linden 6, Berlin, 10099, Germany, dielsjana@wiwi.hu-berlin.de, Lutz Hildebrandt

Out-of-stock (OOS) is not limited to offline settings, but also constitutes a prevalent problem in the virtual market place. Since demand there is highly fluctuating and difficult to predict, situations of product shortages are inevitable. As switching costs are low and adequate substitutes and competing vendors are just one click away, understanding how customers form their preferences in online OOS situations can be regarded as key determinant of e-retailers' success. Experimental research in offline settings reveals that preferences are context-dependent and affected by the relative positions and the presence or absence of other choice options. Alternatives, which are temporarily missing in the choice set are dubbed phantoms which have been shown to cause systematic shifts in choice probabilities. In this regard, the most robust effect is the so-called phantom effect; a choice anomaly typically observed in choice sets containing two non-dominating options and a highly attractive, yet unavailable phantom. In a two-stage choice experiment (n = 838) we examine the phantom effect in an online context. Specifically, we investigate the degree to which online product recommendations can moderate the effect, contrasting search against experience goods. The results establish the validity of the phantom effect in online OOS situations; however, they give mixed evidence concerning the relevance of recommendations in influencing the effect's strength. Our results also make important contributions for marketers: They reveal that in online OOS situations, preferences cannot only be guided by recommendations. Also, online retailers can intentionally direct choice to certain alternatives by displaying no-longer-available options, especially in the case of OOS of experience goods.

3 - From Stranger Toward Friend: Using Social Media to Build Consumer-brand Relationships

Renee Gosline, Massachusetts Institute of Technology, Sloan School of Management, 100 Main Street, Cambridge, MA, United States of America, rgosline@mit.edu, Glen Urban, Joyce Salisbury, Nell Putnam-Farr

Brands are increasingly leveraging social media in an effort to build trust, and to develop relationships with consumers that move beyond mere awareness toward resonance (Urban et al 2009; Fournier 1998; Keller 1998; Richins 1997; Schouten and McAlexander 1995). Currently there is little research on how brand-sponsored social media affects trust and the development of consumer-brand relationships. We seek to contribute to this literature with a field experiment using an "app" game sponsored by an automobile brand. Subjects were randomly assigned to two types of social media: a social network brand community and independent blogs. Subjects in the control condition were exposed to traditional television advertising. Survey measures and qualitative data contribute to a model of how social media affects transitions between 6 relationship states, from "stranger" to "friend". We find that traditional media is most effective in moving consumers toward lower-level brand connections like recall and awareness. Over time, we find that social media involvement is positively associated with higher-level consumer-brand relationships like friendship, despite being negatively related to recall initially. We also find that the positive impact of traditional media degrades quickly, while social media increases in its positive impact over time. Our findings suggest causal links between media type and consumer-brand relationship states.

4 - How to Persuade 100,000 Friends? Understanding Blogs as One-to-one Mass Media

Soyean (Julia) Kim, Boston University, School of Management, Boston, MA, United States of America, sokim@bu.edu, Seema Pai, Frederic Brunel, Barbara Bickart

In this paper, we examine how bloggers are able to relate personally to and persuade a large audience. Following a grounded theory approach, we selected fifty blogs on various topics (e.g., fashion, technology, music, beauty, mommy/parenting), downloaded conversations (posts and comments), analyzed conversations and developed a theoretical framework that explains how persuasion works in blogs. The samples were drawn from the blog ranking site, BlogRank (http://www.invesp.com/blog-rank). By comparing and contrasting extant theory with the collected data, we find that blogs are a unique case of a one-to-many broadcast medium that functions like one-to-one communication but also possesses one-off characteristics. We propose a categorization of blogs based on two dimensions: (a) the perceived target audience (mass versus one-to-one); and (b) the blogger's perceived communication motive (commercial versus non-commercial). We first describe a categorization scheme based on how blogs actually function. We then describe how this categorization scheme changes when we consider how blogs are perceived by the audience. Specifically, we describe two communication strategies used by bloggers: (a) illusion of relationship and (b) ambiguity in communication motives. We examine how bloggers use these strategies (either independently or in combination) to refashion the rules of one-to-one communication to accommodate a mass audience. The use of these strategies results in four different types of blogs. Finally, we discuss the use of specific persuasion tactics, such as authority, fandom, worship, and domain expertise to explain how persuasion works differentially in each of the four types of blogs. We discuss the practical implications of this framework for bloggers, including specific approaches for increasing the persuasive impact of blogs as well as ethical issues associated with the use of these strategies.

5 - Sponsored Social-learning in Social Shopping Network

Junlin Du, Doctoral Student, Indiana University, Kelley School of Business, 1120 S Woodside Drive, Bloominton, IN, 47403, United States of America, duj@indiana.edu, Yacheng Sun, Xiaojing Dong

We study in the context of online social shopping network (OSSN) the determinants and effects of autonomous and seller-sponsored social learning. Social learning is defined as purchase and site visits of late buyers (or "followers"), based on their observations of similar behaviors by early buyers ("leaders"). By linking both buyers and sellers in a social network, OSSN facilitates social learning among the buyers through user generated content, such as product reviews and consumers' shared information about their interests in specific sellers. Increasingly, sellers have started to sponsor social learning by providing monetary incentives to buyers who publicize their interests in the sellers. Sellers' sponsorship may either increase or decrease the effectiveness of social learning, depending on whether it can serve as a signaling mechanism, which leads to an efficient separating equilibrium. Using the data from an OSSN, we empirically estimate the effect of sellers' sponsorship on social learning manifested by the subsequent Word of Mouth activities and purchases made by the followers. Specifically, we aim to understand (1) the effect of the seller's sponsorship on users' intentions to explicitly express their interests in the seller; (2) the effect of sellers' sponsorship on users' intentions to visit the sellers; (3) the effect of sponsorship on users' intention to purchase; and (4) the moderating effects of sellers' sponsorship on the relationship between the user's cumulative interests in the seller and his purchasing decisions. Finally, we address the managerial question whether sellers' manipulation of the information accumulation through sponsored social learning is beneficial to consumers.

■ TD04

04- Courier

Consumer Behavior - Decision Making

Contributed Session

Chair: J. Jeffrey Inman, University of Pittsburgh, 350 Mervis Hall, Pittsburgh, PA, United States of America, jinman@katz.pitt.edu

1 - Quantity Decision After Missing a Better Opportunity

Song Su, Assistant Professor, School of Economics and Business Administration, Beijing Normal University, No.19, XinJieKouWai St.,HaiDian District, Beijing, China, sus@bnu.edu.cn, Rong Chen, Jinsong Huang, Liuning Zhou

Inaction inertia will cause serious negative impacts on both consumers who miss a good opportunity and marketers who end a promotion activity. This research investigates the conditions under which consumers actively recover from inaction inertia and even purchase more after missing a better chance. It introduces unplanned quantity and unplanned items as decision factors and proposes a budget extending regulation theory for attenuating inaction inertia. We found consumers regulated inaction inertia through increasing purchase

quantity under the condition of high anticipated inaction cost after missing a high coupling forgone opportunity (Study 1). Even for products without stockpilability such as travelling service, strategies that extend purchase budget such as bundle sale could be effective for alleviating choice deferral (Study 2). The research also contributes to the literature by synthesizing the views of regret and loss perspectives, and manifesting their joint mediations in leveraging inaction inertia.

2 - Smart Shopping Carts: How Real-time Spending Feedback Influences Grocery Shopping Behavior

Koert Van Ittersum, Georgia Institute of Technology, 800 West Peachtree Street, NW, Atlanta, GA, 30308, United States of America, koert@gatech.edu, Brian Wansink, Daniel Sheehan, Joost Pennings

While the interest in smart shopping carts is growing, both retailers and consumer groups have concerns about how real-time spending feedback will influence shopping behavior. Two lab experiments, a field experiment in an online grocery store, and a field study in a Atlanta-area grocery store demonstrate that real-time spending feedback stimulates budget shoppers to increase their spending (without breaching their budget) by purchasing more nationally branded (hedonic) products. Real-time spending feedback improves the shopping experience and increases budget shoppers' intention to revisit the store. For non-budget shoppers, real-time spending feedback reduces spending. Instead of reducing the number of products purchased, they replace national brands with store brands. While real-time spending feedback decreases the quality of the shopping experience of non-budget shoppers, it does not lower their intentions to revisit the store.

3 - When Knowing Hurts: The Dynamic Influence of Spending Feedback on Intra-shopping Trip Decisions

Daniel Sheehan, PhD Student, Georgia Tech College of Management, 800 West Peachtree, Atlanta, GA, 30308, United States of America, dsheehan3@gatech.edu, Koert Van Ittersum

Growing evidence suggests that real-time spending feedback from smart shopping carts may assist shoppers in regulating their in-store spending behavior. This research demonstrates that the dynamic influence of real-time spending feedback differs between budget shoppers — shoppers whom shop under a predetermined financial constraint — and non-budget shoppers. Three experiments detail how exactly real-time spending feedback influences the intra-shopping decision making of budget and non-budget shoppers. Driven by unique patterns in regulatory resources and pain of payment, an (inverted) U-shape relationship is shown to exist between the temporal sequence of purchase decisions and the relative spending per product of (budget) non-budget shoppers. Real-time spending feedback magnifies these distinct relationships for budget and non-budget shoppers. This research offers theoretical contributions in the domain of self-regulation and pain of payment, and has important implications for marketing and promotion strategies in both retail and mobile technology environments.

4 - What Determines Unplanned Purchases?: A Model Including Purchase History and Within-trip Dynamics

Karen Stilley, St. Vincent College, 300 Fraser Purchase Road, Latrobe, PA, 15650-2690, United States of America, karen.stilley@email.stvincent.edu, Tim Gilbride, J. Jeffrey Inman

The recent advent of shopper marketing has led to an increased need to understand the drivers of unplanned purchases. This research addresses this issue by examining how past purchases (e.g., average historical price paid by the shopper) and elements of the current shopping trip (e.g., lagged unplanned purchase and cumulative purchases) determine unplanned purchases on the current trip. Using a grocery field study and frequent shopper data, we estimate competing models to test behavioral hypotheses using a Bayesian probit model with state dependence and serially correlated errors. We find that serial correlation in the data must be accounted for in order to draw correct inferences. Results indicate that early in a shopping trip, an unplanned purchase suppresses subsequent unplanned purchase, but this effect reverses over the course of the trip such that an unplanned purchase spurs additional unplanned purchases. Further, factors from previous shopping trips determine unplanned purchases in the current trip, suggesting that retailers can use their frequent shopper program data to create customized shopping lists and improve the targeting of mobile app-based promotions.

■ TD05

05- Essex Center

Meet the Editors II

Cluster: Special Invited Sessions

Invited Session

Chair: Seema Pai, Boston University, School of Management, Boston, MA, United States of America

1 - Meet the Editors II

Editors of leading journals for marketing academics will present their editorial policies and perspectives. The following editors are represented: Quantitative Marketing and Economics: Greg Allenby/Sridhar Moorthy; International Journal of Research in Marketing: Jacob Goldenberg; Journal of Retailing: Praveen Kopalle; Journal of Service Research: Kay Lemon; Marketing Letters: Joel Steckel.

■ TD06

06- St. George B

Pricing I

Contributed Session

Chair: Jorge Silva-Risso, Associate Professor, University of California, Riverside, 900 University Avenue, 201 Anderson Hall, Riverside, CA, 92521, United States of America, jorge.silva-risso@ucr.edu

1 - The Welfare Effects of "Bill Shock'" Regulation in Mobile Telecommunication Markets

Lai Jiang, Economics Department, Stern School of Business, New York University, 44 West Fourth St, 7-160, New York, NY, 10012, United States of America, ljiang@stern.nyu.edu

This paper studies the welfare effects of the recently proposed "Bill Shock" regulation, a proposal that would make consumers better informed of the price for each calling minute on their mobile phones. Using a unique dataset that records monthly usage of mobile phones by residential consumers in 26 U.S. regional markets in 2000-2001, I empirically identify consumers' uncertainty about marginal price resulting from the limited ability to recall previous usage, under a three-part tariff mobile phone plan (a fixed monthly fee, an allowance, and an overage price per minute.) I predict that the reduction of consumer uncertainty by the implementation of "Bill Shock" regulation has two conflicting effects: (1) on the extensive margin, the increase in fixed fees leads to a decrease in the penetration rate from 55% to 48% in 2000-2001, and to a loss in welfare; (2) on the intensive margin, the decrease in overage prices leads to an increase in monthly calling minutes from 115 minutes per household to 134 minutes per household in 2000-2001, and to a gain in welfare. The welfare gain from the intensive margin surpasses the welfare loss from the extensive margin, resulting in a positive welfare effect. This gain is captured by consumers (2% increase in consumer surplus) while the industry profit does not change. I also find that the proposed "Bill Shock" regulation imposes an important distributional effect on consumer surplus: while heavy users of cell phones benefit, light users are hurt.

2 - Strategic Price Obfuscation and its Impact on Consumer Search and Consideration Set Formation

David Muir, PhD Candidate, The Wharton School/The University of Pennsylvania, 3000 Steinberg Hall-Dietrich Hall, 3620 Locust Walk, Philadelphia, PA, 19130-6302, United States of America, muir@wharton.upenn.edu, Maria Ana Vitorino, Katja Seim

It is not uncommon for companies to deliberately shroud prices, rendering price shopping and comparison more difficult. This ploy to entice consumers suggests that retailers actively consider adding obfuscation to their pricing strategies. We empirically investigate the extent to which the strategic augmenting of obfuscation to firms' pricing strategies or to other competitive marketing tactics affects consumer behavior, specifically, how consumers search for products, what products then comprise their consideration sets, and how firms' potentially manipulative actions affect market efficiency. We employ an equilibrium search model with data from the Portuguese driving school industry, where price shrouding in local markets often proliferates, to determine the impact of strategic price obfuscation on students' search and consideration set formation, school profitability and competition, and industry efficiency. This notion of obfuscation need not apply solely to the driving school industry, however; many retailers shroud certain attributes in their advertising, generate complex price structures, and so on. Examples abound, from retail banks that overwhelm consumers with different interest rates across different tiers of similar products and a plethora of hidden fees, online retail firms that obscure shipping costs and taxes until the consumer has already purchased a product, to as-seen-on-TV or pharmaceutical retail firms that place important details in tiny print at the bottom of the screen. Our research has additional salience because many of these predictions have not been borne out empirically, and, notably, because it is important to understand whether market players are helped or harmed by such activity.

3 - Variety and Quality Heterogeneity on Two-Sided Platform

Ruhai Wu, Assistant Professor, McMaster University, 1280 Main Str. West, Hamilton, Canada, wuruhai@mcmaster.ca, Mei Lin

As many two-sided markets flourish, the platform faces the problem of governing the variety and qualities offered by its sellers. In this paper, we use a circular-city model to study both product variety and quality in a two-sided market and evaluate the platform's governance strategy. We first examine the implications of product variety on the microstructure on the platform. Increasing product variety leads to superior matching of buyers' preferences (cross-side network effect); meanwhile, it alters the competition among sellers and their pricing strategies (same-side network effect). Interestingly, increasing product variety may reduce consumer surplus, in stark contrast with the positive cross-side network effect discussed in the existing literature. Overall, social welfare monotonically increases in product variety; however, the platform has the incentive to restrict product variety to a certain threshold as a result of the same-side network effect. Second, we explore the influence of product qualities on sellers' pricing strategies and on the platform's profit. We extend the traditional circular-city model by incorporating quality heterogeneity. The result shows that the variance of quality, rather than the average quality level, plays a key role in the platform's profits. We show that the platform's optimal strategy is to offer asymmetric/discriminatory support to sellers to effectively increase quality variance.

4 - Out with the Old, In with the New: The Impact of "Cash for Clunkers"

Jorge Silva-Risso, Associate Professor, University of California, Riverside, 900 University Avenue, 201 Anderson Hall, Riverside, CA, 92521, United States of America, jorge.silva-risso@ucr.edu, Meghan Busse, Florian Zettelmeyer, Christopher Knittel

The stated aims of the government program formally called the Car Allowance Rebate System (CARS), but better known as "Cash for Clunkers", were threefold: economics stimulus, especially protecting American jobs; environmental gains; and helping American consumers save money. We investigate the effectiveness of CFC in achieving the third of these aims: consumer benefits. We analyze three avenues in which the program could have benefited consumers. The most direct way is through the government credit of either $3500 or $4500 provided for customers who bought qualifying new vehicles and traded in qualifying "clunkers". Although the credits were intended to go to customers, transaction prices for cars are negotiated with dealers. We estimate the pass-through rate of CFC credits to see whether customers received all of the direct benefits that the program intended them to receive. The second avenue through which CFC could have affected consumer benefits is by affecting the subsidies offered by manufacturers themselves. Manufacturers regularly offer subsidies to customers in varying amounts depending on the vehicles they purchase. CFC credits could "crowd out" existing manufacturer subsidies for qualifying vehicles. This would reduce the net benefit to consumers of the program. Also CFC could encourage manufacturers to increase rebates increasing the net benefits to customers. Finally, the "clunkers" traded in under the program had to be destroyed, removing them from the used car market. The effect of this would presumably be to raise prices in the used car market. Thus, overall consumer benefits may include gains for buyers who bought new cars under CFC, counterbalanced by losses for buyers who found it more expensive to buy used cars in the months following the program.

■ TD07

07- St. George C

Mobile Marketing

Cluster: Special Invited Sessions

Invited Session

Chair: Andrew Stephen, Assistant Professor, University of Pittsburgh, Pittsburgh, PA, United States of America, astephen@katz.pitt.edu

1 - Determinants of Mobile Advertising Effectiveness

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Mobile advertising is a form of digital advertising whereby consumers are exposed to advertisements on mobile devices (e.g., cell phones). Firms are increasing spending on mobile advertising: e.g., global spending on mobile advertising in 2010 was $3.5 billion, and is expected to reach $24 billion by 2015. Interestingly, while mobile display advertisements (the most common type) are small and contain little information, firms continue to invest in this channel. This paper focuses on identifying conditions under which these "low-fidelity" mobile advertisements are effective. We report results from a field experiment conducted between 2007 and 2010 involving 27,753 consumers and covering 54 national mobile advertising campaigns from a wide range of industries. Advertising effectiveness is determined by comparing purchase intentions for brands among those consumers in a treatment group who saw an advertisement to those consumers in a control group who did not see an advertisement. Surprisingly, despite firms' interest in mobile advertising, conditions under which mobile advertising had a positive impact on consumers' purchase intentions were limited. Mobile advertisements were effective only for utilitarian, high-consideration brands. Drawing on the persuasion literature to explain our findings, a consumer exposed to a low-fidelity mobile advertisement is unlikely to be influenced unless they are highly motivated to process the information. Because they have a high likelihood of motivating deliberate and conscious information processing, brands that are utilitarian and high consideration are suited to mobile advertising. However, our data show that mobile advertisements for brands lacking these qualities (e.g., hedonic or low consideration) do not perform well.

2 - Monetizing the Effect of In-store Travel Distance on Unplanned Purchases: The Relative Effectiveness of Mobile Shopping Apps versus Store Layout Strategies

J. Jeffrey Inman, University of Pittsburgh, Mervis Hall, Pittsburgh, PA, United States of America, Sam K. Hui, Jacob A. Suher, J. Jeffrey Inman, Yanliu Huang

Traditionally, retailers have stocked frequently purchased products in strategic locations that encourage shoppers to pass by unplanned categories. Advances in location-based mobile marketing present a new shopper marketing opportunity of offering targeted promotions to increase in-store distance and concomitant unplanned spending. This is potentially more effective than relocating entire product categories because the mobile marketing strategy enables retailers and manufacturers to tailor the offer based on shoppers' planned purchases. The effectiveness of both strategies hinges on the magnitude of the causal relationship between distance traveled and unplanned spending which, due to the difficulty of collecting in-store shopping path data and the endogeneity issues surrounding shopping paths, has never been estimated. In this research, we develop an instrumental variable approach to estimate the causal effect between in-store distance and unplanned spending, and apply it on a novel dataset collected using an in-store survey and RFID tracking. We find that the elasticity of unplanned purchase on travel distance is 1.44, which is 53% higher than the uncorrected OLS estimate. Further, our analysis suggests that location-based targeting strategies are potentially more effective than traditional product relocation strategies in increasing unplanned spending. By strategically promoting one additional product category to each shopper, unplanned spending could be increased by as much as 28%. In contrast, changing product location has a limited effect on increasing unplanned spending. A field experiment is underway to empirically test the model's predictions.

3 - Tie Strength and Network Closure on the Mobile Internet

Raghuram Iyengar, University of Pennsylvania, The Wharton School, Philadelphia, PA, United States of America, riyengar@wharton.upenn.edu, Anindya Ghose, Sang Pil Han

There is much interest in understanding how structural properties of social networks and an individual's associations with their network impact their behavior. We contribute to this stream of research by investigating the dual impact of tie strength (strength of interpersonal connections) and network closure (relationship among contacts) on individual behavior. On the one hand, as higher tie strength typically has a positive impact and because higher tie strength is usually related to higher closure ("my close friends are friends of each other"), it is likely that network closure may also have a positive impact. On the other hand, network closure can result in a high degree of redundancy in ties from a perspective of information transfer among members. Such redundancy suggests that network closure may have a negative impact on individual behavior. This, in turn, indicates that tie strength may have a negative impact as well. Thus, it is not obvious how tie strength and network closure will jointly impact individual behavior. We address our research question using mobile data from a telecommunications company from South Korea. We develop an econometric model to investigate whether customer-level mobile Internet usage can be explained in part due to their communication patterns while controlling for the Internet usage of their network neighbors. We find that both tie strength and network closure are significant in impacting individual behavior after controlling for the other. What is interesting is that tie strength has a positive impact on individual usage while closure has a negative impact. This is the case even when both these variables are positively correlated. These results suggest that an optimal balance between the two is required to maximize individual activity. The findings from this study have managerial implications for social networking services like Facebook as to what network characteristics to show their members such that they can obtain useful information in a non-redundant manner.

4 - Consumer Surplus in the New Mobile Economy: Estimating Demand for Mobile Apps

Anindya Ghose, Associate Professor, New York University, New York, NY, United States of America, aghose@stern.nyu.edu, Sang Pil Han

A fundamental change brought forth by the advent of the mobile internet has been the widespread adoption of mobile phone based applications (apps). Mobile apps are now being sued worldwide to perform a variety of tasks - access social networks, read ebooks, play games, listen to music, watch videos and so on. In 2010 more than 300,000 applications were downloaded 10.9 billion times. As consumers increasingly use mobile apps, it is important to estimate consumer demand for mobile apps and quantify the value created by these new apps and services. We build a structural model of user demand for mobile applications and estimate the change in consumer surplus from the usage of mobile apps. We use a panel dataset consisting of top 300 ranked applications' sales rank, prices, and characteristics data from the two leading app stores – Apple's App Store and Google's Android Market. We address the price endogeneity issue intrinsic in demand estimation by building a random coefficient logit demand model in a

similar vein to the BLP (1995) method. Our results show that demand increases with the file size of apps and the length of description, but decreases with the age of apps (time since release) and the number of screenshots included. We incorporate consumer heterogeneity in the model and find that older and male consumers tend to be less sensitive to the prices of apps than younger and female consumers, respectively. Using the estimated demand function, we find that the top 300 ranked applications in both app stores enhanced consumer surplus by approximately $935 million over the time period of our study.

■ TD08

08- Adams

Marketing in Emerging Markets

Cluster: Special Invited Sessions

Invited Session

Chair: K. Sudhir, Yale University, New Haven, CT, United States of America, k.sudhir@yale.edu

1 - Consumer Adoption of Modern Retail in Emerging Markets: Evidence From India

Vishal Narayan, Cornell University, Ithaca, NY, United States of America, vn28@cornell.edu, Vithala R. Rao, K. Sudhir

As "modern" retail expands into emerging markets with promises of better quality, variety and lower prices, they face competition from millions of 'traditional mom-and-pop stores. The behavioral literature on innovation adoption suggests that lower socio-economic classes are likely to resist the impersonal nature of modern retail, and continue shopping from traditional stores. However, economic value-based arguments suggest that better quality and variety will attract higher socioeconomic classes, while lower prices will attract lower socio-economic classes. Greater store distances of modern retail may be a greater deterrent for higher socio economic classes. Using survey and household panel data on food and FMCG purchases from India, we estimate household level models of store format and expenditure share choice. We find that both high and low socioeconomic households adopt more often and spend more on modern retail than households of medium socioeconomic status – suggesting that the economic value of modern retail trumps attachment to tradition and status quo. Further, the model based estimates using observation panel data and self-reported reasons provide convergent evidence that patronage of modern retail for high socio-economic households is driven by higher quality and variety, while for low socioeconomic households it is driven by low prices and lower opportunity cost of time. Interestingly, the value proposition of modern retail in its early stage is not as compelling for the "middle" socioeconomic group. The results provide insights for how modern retail should use socioeconomic status as a segmentation variable for targeting, positioning and store location choice.

2 - Traditionalism Meets Modernity: Market Insights From Store Level Data in the Indian Retail Sector

Debabrata Talukdar, Professor, State University of New York-Buffalo, School of Management, 215 E. Jacobs Management Center, Buffalo, NY, 14260, United States of America, dtalukda@buffalo.edu, K. Sudhir

The Indian retail sector is the fifth largest in the world with a current market size of about 600 billion dollars and an average annual growth rate between 8 and 10 percent. However, it is an a early stage of modernization, with organized retail contributing only ten percent of the sector; in comparison to China at 20% and the United States at 85%. As the government explores regulatory changes to modernize retail, an important issue is how much traditional retailers (kiranas) can improve and defend themselves by adopting modern business practices. Using store-level survey data from a stratified random sample of nearly two thousand retailers in India, the paper seeks to provide insights into questions like: What are the key drivers of retail store performance? Do modern, organized retailers exhibit any intrinsic advantage in terms of performance efficacy over their traditional, unorganized counterparts? Can traditional retail improve their competitive position with respect to modern, organized retail by adopting modern business practices - e.g., technology adoption and formal financing?

3 - Income Inequality and the Demand for Counterfeits

Yi Qian, Assistant Professor, Northwestern University, Kellogg School of Management, Evanston, IL, United States of America, yiqian@kellogg.northwestern.edu, Derek Rucker

How does income inequality affect the popularity of counterfeit goods? We collect rich panel data from China on the discovered counterfeits as proportions of sampled products in different regions of China and across a variety of product categories. Exploiting both time-series and cross-sectional variations, we show a positive and significant relationship between income inequality and the prevalence of counterfeits found in markets. We use alternative inequality proxies, including the GINI coefficient and the local income disparity, and arrive at robust results. In particular, income inequality is positively associated with the rate of counterfeits discovered in the market in the sectors of apparel, shoes, light industry (including textiles, etc.), consumer electronics (including cell phones, laptops, etc.) and mechanical (including bicycles, etc.). Income inequality and counterfeiting is not significantly related in the other sectors, ranging from agricultural products to raw materials. Overall, these results are consistent with the rationale that widened income inequality generates incentives for the poor to obtain and signal status through counterfeits. To further causality, we conduct lab experiments, calibrating the range of income inequality in the treatment and control groups based on the maximum and minimum values of inequality as observed in the field data. Income inequality is shown to lead to higher purchase intent for counterfeits. We also conduct experiments to explore the underlying mechanism for the relationship between income inequality and the purchase intent and attitudes toward counterfeiting.

4 - Fraud Transactions under Seller Rating System: A Dynamic Analysis of Price and Quality Competition on Online Retailing Platform

Baohong Sun, Dean's Distinguished Chair Professor of Marketing, Cheung Kong Graduate School of Business, 111 West 57th Street, Suite 418, New York, NY, 10019, United States of America, bhsun@ckgsb.edu.cn, Xiao Liu, Robert Miller, Zhanbo Zhao

Popular online retailing platforms such as Amazon, Craiglist, and eBay introduce sellers rating that is typically calculated as summary statistics of accumulative sales and consumer feedbacks. The seller rating point reduces uncertainty stemmed from the separation of buyers and sellers in e-commerce and plays a significant role in determining consumer decision of store choices. In this paper, we investigate the dynamic competition among stores under the popularly adopted seller rating system. Specifically, we propose a dynamic structural model in which stores are allowed to make periodical price and service quality decisions (i.e. guarantee, free return within 7 days) in order to maximize long-term discounted profit. Our model incorporates firms' competitive dynamic pricing and reputation-building strategies as well as interactive and sequential purchasing process of consumers in a structural manner. To estimate the model, we employ the new estimation technique – conditional choice probability (CCP) with unobserved heterogeneity – developed by Arcidiacono and Miller (2011). Applying this model to a 6-month transaction panel data from a Chinese online retailing platform, we obtain rich results of firm and consumer dynamics. For example, under current design of the seller rating, a firm newly listed on the platform may engage in fraud transaction by strategically cutting price and sacrificing service quality in order to achieve higher seller rating. We conduct policy simulations to explore better ways to construct the seller rating system in order to avoid fraud transactions.

■ TD09

09- Helicon

Multiattribute Choice Models

Contributed Session

Chair: Minki Kim, KAIST, #2109, N5, 291 Daehak-ro, Yuseong-gu, Daejon, Korea, Republic of, minki.kim@kaist.ac.kr

1 - Catch A Tiger By His Toe: A Linear Programming Approach to Large Scale Discrete Choice Problems

David Anderson, University of Maryland, 3330F Van Munching Hall, College Park, MD, 20740, United States of America, danderson@rhsmith.umd.edu, William M. Rand, Anna Devlin

We present a method for solving large scale discrete choice problems using linear programming. We show that our method quickly provides results competitive with multinomial logistic regression (MNL). We demonstrate that our method derives the correct answer on simulated data, present a comparison with MNL on two small data sets, and then show that our method can handle very large data that cannot be easily analyzed with MNL. Our method is fast and flexible, and allows for analysis of types of data that traditional MNL does not handle well, or at all. However, it has some drawbacks. It does not guarantee consistent estimates, and it does not show statistical significance. However, we believe it is a powerful new tool that has many applications to problems in marketing and beyond.

2 - Understanding Choice Variation in Group Decision-making

Sam Riethmuller, Doctoral Candidate, Australian National University, LF Crisp Bldg Level 1 MMIB ACT, Canberra, 0200, Australia, samuel.riethmuller@anu.edu.au, Ujwal Kayande

This paper develops a model to explain why some groups exhibit greater variation in their choices than others. Many important consumer decisions are made, not by individuals, but by groups, such as spouses or family units. Groups are more likely to make choices in situations where the decision is important, costly or complex. Such complex decisions are often clouded by noise or uncertainty, where groups must compare multiple alternatives, and identify differences in utility across alternatives. However, some groups are more cohesive and may be more homogenous than others in terms of its members' characteristics. An effective group will be more likely to identify its most preferred alternative, and its choices will be relatively easy to predict. On the other hand, groups that struggle to identify differences among alternatives will appear to have more random choices. This choice variation has important implications for firms. As uncertainty rises, preferred brands will lose their advantage, since buyers will be less able to detect the relative superiority of such products. Using a discrete-choice Random Utility framework, we incorporate both preference heterogeneity and random error heterogeneity into a group

choice framework. Our model specifies both preference similarity and individual variation as drivers of the choice variation exhibited by groups. We establish the estimability of our hierarchical Bayesian model using a simulation experiment. We then conduct a discrete choice experiment of spouses selecting rental accommodation in order to empirically validate the model. Our approach provides behavioral insights into the choice behavior of groups, enabling the better design and promotion of products and services by firms.

3 - Analyzing Heterogeneous Voting Behavior in Multiparty Elections: Implications for Political Marketing

Minki Kim, Kaist, #2109, N5, 291 Daehak-ro, Yuseong-gu, Daejon, Korea, Republic of, minki.kim@kaist.ac.kr

In this study, I investigate how heterogeneous voters perceive multi-party candidates when their psychological state and the election mood influence their preferences over time. By extending a factor-structure based random coefficients choice model to exploit voting intention varying within and across voters, I present the competitive landscape of candidates across different segments of voters. To deliver useful marketing insights to campaigning strategists, I construct a unique data set by augmenting the six-wave panel data on the 2007 Korean Presidential election with campaign advertising which includes Internet-campaigning activities. Empirical findings are: (i) there exists a unique pattern of inter-candidate competition across 5 segments of voters; (ii) each segment is differentiated in most of demo/socioeconomic variables; (iii) demographic profiles of each segment constructed from the posterior probability of segment membership show a regional cleavage between the Eastern and Western regions of Korea; (iv) Internet and Newspaper advertising were not effective on Korean voters while TV commercials and TV speeches had a significantly positive impact on several segments of voters. The substantive insights can help campaigning strategists better understand the nature of competitive interactions among candidates and efficiently allocate campaign expenditures across target voters.

■ TD10

10- St. George D

New Products Adoption III

Contributed Session

Chair: Kay Ryung Koo, PhD Candidate in Marketing, Korea University, #416 Main Business Building, 145 Anam-ro, Seongbuk-gu, Seoul, Korea, Republic of, kay.ryung.koo@gmail.com

1 - The Effect of ISP Availability on Internet Adoption

Junzhao Ma, Lecturer, Monash University, Department of Marketing, P.O. Box 197, Caulfield East, VIC, 3145, Australia, junzhao.ma@monash.edu

We empirically investigate how the availability of Internet service providers (ISP) affect people's decision to adopt Internet access. We do so with a novel dataset from a large US mail-order company, whose customers reside in disparate geographical areas that receive unequal coverage from commercial ISPs. We estimate the effect of the number of ISPs in a customer's local market on her likelihood to adopt online ordering. To overcome the issue of endogenous entry by service providers, we focus on shoppers who relocate between ISP markets because the act of moving can be thought of as an exogenous shock to these shoppers' Internet access option. Internet has been one of the most important technologies to emerge in the 20th century. This is one of the first papers to examine how the supply of Internet access affects people's adoption decision. The issue has important public policy implications. In the past decade, governments around the world have made significant investments to improve Internet access in underserved areas. Yet there is scant evidence on how effective these measures are at increasing Internet adoption and narrowing the digital divide.

2 - An Investigation of Domain-specific Innovativeness

Masataka Yamada, Professor, Nagoya University of Commerce and Business, 4-4 Sagamine, Komenoki-cho, Nissin, 4700193, Japan, myamada@nucba.ac.jp, Toshihiko Nagaoka

In the conferences, we reconsidered not only the consumer innovativeness but also the theory of innovation diffusion itself focusing on the construct of consumer innovativeness. After intensive literature survey we concluded that Midgley and Dowling's contingency model is the most suitable one with a few modifications. Innovativeness should be treated as a theoretical construct as one of personality traits. We found that the items of scales for theoretical construct are relatively far from what you want to measure because of its width and that the items of scale for disposition concept are just behavior, at its extreme like time or number with no surplus meaning. Then, in order to improve our predictability of behavior, we introduced a new way of viewing the diffusion of innovation using Carnap's theoretical construct and disposition concept. We introduced an intermediate level of abstraction construct between theoretical construct and disposition concept "T-D mixture". We showed that the domain-specific innovativeness (DSI) happened to be an example of T-D mixture because its scale items include contents closer to the behavior patterns to be predicted but not entirely dispositional. This study investigates the domain-specific innovativeness. We collected DSI scores on three different innovations on the same respondents. While we confirmed that the mean scores of respective DSI are different and have very low correlations with scores of generalized innovativeness (GI), consumer independent judgment-making (CIJM) and consumer novelty seeking (CNS), we noticed that the DSI total scores at time t can be utilized as an indictor of its position on its product lifecycle at t. Finally, we developed forecasting models for adoption times using survival function.

3 - Markets or Exports?: Understanding Innovation in Emerging Markets

Bruce McWilliams, Professor, Instituto Tecnologico Autonomo de Mexico (ITAM), Rio Hondo #1, Col. Progreso Tizapan, Mexico City, DF, 01080, Mexico, bruce@itam.mx, Rubina Verma

The innovation and trade literature is ripe with examples extolling the virtues of exports in driving firm innovation. A leading explanation suggests that innovation among exporting firms is driven by the transfer of technologies from foreign firms to domestic firms. In this paper we question both of these assumptions, in particular for product innovations. We analyze World Bank Business Environment and Enterprise Performance data of 30,000 firms in low and medium income countries. This data contains information of firms' recent adoption of both new products and new technologies, as well as their participation in export sales and sales to other markets. This analysis reveals that the relationship between innovation and participation in export markets is an inverted U, where firms that export all of their products are little different in their innovation behavior from those that sell only to the domestic market. More interestingly, this inverted-U relationship extends to firm participation in other markets as well, all of which indicates that firm innovation is positively driven by participation in multiple markets. Firms are the most innovative when they straddle different markets, while participation in a single market (even if it is exports) may deter innovation. We compare and contrast the innovative behavior of these domestic firms with the innovative behavior of foreign owned firms, which provides additional insights into the determinants of innovation.

4 - Prediction of Trial Purchase of New Product Based on Purchase History of Market Mavens

Takashi Teramoto, Associate Professor, Meisei University, 2-1 Hodokubo, Hino-shi, Tokyo, 1918506, Japan, takashi.teramoto@meisei-u.ac.jp, Akira Shimizu

We have two objects for this study. First is to predict whether a new product would be a success or not based on the selected consumer segment characterized as "market mavens". Second is to determine the purchase trend based on the shorter period data to compare with a preliminary study. In our analysis we used the results of lifestyle surveys to specified market mavens. Next, a prediction formula based on the model by Parfitt and Collins (1968)—which is widely used for products that are frequently and repeatedly purchased—was applied, along with a consumer pattern (All Panel and Market Maven Panel) and different period patterns (6, 7, 8 and 13 weeks) in order to compare errors from the actual result. Consequently, the highest prediction accuracy was achieved when "7 weeks of Market Maven Panel" was used. This result provides the following two insights: 1) success of a new product can be determined based on whether the predicted penetration ratios among market mavens and all buyers are high or low; 2) if we use the purchase history data of market mavens, we can get more accurate prediction using shorter period data than what has traditionally been applied for prediction. Preliminary studies related to demand prediction for new product present many arguments for considering marketing variables and advancing the parameter estimation method, as ways to enhance the accuracy of prediction. However, the insights gained from this study suggest that applying the market maven segment is effective for the accuracy of prediction.

5 - Empirical Analysis of Market Maven's Bahavior

Kay Ryung Koo, PhD Candidate in Marketing, Korea University, #416 Main Business Building, 145 Anam-ro, Seongbuk-gu, Seoul, Korea, Republic of, kay.ryung.koo@gmail.com, Janghyuk Lee, Jiyoon Kim

Influentials who affect other consumer's purchase decision by diffusing product related information are important to marketers. Conceptually, market mavens are influential consumers having high involvement to shopping and substantial knowledge on various categories. Since Price and Feick (1987) suggest market maven concept, follow up researches mainly focus on the demographic characteristics of market maven or market maven's underlying motivation of generating communication with others. To understand market maven effectively, it is important to check whether their behavior match up with their market maven response. Different from previous research, we empirically investigate market mavens' behavior in terms of purchasing and redeeming point behavior in aggregate loyalty program to validate market maven scale. We test how market maven scale match up with purchase and redemption behavior of respondents. Our results indicate that high score on market maven scale tend to purchase more product, make lesser effort to save the point, and possess higher number of loyalty cards than lower score on maker maven scale. However, it is questionable that market mavens relatively purchase more products or redeem more points in various categories than non-mavens.

■ TD11

11- Empire

Consumer Channel Choice

Contributed Session

Chair: Jing Li, PhD Candidate, Eindhoven University of Technology, Postbus 513, Eindhoven, 5600MB, Netherlands, Jing.Li@tue.nl

1 - The Effect of Unobservable Learning States on Customers' Channel Preference Evolution

Chun-Wei Chang, University of Washington, Mackenzie Hall 336, Seattle, WA, 98195, United States of America, sabatini@uw.edu

Understanding how customers' channel preferences evolve is crucial to firms in managing multiple channels effectively. This research examines the underlying influences which cause customers to migrate over time into different unobservable experience states with higher propensity to purchase in a specific channel. We apply a multiple-segment Hidden Markov Model (HMM) to discover the dynamic behavior of customers facing multiple channels. A particular strength of our approach is that preference parameters vary systematically over time, which leads to a clearer and strategically meaningful understanding of channel choice and preference evolution. It also allows us to capture both dynamic variation and cross-sectional heterogeneity, and thereby allows a richer interpretation of customer state transition and state-dependent choice. In the empirical application, we identify two segments and two states in the multiple-segment HMM and examine different learning patterns and rate of experience development for each segment. Our results show that over time, customers do not tend to move away from bricks-and-mortar stores as some experts expect as they gain more experience. Some customers perform multichannel-oriented behavior and show various evolving patterns. Furthermore, customers also reveal different reactions to marketing communications for different combinations of channel tendency. The study takes an alternative way to incorporate heterogeneity using structural segments, which allows heterogeneity in both state transition and channel choice, and offers substantive and interesting insights regarding multichannel shopping patterns. Also, the study suggests an effective way for a firm to dynamically segment and manage channel usage with its customer base.

2 - Consumer Shopping Behavior and Product Cannibalization

Bin Li, University of Connecticut, Marketing Department, 2100 Hillside Road, U1041, Storrs, CT, 06269, United States of America, bin.li2@business.uconn.edu, Hongju Liu, Xinxin Li

Product line design is an important strategic decision for firms in today's competitive market. A broad product line may potentially increase market share or deter entry, but can also raise the concern of cannibalization within the same firm. In this study, we examine how different aspects of consumers' shopping behavior affect product cannibalization within firm in different channels. Specifically, using the aggregated sales data for major personal computer vendors and survey data on consumers' purchasing behavior between 2004 and 2008 in the United States, we estimate a nested logit model that explicitly examines the effects of consumers' shopping style on product substitution effect. Our preliminary results suggest that product cannibalization within a firm differs significantly across channels, and is influenced by consumers' brand loyalty and other shopping characteristics. Our findings have important implications on firms' product line design in different channels.

3 - A Study to Evaluate Consumers Intention to Use Stationary, Mobile and TV Devices for Online Shopping

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In research and retail practice, online shopping is often understood and analyzed with regard to the purchasing behavior of consumers on a retailer's website by personal computer or notebook. However, today new digital end devices (e.g. smartphones, tablet PCs or Internet-enabled TVs) provide further possibilities for customers to shop online. Though, mobile devices and TV devices obviously differ from stationary e-commerce devices, in situational as well as in technical means, no further differentiation or measurement approach can be found in current literature. Therefore it is a matter of particular interest to know how consumers perceive and evaluate online shopping when using different end devices (individually as well as in combination) and how individual characteristics of these devices influence consumers' intentional search and purchase behavior. The analysis of data from N=1,015 consumers shows that evaluation of an online shop differs significantly between three e-channel formats (e-commerce, m-commerce and TV-commerce). In addition, the results indicate that each e-channel contributes to customer satisfaction and perceived value, while the effects on intention to search for information and to purchase vary between devices. This finding is of interest for online retailers, because it suggests that some e-channels might be preferred for searching while others might be preferred for purchasing. A further examination of the interrelation between end devices shows that the integration of e-channels is able to create complementarity and synergy, which positively effects the perceived value and satisfaction with an online retailer, respectively its multichannel e-commerce system.

4 - Cross-competition Effects During the Customer Adoption of a New Online Channel

Jing Li, PhD Candidate, Eindhoven University of Technology, Postbus 513, Eindhoven, 5600MB, Netherlands, Jing.Li@tue.nl, Fred Langerak, Umut Konus, Mathieu Weggeman

The retailing environment is getting more and more competitive with the introduction of new and multiple forms of online channels, such as web-based online shopping, and shopping applications of smart phones and tablet computers. Customers can easily use and switch between multiple channels offered by different firms in the same category. This implies that customers' channel choice behavior for an incumbent firm is also affected by competitors' multichannel offerings. Therefore, while introducing a new online channel, the incumbent should consider the channels offered by its competitors and customers' past and current usage patterns of those channels. One may expect that customers who purchase more from competitors' online channels are more likely to adopt the incumbent's online channel because their online shopping experience increases their chances of online adoption. However, it is also possible that if customers are already loyal to competitors' online offerings, they will remain loyal to those channels and consequently be less likely to switch to the incumbent's. This study attempts to determine the impact of competitors' multichannel offerings on customer adoption of a newly introduced online channel over time. These effects are represented by customers' status and history of multi-channel usage from competitors. We also examine the customer characteristics that could moderate this relationship. We use longitudinal transactional data capturing customer purchases from the incumbent and its multi-channel competitors in the apparel category over a five-year period. We employ panel probit models for purchase incidence and channel choice to test our hypotheses. We offer implications for further research and practice.

■ TD12

12- Parliament

Bayesian Methods I

Contributed Session

Chair: Jonathan Lee, Associate Professor, California State University, Long Beach, CBA 351 Dept. of Marketing, 1250 Bellflower Blvd, Long Beach, CA, 90840, United States of America, jlee6@csulb.edu

1 - When Are Your Customers Active? A State-switching Mixture Model for Always-a-share Markets

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To score customers with regard to their purchasing behavior and expected future transactions is of key interest to direct marketers. For the purpose of customer scoring, a variety of models have been developed based on the negative binomial distribution. Extensions of such models allow for customers defection ("buy-until-you-die"). We challenge the assumptions of defection-based customer scoring models and extend them in two ways. (1) We assume that customers switch between an active state in which they buy and an inactive state in which they do not purchase. Switching between states can occur in both directions implying that defection is temporary. (2) We allow for transactions to be more regular than random by incorporating a mixture of exponential and Erlang-distributed interpurchase times in the active state. This addresses heterogeneity among households with regard to the regularity of purchasing behavior. Our proposed model nests the well-known BG-NBD model and a variety of other models. We develop MCMC simulation methods for our model and apply it to various data sets. We discuss conditions under which is it desirable to allow for state switching and a mixture of random and regular interpurchase times for customer scoring.

2 - A Managerial Perspective on Predicting Customer Behavior

Robin Wuenderlich, Technische Universitaet Muenchen, Arcisstrasse 21, Muenchen, 80333, Germany, robin.wuenderlich@marketing.wi.tum.de, Florian Wangenheim, Nancy Wuenderlich

Managers often use fast and frugal heuristics to forecast customer behavior, while academics propose statistical models of increasing complexity. The authors analyze a prominent hierarchical Bayesian model in comparison to simple managerial heuristics on three non-contractual large-scale data sets. They improve previous classification rules to identify inactive customers from the Bayesian model's output and benchmark the performance of the model in (a) determining long and short-term forecasts of purchase behavior, (b) predicting future inactive customers, and (c) identifying future best customers. The results show that the proposed classification rule dominates previous approaches. The benchmark test also reveals that the model does not outperform simple managerial heuristics in many of the scenarios tested. While the model is more accurate in predicting long and short-term interpurchase times, its accuracy in classifying future inactive customers is at best only equal to the heuristics. Moreover, the heuristics outperform the model consistently in identifying future best customers. The authors discuss conceptual, computational and practical reasons for these results and point to new avenues of research to predict individual customer behavior.

3 - A Bayesian Approach to Correspondence Analysis

Jonathan Lee, Associate Professor, California State University, Long Beach, CBA 351 Dept. of Marketing, 1250 Bellflower Blvd, Long Beach, CA, 90840, United States of America, jlee6@csulb.edu

A Bayesian approach to model heterogeneity in correspondence analysis is proposed for heterogeneous perceptual mapping. Multiple correspondence analysis can be viewed as a nonlinear version of principal components analysis, in which ratings data are replaced by categorical data. Accordingly, it results in low-dimensional representations of both consumers and response categories. This characteristic allows clustering consumers as well as response categories based on their low-dimensional representations. The proposed Bayesian approach is a model-based approach applied to the unobserved mean matrix of the standardized residuals based on the probabilistic singular value decomposition. The authors discuss estimation and inference for statistical models based on the singular value decomposition. The efficacy of the proposed approach related to positioning is presented based on the attributes-benefits-values framework. In contrast to traditional perspectives, fundamental to this framework is the concept of abstraction whereby a brand attribute is "abstracted" to a higher level such as enduring personal values. The authors incorporate abstraction in a comprehensive conceptual and empirical framework that managers can use to develop and revise a brand's positioning strategy. A Bayesian MCA is implemented using family sedan automobile consumer panel data, collected by an online survey dealing with preferences and attitudes towards family sedans, consistent with reports published by Consumer Reports and J.D. Power and Associates. While the results are comparable to a standard solution, the empirical illustrations demonstrate that the proposed Bayesian approach provides a flexible way to address a multi-way positioning framework for diagnostic and predictive purposes.

■ TD13

13- North Star

Bidding Strategies and Design in Quality Auctions

Cluster: Special Invited Sessions

Invited Session

Chair: Sandy Jap, Emory University, Atlanta, GA, 30332, United States of America, sjap@emory.edu

Co-Chair: Eman Haruvy, Associate Professor, University of Texas at Dallas, 800 West Campbell Rd., Richardson, TX, United States of America, eharuvy@utdallas.edu

1 - Differentiated Bidders and Bidding Behavior in Procurement Auctions

Sandy Jap, Emory University, Atlanta, GA, 30332, United States of America, sjap@emory.edu, Eman Haruvy

Why do bidders in buyer-determined procurement auctions often bid above the lowest observed bid over the course of the auction? Are such bidding patterns meaningful? In this research we propose that since bidders are differentiated in their value to the buyer and competition in these auctions is anonymous, bidders infer their potential quality advantage or disadvantage vis-à-vis their observation of competitive bids and incorporate this information into their responses and price bids. Using point-by-point bid data from two industrial procurement auctions we show that bidders appear to be making inferences about their own implied quality differentials and adjust their bidding strategies and bidding aggression accordingly. Specifically, we find that high quality bidders tend to be more aggressive in bidding against potentially higher quality competition and less aggressive when bidding against potentially lower quality competition. In contrast, low quality bidders appear aggressive regardless of their implied quality vis-à-vis the competition. Implications for management and auction design are discussed.

2 - Bidders as Networks and Key Bidders in Online Auctions: A Case of Fine Art Auctions

Mayukh Dass, Texas Tech University, Rawls College of Business, Marketing Department, Lubbock, TX, 79409, United States of America, mayukh.dass@ttu.edu, Srini Reddy, Dawn Iacobucci

A growing literature is enhancing our understanding of auction characteristics on outcomes such as final sales prices. We position our research as 1) building upon the developing literature that focuses on the underlying auction processes that yield those sales outcomes. We model final sales prices, as well as the micro-level structures of the sequential bid processes that lead to the auction outcomes. We model the effects of these network dynamics on the real time price curve and its first and second derivatives, capturing the velocity and acceleration of prices. In doing so, we provide a more thorough understanding of auctions, including how even early auction dyadic interactions can preview the final sales price and the pace at which that price will be realized. In addition, we also position our research as 2) contributing to the increasing recognition of the social and interpersonal elements of auctions, in that they involve multiple bidders competing toward a purchase, and bidders interpret other bidders' actions and respond accordingly. We model these unfolding interdependencies and show that over the duration of an auction, there is significant evolution in bidder interactions. In particular, 3) we are able to identify clearly and early in an auction the key bidders who express disproportionate influence on the auction – the behaviors of other bidders as well as the ultimate auction sales prices. Finally, 4) we begin building the literature on simultaneous auctions. In addition to our intended theoretical contributions, 5) we describe how our research and methodological approaches can have, indeed already has had managerial impact, based on feedback from several auction house managers, and media describing record sales values realized in auctions using our techniques.

3 - Advertising Agency Selection Contest with Stipends for New Business

Dan Horsky, Benjamin L. Forman Professor of Marketing, University of Rochester, Rochestor, NY, United States of America, dan.horsky@simon.rochester.edu, Sharon Horsky, Robert Zeithammer

We model the contest among full-service advertising agencies as a score auction. The score auction captures the fact the modern contests solicit each agency's bid of a media price in addition to its creative idea, and the advertiser selects the agency that offers the best combination of creative quality and media cost. To participate in the contest, each agency needs to incur an upfront bid-preparation cost arising from the development of a customized creative. The advertising industry is currently debating whether or not advertisers should offer participation stipends to help defray such costs, and no standard practice has yet emerged in this regard. We characterize the stipend structure that maximizes the advertiser's expected profit. Our results show that stipends can sometimes benefit the advertiser, but only when the contest includes an incumbent agency with lower bid-preparation costs. Such an incumbent should not receive a stipend, but the competing agencies bidding for new business often should. We provide a sufficient condition for profitability of new business stipends in terms of the population distribution of agency types, show that the optimal stipend should never cover the bid-preparation cost in full, and give several examples of agency-type distributions that do not support any stipends.

4 - Quality Scores that Make You Invest

Zsolt Katona, Assistant Professor, University of California at Berkeley, Berkeley, CA, United States of America, zskatona@haas.berkeley.edu, Yi Zhu

This paper examines the role of quality score in ad auctions. Many search engines and other ad auctions use a quality score to favor certain advertisers in the auction. The typical justification for quality score is the need to favor advertisers with higher click-through rates. This work examines the impact of different forms of quality scores on advertiser's quality investments. The results suggest that quality score plays an important role in providing incentives to advertisers to invest. Often a type of quality score that is stronger than one that only estimates click-through rates is optimal. Such a quality score not only increases advertisers qualities, but in turn raises the auctioneer's revenue. These results are stronger when there are (i) more advertising slots, (ii) when these slots are similar, and (iii) when quality investments are expensive.

5 - Pay What you Like: A Controlled Laboratory Experiment

Robert Zeithammer, Assistant Professor, University of Californnia-Los Angeles, Anderson School of Management, Los Angeles, CA, United States of America, rzeitham@ucla.edu, Martin Spann, Klaus M. Schmidt

In several industries – including museums, software, and charity sales – some sellers use a seemingly risky tactic of letting buyers pay what they like (PWYL) for the goods and services provided. We report a series of incentive compatible laboratory experiments that identify sources of PWYL profitability, and we outline the potential benefits of PWYL over traditional posted pricing in both monopoly and competitive settings. Why would a buyer pay a positive amount in a PWYL setting? A natural reason is pure altruism, i.e. caring about the seller's surplus. We propose and test two additional reasons for paying, both rooted in the preference for reciprocity: First, the buyer may want to keep the seller in business within a repeated game, paying today to encourage a sale tomorrow and hence obtain more surplus. For example, diners may pay in their neighborhood restaurant in order to keep the restaurant operating. Second, the seller may credibly invest in the quality of the product, inviting the buyers to reciprocate with a higher payment. Our experimental design makes it difficult for PWYL to be successful because the buyers and sellers engage in no personal interaction, and the seller cannot sell any complementary goods. Despite these restrictions, we find that PWYL sellers enter the market and can be profitable, and we identify reciprocity concerns as the key drivers of PWYL profitability.

■ TD14

14- Defender

Global Branding

Contributed Session

Chair: K. Sivakumar, Arthur Tauck Chair and Professor of Marketing, Lehigh University, 621 Taylor Street, Bethlehem, PA, 18034, United States of America, k.sivakumar@lehigh.edu

1 - Global Brand Relationship: Understand Customer Relationship with Global Brand That Does not Exist

Ibrahim Abosag, University of Manchester, Booth Street West, Manchester, M15 6BP, United Kingdom, ibrahim.abosag@mbs.ac.uk, Oleskii Bekh

The relationship between a consumer and a global brand, that has not yet entered a certain market, has not been fully examined. The study combines the insights from relationship marketing literature (e.g. Sheth and Parvatiyar, 1995; Bowden, 2009) and insights from brand equity literature (e.g. Keller, 1993; Kohli and LaBahn, 1997) within the cultural context of customer-brand relationship (CBR) of Ukraine. A conceptual model on the role of customer-brand liking was developed. The study surveys 298 Ukrainian consumers that have no direct interaction with Hard Rock Café (HRC), but who have, nevertheless, access to information about the brand through different media channels and word of mouth. The conceptual model include brand personality, customer perceived quality,customer perceived value,liking,affective trust and purchase intentions. The measurement model has largely met the criteria: ?≤ (df) = 640.8(217), p-value = .000, CFI= .97, IFI = .97, RMSEA = 0.07. Model estimation shows a good fit ?≤ (df) = 56.47(14), p-value = .002, GFI = .96, AGFI = .88, CFI = .98, RMSEA = 0.094. Customer brand liking was found to play an essential role in linking brand equity (brand personality, perceived value and perceived quality) with future customer-brand relationship and purchase intention. Important recommendations and implication for global brands are discussed. The value of the paper is that of deeply understanding the consumers' attitude and desired relationship towards the global brands that yet to enter to the market. Liking is a major factor in transforming brand equity into a long-term relationship with global brand.

2 - The Role of Internationalization in Firms' Branding Strategy Choices

Saejoon Kim, PhD Student, Drexel University, 2200 Benjamin Franklin Pkwy, ParkTownePlace E1001, Philadelphia, PA, 19130, United States of America, sk932@drexel.edu, Pravin Nath

It is widely accepted that brands are important marketing assets, which if carefully managed as part of a firm's branding strategy can impact firm performance. For example, Rao, Agarwal, and Dahlhoff (2004) showed that a corporate branding strategy is more positively related to intangible firm value than other branding strategies. Another empirical study by Morgan and Rego (2009) found that brand portfolio strategy explains significant variance across firms' financial performance. Yet, little is known about how a firm's branding strategy affects its performance in the context of globalization. This is an important gap in the field given that the internationalization of firms and industries, increasingly appears to be a significant global trend (Capar and Kotabe 2003; Douglas and Craig 2011). Our timely research aims to fill this gap by testing whether the prescriptions for branding strategy are conditional on the degree and diversity of internationalization of a firm. We focus on a sample of U.S. firms in the retail industry which we observe over a 5 year period and analyze using econometric methods for longitudinal data. We measure firm performance using various alternatives including Return on Sales. For internationalization, we consider multiple measures such as the proportion of foreign sales (Sullivan 1994), cultural diversity (Hofstede 1980), and geographical distance. Early empirical results indicate that internationalization does matter to the relationship between firm performance and branding strategy as captured by the presence or absence of corporate branding. Our research therefore has important implications for theory and managerial action in the fields of branding and internationalization.

3 - Cross-country Analysis of Conspicuous Consumption: The Case of the Automotive Industry

M. Berk Talay, University of Massachusetts Lowell, One University Avenue, FA 207C, Lowell, MA, 01854, United States of America, berk_Talay@uml.edu, Janell Townsend

While scholarly interest on conspicuous consumption grew substantially, the literature, nevertheless, has remained largely limited to studies focused on a single country – most of the time, a developed country despite the fact that a) the rapid globalization luxury brands due to the eradication of trade barriers and convergence in consumers' tastes, and b) unprecedented growth of demand for luxury brands from emerging markets. Using data on global automotive industry for 165 brands from 18 countries, operating in 65 countries from 2002-2008 to assess the performance of luxury brands, this study begins to fill that lacuna by analyzing how consumption patterns for luxury, high-end brands vary across countries.

4 - Modeling Cultural Distance in Globalization Research: Measurement, Interpretation, and Implications

K. Sivakumar, Arthur Tauck Chair and Professor of Marketing, Lehigh University, 621 Taylor Street, Bethlehem, PA, 18034, United States of America, k.sivakumar@lehigh.edu

National 'Cultural Distance' has been a very prominent variable to be included in research focusing on globalization. The variable has been used to explain several aspects of customer behavior as well as firm behavior. Given the increase in globalization, the research that focuses on a global approach to customer and firm behavior is only going to increase and therefore, a critical examination of the key variable of cultural distance will be useful for researchers as well as managerial practice. This paper focuses on the measurement, interpretation, and implications of cultural distance in globalization research and offers some approaches to utilize the richness of data as well as to overcome the challenges in interpreting the meaning of a statistical relationship between cultural distance and other variables.

■ TD15

15- Great Republic

Marketing and Firm Performance I

Contributed Session

Chair: Atanas Nikolov, PhD Student, University of Georgia, 148B Brooks Hall, 310 Herty Dr, Athens, GA, 30602, United States of America, nikolov@uga.edu

1 - Is Corporate Reputation Relevant for Financial Analysts?

Elena Michel, Ludwig-Maximilians-Universität, Kaulbachstr. 45, Munich, Germany, michel@bwl.lmu.de, Manfred Schwaiger

During the past decade, several scholars have shown that corporate reputation, which is one of the key marketing metrics, has a significant impact on financial performance. However, one important stakeholder group within the reputation-finance interface has so far been neglected: financial analysts. Financial analysts act as information intermediaries between firms and investors as their issued stock recommendations and forecasts comprise different financial and non-financial information about the analyzed firms. Closing this gap in research, this study sheds light to the information processing behavior of financial analysts by answering the following questions: Do financial analysts use information about a firm's reputation in order to generate their forecasts and stock recommendations? Does this affect analysts' forecast errors, and if so, how? Specifically, we examine the effects of corporate reputation on analysts' forecasts and recommendations by using a panel data set with data for German DAX companies from December 2005 to December 2010. Applying panel data methodologies, we find that corporate reputation has a positive impact on analyst stock recommendations as well as on their forecasts. Our results are relevant for both researchers and practitioners of management and accounting disciplines as they contribute to a better understanding of the relationship between corporate reputation management and the financial market. In particular, our results help corporate managers to understand that it is possible to influence analysts' opinions by implementing corporate reputation management.

2 - Sources and Financial Consequences of Product-harm Crises: Evidence from Automobile Industry

Wonjoo Yum, Texas A&M University, 4112 TAMU, RM 220R, College Station, TX, 77843-4112, United States of America, wjyun@mays.tamu.edu, Yan Liu, Venkatesh Shankar

The number of product-harm crises due to faulty products has significantly increased in recent years. It is important for firms to effectively cope with their crisis management decisions by deciding what activities to engage in and what activities to disengage from. The objective of the study is to answer the following questions: (1) What are the determinants of financial returns in the face of crisis? (2) Do different types of advertising have different effects on financial returns? (3) Do product quality and recall severity moderate the relationship between advertising and firm value? and (4) Do these returns accumulate differently over the long run for different scenarios? To address these questions, we build on agency and signaling theories to formulate hypotheses on the effects of product-harm crisis on short- and long-term financial performance. Using a sample of 169 automobile product recalls undertaken over a six-year period (1997-2002), this study empirically tests the hypotheses. The findings indicate that the financial returns from model advertising are more significantly positive in the short run than other types of advertising. The results reveal that product quality and recall severity moderate this relationship. Furthermore, they show that the financial returns from product recall announcements become positive in the long run if the firm spends more on advertising and considerable efforts on the post-product recall processes after the recall announcements. The findings provide managers with guidelines on how to manage marketing communications and remedial recall procedures during the product-harm crisis to mitigate the negative impact of recall announcement on firm value.

3 - Advertising Media Mix Decisions and Firm Value

Jaime Romero, Associate Professor, University Autonoma Madrid,, Fac. CC. Economicas, Avda. Tomas y Valiente, 5, Madrid, 28049, Spain, jaime.romero@uam.es, Pablo J. Lopez-Tenorio

Nowadays marketing and advertising executives are urged to adopt a financial language when evaluating and reporting their actions. Previous research has shown that advertising expenditure increases firm value. However, there is a growing demand for analysis about how the allocation of this expenditure over advertising components – ad copy and media mix- modifies company finances. In this research we aim to partially fill this gap analyzing the impact on firm value of the component that usually consumes the highest part of advertising budget – media mix. This study analyze the impact of media mix (TV, Radio and Press) on company value for 103 firms included in the Madrid Stock Market Index covering the period January 2007 – June 2011. We use a cross-sectional time-series fixed effects regression model to regress firm value against media mix across time. Our first results suggest that not all media affect firm value in the same way. Using Press in advertising programs increases firm value more than other media. TV usage does not affect firm value by its own. However, together with Radio it can positively influence company value. The results of this research have both theoretical and managerial implications. From a theoretical perspective we contribute to clarify how media mix decisions can increase shareholder value and therefore to set a base to further research about the impact of advertising decisions (ad copy, message, strategy and so on) on firm value. For advertising executives and media planners these insights would allow extracting a higher return from their media plans, thus improving the efficiency of their decisions. First author funded by Fundacion Ramon Areces. Advertising dataset provided by Arce Media S.A.

4 - Advertising Spending's and Marketing Strategy

Atanas Nikolov, PhD Student, University of Georgia, 148B Brooks Hall, 310 Herty Dr, Athens, GA, 30602, United States of America, nikolov@uga.edu, Anindita Chakravarty, Sundar Bharadwaj, Guiyang Xiong

Advertising spending has been treated as a discretionary expense in accounting practice. Increases in advertising are considered a short-term cost driver for the firm and expensed in the year the spending occurs. In this study, we identify and empirically examine the key drivers of advertising that justify deviations from expected levels. Using brand-level panel data from 24 consecutive quarters, we employ a system GMM approach to test the impact of firm level marketing strategy (e.g., innovation), firm structure (e.g., extent of diversification, capital structure), and market reaction (e.g., earnings surprises, and abnormal stock returns). In addition, we explore the contingent role of CEO characteristics (e.g., compensation structure, level of narcissism or overconfidence). The findings suggest that advertising spending should not be treated as a cost center, but rather as a strategic tool in implementing the company's competitive positioning. We also add to the literature by providing empirical evidence on how marketing strategy responds to firm stock market performance.

■ TD16

16- St. George A

Channels: Game Theory I

Contributed Session

Chair: Suman Ann Thomas, Assistant Professor, Indian School of Business, AC2 Level 1, 2126, ISB Campus, Gachibowli, Hyderabad, 500032, India, sumanann@gmail.com

1 - How Brand Image and Product Characteristics Can Govern Firms' OEM and Entry Decisions

Fabio Caldieraro, Assistant Professor of Marketing, University of Washington, Paccar Hall, Box 353226, 4295 E. Stevens Way NE, Room 426, Seattle, WA, 98195, United States of America, cfabio@u.washington.edu

This paper shows that differences in brand image and product quality (horizontal and vertical differentiation) can govern the market-entry decisions of firms facing a market already served by an incumbent. The entrant might sell under its own brand, become a supplier to the incumbent (called an OEM arrangement), or both. Findings reveal that when firms are vertically but not horizontally differentiated, the entrant cannot profit from entering the market on its own, but firms can profit from OEM arrangements. When firms are both vertically and horizontally differentiated, the entrant profits by simultaneously entering the market and establishing an OEM arrangement with the incumbent. This is an interesting outcome because in competitive scenarios in which firms compete for consumers, the entrant will effectively sell its own product to the competitor. Furthermore, in those competitive scenarios, both buyer and seller increase profits by agreeing on a high wholesale price. When firms have the capability of producing all possible qualities of the products on their own, OEM relationships between firms can still happen in equilibrium. In this case, the most interesting result is the fact that, under certain conditions, firms may select to produce goods of different qualities and become suppliers to each other, despite the fact that they will end up selling the same product qualities to consumers. The reason for this outcome is that this dual buyer-seller arrangement causes a strategic effect that reduces the firms' aggressiveness when competing for consumers.

2 - How Warranty Influence the Pricing Strategy: Monopoly Manufacturer vs. Multiple Retailers

Dalu Fang, Hong Kong Polytechnic University, M801, Dept. Management and Marketing, Hung Hom, Kowloon, Hong Kong - PRC, Dalu.Fang@connect.polyu.hk, Xubing Zhang

Warranties ensure consumers against potential risk of product failure. In this paper, we examine the role of warranty in a distribution channel where a manufacturer offers a warranty that is bundled with a product and two competing retailers determine whether to offer an optional extended warranty to price discriminate consumers who are heterogeneous in risk aversion. We show that both symmetric offering of extended warranty (i.e., both or no retailers offer it) and asymmetric offering of extended warranty (i.e., only one retailer offers it) can rise in equilibrium. Implications of retailers' warranty decisions for the manufacturer's wholesale contract, channel performance, and consumer welfare are discussed.

3 - The Equilibrium Channel and Advertising Strategies for Duopolistic Retailers

Shan-Yu Chou, National Taiwan University, No.1, Sec. 4, Roosevelt Road, Taipei, Taiwan - ROC, chousy@management.ntu.edu.tw

The purpose of this research is two-fold. First, it attempts to characterize the equilibrium channel and advertising strategies for duopolistic retailers in a wide class of marketing environments. Second, it intends to examine how in such an environment the retailers' choices of channel and advertising strategies may influence their price competition in the online and the physical markets. We obtain the following results. (i) In a wide class of marketing environments, a cross-advertising equilibrium exists, in which the duopolistic retailers mitigate competition by coordinating their choices of channel and advertising strategies, thereby removing advertising inefficiencies and improving the retailers' profits. In equilibrium, some offline shoppers obtain information about the online market at one retailer's physical outlet and then trade online, some online shoppers obtain information about the physical market at the other retailer's online outlet and then trade offline. (ii) In such a marketing environment, when advertising is sufficiently costly, whether to adopt a dual-channel strategy becomes strategic complements from the duopolistic retailers' perspective; in equilibrium, either both retailers give up online outlets, or they both adopt online outlets. (iii) In such a marketing environment, the online price dispersion between retailers is positively related to the retailers' advertising spending, and the online price dispersion attains its maximum when both retailers have adopted a dual-channel strategy.

4 - Sachet: Use of Size as a Retail Competitive Tool

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

In this paper, we look at how size preferences of consumers are being leveraged by different types of retail outlets to make their stocking and pricing decisions. It is seen that small mom and pop stores /Provision stores usually stock more of small sized packages/sachets than large sized packages. In a market where they are competing with large sized supermarkets, albeit on a much smaller scale, this stocking and subsequent pricing decision decides the profitability of the firm. In this project, we try to analytically model this competition between the two types of stores when the customers have heterogeneous preferences w.r.t. product sizes. We include size preferences as well as store preferences into the model to characterize the various markets and consumer behavior.

■ TD17

17- Essex North East

Consumer Promotion Response

Contributed Session

Chair: Nathan Fong, Temple University, Alter Hall 517, 1801 Liacouras Walk, Philadelphia, PA, 19122, United States of America, nmfong@temple.edu

1 - The Deal is On: Understanding and Managing Deal-of-the-day Promotions

Maik Eisenbeiss, Assistant Professor, University of Cologne, Albertus-Magnus-Platz 1, Cologne, Germany, eisenbeiss@wiso.uni-koeln.de, Robert Wilken, Bernd Skiera, Markus Cornelissen

Deal-of-the-day (DoD) promotions have become extremely popular in recent years. They feature products or services with a substantial price reduction for 24 hours while stocks last. Groupon, the prime example for DoD promotions, recently went public for a market value of $12.65 billion. However, are DoD promotions really that effective or are they just another marketing fad? Three questions are of key managerial importance: (1) Are DoD promotions generally feasible? (2) Which products or services should be promoted as DoD? (3) Which discount levels should be chosen? We empirically tackle these questions in a series of three studies: two experiments and one field study. Experiment 1 (N=374) underlines the general feasibility of the DoD format by revealing higher

willingness to buy for well-known retailers, compared with simple price promotions of the same discount level. Smaller, relatively unknown online retailers benefit from DoD only in the presence of favorable user comments. Experiment 2 (N=800) generalizes this result to more categories. More importantly, it shows that both the effect of the DoD format itself and the leverage effect of the discount level on promotional effectiveness strongly varies across products that differ in their utilitarian and hedonic nature. The field study cross-validates these results by using transaction data from Groupon (N=125,000 deals in several countries) across 10 categories. We additionally identify category-specific threshold and saturation effects of discount level on sales. Given the variety of products and services that are offered as DoD, with discount levels ranging between 30% and 70%, these results help managers to decide on an optimal discount for a DoD promotion.

2 - State Dependence in Frequency Reward Programs: A Dynamic Structural Examination

Huseyin Karaca, Northwestern University, 2001 Sheridan Rd, Evanston, IL, 60208, United States of America, h-karaca@kellogg.northwestern.edu, Yuxin Chen, Lakshman Krishnamurthi

We study consumer choice behavior in a frequency reward program. The presence of the reward program and habit persistence in consumer choices create certain forms of state dependence that make consumers repeat-purchase. We disentangle two specific forms of state dependence that affect consumer choices, a firm "induced state" dependence and consumers' "intrinsic state" dependence. Induced state dependence is specific to reward program settings and is induced on consumers by the reward program. This type of state dependence creates an incentive for repeat-purchase which is based on the economic benefits associated with rewards. Intrinsic state dependence is common to most choice settings and occurs due to habit-forming effects of past consumption on current choices. This type of state dependence represents a psychological form of persistence in consumer choices. We develop a comprehensive dynamic structural model of purchase behavior that incorporates response to reward, state dependence, heterogeneity and forward-looking behavior. We apply the model to a unique panel data set that includes consumer purchases in a buy-ten-get-one type of reward program administered by a U.S. based chain of tea cafes. We find that all the customers are sensitive to intrinsic state dependence with a great deal of heterogeneity in the response levels, whereas only the moderately frequent customers are sensitive to induced state dependence and their sensitivity decreases as they get more habituated. Moreover, even though on a periodical basis, i.e. after the cash in of rewards, customers are released from the induced state dependence associated with the reward program, and hence are more likely to choose alternative options, the intrinsic state dependence mitigates such behavior.

3 - Loyalty Effects of Multi-Item Promotions: What Happens to Brand Choice After the Promotion?

Carmen Horn, University of Hamburg, Institute for Marketing and Media, Welckerstr. 8, Hamburg, 20354, Germany, carmen.horn@wiso.uni-hamburg.de, Karen Gedenk, Michael Knaf, Sonja Spürkmann, Bram Foubert

Previous research has shown that price promotions often hurt brand loyalty, for example by decreasing reference prices, such that the repurchase rate after an on-deal purchase tends to be lower than after an off-deal purchase. However, these studies focus on temporary price reductions (TPRs), and it is not clear how other types of price promotions affect brand loyalty. We are the first to study the impact of multi-item-promotions (MIPs) on brand loyalty and compare it to the effect of TPRs. In a MIP consumers get a discount if they buy a certain number of units of the promoted product. Managers often expect that MIPs are less harmful for brand loyalty than TPRs because MIPs typically do not display the price per unit (e.g., "buy three for X") and are thus less likely to decrease reference prices. On the other hand, MIPs may hurt brand loyalty more than TPRs, because the typically higher nominal discount and the purchase quantity requirement make MIPs more salient, such that consumers are more likely to expect a promotion at the next purchase occasion and to question product quality. We first conduct a lab experiment in which consumers make repeated purchase decisions in four product categories, and we elicit their reference prices before and after promotion. We find that stated reference prices decrease after TPRs, but not after MIPs. Yet, a brand choice model reveals that both types of promotion decrease repurchase rates to a similar degree, suggesting that MIPs trigger negative loyalty effects due to their high salience. We validate the results from our experiment with scanner panel data from the snack chips category. Our research highlights the different processes by which price promotions affect brand loyalty, and yields important implications for managers.

4 - Targeted Marketing and Customer Search

Nathan Fong, Temple University, Alter Hall 517, 1801 Liacouras Walk, Philadelphia, PA, 19122, United States of America, nmfong@temple.edu

It has become common practice for retailers to personalize direct marketing offers based on customer transaction histories. Targeted email offers featuring products similar to a customer's previous purchases generate higher response rates, but also have the potential to affect customer search behavior. A closely matched offer may encourage a customer to start the search process, leading to increased search activity. Alternatively, providing customers with closely matched offers may weaken their incentives to search beyond the targeted items. In a field experiment using email offers sent by an online wine retailer, targeted offers result in reduced search activity on the retailer's website. In a second study, transaction data from an online ticket exchange shows that, after receiving targeted offers, customers are less likely to broaden their purchasing to new genres. These findings indicate that targeted offers carry a hidden cost: a decrease in customer exploration and discovery.

Friday, 8:30am - 10:00am

■ FA01

01- Essex Ballroom South

Adoption & Diffusions in Social Networks

Cluster: Internet and Interactive Marketing

Invited Session

Chair: Timothy Richards, Professor, Arizona State University, 7271 E. Sonoran Arroyo Mall, San Tan 230B, Mesa, AZ, 85212, United States of America, trichards@asu.edu

1 - Enhancing Brand Information Diffusion in Social Network Services: Challenging the Bandwidth-diversity

Janghyuk Lee, Associate Professor of Marketing, Korea University, Business School, An-am, Seong-buk, LG-Posco #615, Seoul, 136-701, Korea, Republic of, janglee@korea.ac.kr, Young-Kyu Kim, Seokchul Baek, Sanghyun Jeon

In this study on the pattern of information diffusion on Twitter with its transaction data generated by 165 million users, we follow the tradition by investigating the role of influential people, focusing on their positions in social networks, but differentiate from previous research by having a specific focus on adopters – connecting users in Twitter – whose role resembles that of market critics. We find preliminarily a strong correlation of 0.636 between brand including tweet conversation and brand value among 12 global top electronic brands.Based on sociological theories, we address the question of which network characteristics of connecting users provide the influence advantage. Consistent with status theory, we found that connecting users who have relatively more followers than those whom they follow (friends) are likely to increase information traffic as well as provide unique access to more users. However, unlike conventional expectations, we could not find any evidence that connecting users whose network is characterized by diverse disconnected alters are more likely to be influential. We argue that a bandwidth-diversity trade-off drives our findings, implying that large volume of quality information circulated in a closed network, rather than diverse contacts with scant information exchange, can drive the growth of a customer community.

2 - Diffusion on Social Networks: A Multi-relational Perspective

Xi Chen, Hong Kong University of Science and Technology, Clear Water Bay, Kowloon, Hong Kong, Hong Kong - PRC, chenxinh@ust.hk, Ralf van der Lans

The structure of social networks is an important driver of the spread of information and product diffusion. However, academic research has reached divergent conclusions about the specific effects of social contagion and optimal seeding strategies. A possible explanation for these contradicting findings is that previous research assumes all relationships within a network to be equal. In practice, consumers share different information depending on the type of relationship. Assuming equal relationships, therefore, not only neglects the question of whether a specific connection between consumers is relevant, it also leads to biased estimation results caused by misspecification of the adjacency matrix. In this research, based on recent developments in the literature on weighted networks, we propose a new Bayesian methodology that takes into account the influence of different types of relationships on product diffusion. Instead of using an a priori specified adjacency matrix, our methodology infers the relative importance of different relations from observed adoption behavior or diffusion pattern and derives the adjacency matrix based on these estimates. Application of our methodology to the diffusion of products on two different datasets shows the importance of quantifying relationships within social networks. Compared to traditional approaches, our methodology leads to substantially different conclusions about the effects of social contagion on product diffusion. Furthermore, it also recommends a different selection of influential customers important for seeding strategies.

3 - Impact of Social and Spatial Proximity on the Adoption Timing of a Telecommunication Service

Jannik Meyners, Kuehne Logistics University, Brooktorkai 20, Hamburg, 20457, Germany, jannik.meyners@the-klu.org, Christian Barrot, Jan U. Becker

In times of diminishing advertising efficiency, customers increasingly seek trustworthy information from their peers instead of relying on firm-provided messages. Consequently, interpersonal communication has become crucial for the success or failure of products, in particular services. Thus, marketing managers and scholars need deeper insights into the underlying processes of social influence and how it impacts adoption behavior. In our study, we empirically examine the impact of social and spatial proximity on adoption timing by using actual data from a mobile phone provider. The comprehensive data allow us to estimate the relative influence of socially adjacent adopters (e.g., tie strength, family, relative exposure) compared to spatial neighborhood effects as well as their mutual interactions. Furthermore, we are able to control for the consumers' innovativeness (e.g., age, gender, network position) and effects of advertising. Our initial results indicate that the role of spatial proximity lags behind the importance of social proximity. Moreover, consumers' personal attributes considerably codetermine whether a customer adopts the service early or rather late. Further analyses reconfirm the importance of social proximity to prior adopters by underlining the special influence of family members on adoption behavior. In summary, our findings emphasize the importance of considering jointly different drivers of adoption in order to statistically evaluate their relative strength on consumers' purchase decisions.

4 - Social Networks and New Product Choice

Timothy Richards, Professor, Arizona State University, 7271 E. Sonoran Arroyo Mall, San Tan 230B, Mesa, AZ, 85212, United States of America, trichards@asu.edu, Stephen Hamilton

Influential individuals in a social network environment are important in shaping preferences for new products. In this study, we adopt an incentive compatible choice-based conjoint analysis approach to generate data on the introduction of a new ice cream product. We use spatial econometric methods to determine how individuals are likely to change their preferences when exposed to the choices of other members in their social network. We find some evidence that agents look to others for guidance in their preference for subjective or taste-specific parameters, but rely on own preferences for objectively measured attributes such as price. We also use spatial methods to determine which network-member is the most influential. We find that that the most connected member is not necessarily the most influential, and that influence can be determined econometrically.

■ FA02

02- Essex North Center

Online Customer Behavior - I

Cluster: Internet and Interactive Marketing

Invited Session

Chair: Manish Tripathi, Emory University, 1300 Clifton Rd, Atlanta, GA, 30322, United States of America, manish_tripathi@bus.emory.edu

1 - Print vs. Digital: Cannibalization Effects in the Trade Book Market

Edlira Shehu, Assistant Professor, Universität Hamburg, Welckerstrasse 8, Hamburg, 20354, Germany, edlira.shehu@uni-hamburg.de, Tim Prostka, Michel Clement

The recent market introduction of e-books is leading to high dynamics in the physical book (p-books) market. Leisure products have been found to have higher growth rates soon after market introduction (Golder & Tellis, 2004). Hence, cannibalization effects should be highly present even in these early stages of product diffusion. Due to the growing demand for e-books, publishing houses currently fear such cannibalization effects between p-books and e-books. We investigate whether the market introduction of e-books leads to less demand for p-books in a very early stage of the product life cycle. Psychographic factors, e.g., innovativeness or involvement, are shown to be key drivers of adoption behavior. Being in an early adoption stage, e-book buyers are presumably more innovative or involved to reading than non-buyers. To capture these constructs we base our analyses on data from a large and representative survey (N=1,474) of German readers. In order to control for potential biases we apply propensity score matching methods between early adopters and non-adopters. Interestingly, after matching both groups we find no evidence for cannibalization effects between physical and digital books. Obviously in this early adoption stage e-books are not used as substitutes for p-books but rather used in different situations than the latter and therefore lead to market extension effects and not to cannibalization effects.

2 - Impact of Online Exposures: Influencing Online Shopper's Intent

Sudipt Roy, Assistant Professor of Marketing, Indian School of Business, Gachibowli, Hyderabad, AP, 500032, India, sudipt_roy@isb.edu, Pulak Ghosh, Purushottam Papatla

Online retailers face with two major challenges: only about 3% of visitors to get converted into customers, and how to choose from several options through which they can promote their stores and products to prospective customers. Some questions of interest for most retailers today, therefore, are - what are the best options for online advertising, what are the effects of different options on the conversion of a visitor? These are the questions that we investigate in our research using a dataset that tracks visitors to retail sites - who are not converted on a visit. Data includes details regarding their exposure to advertising by the retailer after they leave the site. The tracking is continued for, up to, a year and for over 30 different types of online advertising options. We assume that the intentions of a visitor could include browsing through the site, getting to know about its products, making a purchase, or any other. We take these as state variables and assume that visitors can switch between these states as they are exposed to various advertisements. Empirically, our model involves relating the time to purchase (or, non-purchase) by a visitor to the different types of exposures and the time between exposures. One challenge that we face in our analysis is that the proportion of visitors who are eventually converted into buyers is quite small. We therefore use a Bayesian cure fraction model, with a novel shrinkage prior, for our investigation. We also take a Bayesian model averaging approach to identify the combination of exposures that maximize the predictive performance of the model and, hence, provide insights regarding the optimal combination of advertising formats. We discuss the theoretical, managerial, and methodological implications of our research.

3 - Raising Rival's Cost: Competitive Bidding Strategies in Search Advertising Auctions

Woochoel Shin, Assistant Professor, University of Florida, P.O. Box 117155, Gainesville, FL, 32611, United States of America, wshin@ufl.edu

A unique feature of keyword search advertising is that it uses an auction in allocating its slots to advertisers who are willing to buy a slot. In this auction, the search engine uses the generalized second-price auction rule, where the payment of the winners is determined by the bid that the next slot winner has submitted. This feature leads one to think that in keyword search auctions, advertisers may intentionally increase their own bid amount and thus, disadvantage their competitors in the slot above them. While this reasoning has been supported by some anecdotal observations, there has not been theoretical research to uncover when and why we observe this type of behavior. In this paper, we attempt to understand the incentive for this competitive bidding strategy of advertisers in search advertising auctions. Further, we also examine the implications of this bidding strategy on the equilibrium outcomes.

4 - Completing the Customer Generated Content Loop: Linking Customer Complaint Data to CGM

Manish Tripathi, Emory University, 1300 Clifton Rd, Atlanta, GA, 30322, United States of America, manish_tripathi@bus.emory.edu, Douglas Bowman

In this study, the authors build on previous work which modeled the relationship between online consumer content, brand equity surveys, and brand sales. In particular, the authors seek to identify the relationship between traditional customer complaint data and online consumer generated content, while accounting for brand generated activity. The authors combine data from multiple sources over a twenty-four month period. Various sources provide aggregate-level brand sales, price, product features and innovations, brand-generated effort and media content, and variables that describe consumer-generated communications. A novel data set with codified consumer complaint content (phone, email, & letters) is used to complete the loop of consumer-generated content. Vector Autoregressive (VAR) modeling techniques are used to examine the relationships between the different streams of data.

■ FA03

03- Essex North West

Online Pricing & Promotions

Cluster: Internet and Interactive Marketing

Invited Session

Chair: Charles Ingene, University of Mississippi, Holman Hall, University, MS, 38655, United States of America, cingene@bus.olemiss.edu

1 - An Analysis of Optimal Discounts for Coupon Deals

Jochen Reiner, Goethe University Frankfurt, Grueneburgplatz 1, Frankfurt am Main, 60323, Germany, jreiner@wiwi.uni-frankfurt.de, Bernd Skiera, Martin Natter

Coupon deals such as offered by Groupon have emerged as a popular marketing instrument for merchants. Coupon deals are localized around geographical areas (e.g., cities) in which regional merchants offer independent coupon deals. The coupon deals are typically offered as daily deals and can therefore only be bought in a short time period (most often one day). Coupon deals are attractive for consumers due to the steep discounts. However, it remains unclear whether coupon deals are profitable for the merchants. Therefore, this study develops a coupon-profit model that calculates (a) the short- and long-term profit per coupon deal and (b) the branding value of a coupon deal. We apply the model for 30 merchants who offered a coupon deal on Groupon. We further use more than 25,000 coupon deals from more than 40 cities in a major European country between August 2010 and July 2011 to estimate the relationship between the number of coupons sold and the discount level. Knowledge of the profit per coupon and the number of coupons sold then allows to determine the optimal discount level. We find that coupon deals can represent a profitable marketing instrument that specifically generates profit in the long-term. However, they are likely to realize a negative short-term profit. Accounting for the regular price, the competition within the categories, the categories and the cities we find an inelastic reaction for the discount level in the short-run but an elastic reaction in the long run. Finally, we show that only 4 out of 30 merchants choose an optimal discount (+/- 5%).

2 - An Empirical Analysis of Digital Music Bundling Strategies

Yan Huang, Carnegie Mellon University, 5000 Forbes Avenue, Pittsburgh, PA, 15213, United States of America, yanhuang@andrew.cmu.edu, Michael Smith, Brett Danaher, Rahul Telang

Digital markets have made pricing a more complex problem for record labels by introducing agency pricing (where labels set their own prices) and unbundling single song sales from album sales. However, in spite of the increased importance of single and album pricing, there have been almost no empirical studies of this phenomenon. In this paper, we use data from a unique event where record labels were allowed to increase prices from $0.99 to $1.29 on the iTunes music store. We analyze the impact of this price change by developing a structural model of the pricing problem in digital music markets where both single songs and albums are available to consumers; and then applying this model to a rich dataset obtained from a major record label. We take advantage of a quasi-random price experiment conducted by the label to identify consumers' price sensitivity to album and single price changes, and then recover the average value distribution of songs in a typical album. We then use the estimated parameters to simulate the substitution pattern between singles and albums. Our simulations show that tiered pricing significantly increases revenue for record companies and consumer surplus relative to the uniform pricing policies traditionally preferred by digital marketplaces like iTunes. Our simulation of the "album only policy" shows that unbundling policy, even under current pricing strategy, outperforms the 'album only policy. In addition, our simulations provide detailed pricing guidance for labels seeking to optimize the prices of songs and albums for titles of different genres, with different popularities and at different points in their lifecycle.

3 - The Influence of Social Couponing on the Merchant's Promotion Decisions

Gang Wang, University of Connecticut, 2100 Hillside Rd, Unit 1041, Storrs, CT, 06269, United States of America, gang.wang@business.uconn.edu

Social commerce space has been a hot ticket since the huge success of recent daily-deal websites, such as Groupon.com and Livingsocial.com, etc (McKendrick 2011). In this paper, we examine a special promotion strategy, social couponing, under which social media helps spread the deal and merchant-related information. First, we compare social couponing with two classic marketing mechanisms: traditional couponing and advertising. Traditional couponing acts as a price discrimination tool and attracts deal hunters (price sensitive customers). And advertising is usually used to build the brand name and target the price insensitive customers. However, social couponing, in the presence of social media, deal-hunters are induced by high discount and work as 'sales agents to spread the information to price insensitive customers. Second, we formally model the information-spreading effect through social media and examine whether and when social couponing is profitable for the merchant. We show that social couponing is profitable for a merchant when either its marginal cost is sufficient low, or social interaction is very efficient. We also show how the merchant make the optimal promotion decisions in terms of prices and promotion length. We find the merchant may offer a huge discount on cheap products or services and lose some profits from deal-hunters, but it can profit more from price-insensitive customers' expenses on more expensive products or services. Our results are consistent with some empirical observations.

4 - Are Retail Stores Dinosaurs?

Charles Ingene, University of Mississippi, Holman Hall, University, MS, 38655, United States of America, cingene@bus.olemiss.edu, Amiya Basu

Retail stores are periodically predicted to be headed for extinction, to be replaced by online merchants. Such forecasts ignore a central facet of retailing: products must be transported from points of purchase to places of utilization. But who bears the transport burden? Stores may sell to customers who carry their purchases home. Retailers may augment store offerings with online catalogs, giving consumers the option of buying in store and carrying merchandise themselves, or placing an order and taking delivery. Retailers without stores must deliver whatever they sell. Three spatial-pricing plans model these possibilities: Cash-and-Carry, Menu, and Uniform. Previous research using these plans has (unrealistically) assumed equal costs of carrying by customers or delivery by retailers a single market segment, and functional form for demand. We extend the literature by modeling carrying costs that differ from delivery costs, market segments with unequal carrying costs, and three demand curves that are widely used empirically. From this original basis, we derive a retailer's optimal spatial-pricing plan. We find that, over a wide range of parametric values, the optimal plan is either Cash-and-Carry or the Menu. We conclude that, within the context of our model, online merchants can eliminate storefront retailing only if consumers' carrying costs are much greater than retailers' delivery costs. This may hold for digital purchases – software, music, news, and perhaps books; but until the Star Trek replicator becomes reality, retail stores will not become dinosaurs.

■ FA04

04- Courier

Consumer Behavior II

Contributed Session

Chair: Seshan Ramaswami, Associate Professor of Marketing Education, Singapore Management University, 50 Stamford Road 0501, Singapore, Singapore, rama@smu.edu.sg

1 - Which Paradigm to Use for Extremeness Aversion Research? Meta-analytical and Experimental Evidence

Nico Neumann, University of New South Wales, 6/9 Hereward St, Maroubra, NS, 2035, Australia, n.neumann@unsw.edu.au, Ashish Sinha, Ulf Bückenholt

Extremeness aversion (Simonson and Tversky 1992) comprises the phenomena of the polarization and compromise effects. The compromise effect has been referred to as one of the most robust behavioral phenomena in marketing and has gained the attention of researchers due to its many practical implications, such as for product introduction, assortment planning, and positioning strategies. In this work, we investigate different research paradigms that have been proposed in the area of extremeness aversion. For this purpose, we test various moderators (e.g., research design related variables) using a multivariate meta-analysis as well as different logit models for primary experimental data. Based on our meta-analytical and experimental evidence, we demonstrate the benefits of a multivariate approach and discuss the consequences for the extremeness aversion construct: we show that extremeness aversion studies need to report and use several effect measures to fully understand the impact of moderating variables. Overall, our findings reveal that extremeness aversion appears to be a complex phenomenon that can be characterized by local and global effect components that might not always be linked with each other. We conclude with a discussion of the theoretical (e.g, global extremeness aversion can explain polarization at the local level) and practical implications (methodological recommendations) for future research.

2 - A Dual Process Theory of Decision Anomalies

Mark Schneider, University of Connecticut, 2100 Hillside Road, Storrs, CT, United States of America, mark.schneider@uconn.edu, Robin Coulter

This paper proposes a simple mechanism for determining whether valuation by feeling or calculation will be dominant in a decision task, and experimentally tests a key component of this mechanism. The paper further proposes a principle that guides the behavior of each valuation mode. Given the hypothesis that feeling is dominant in the decision process when affect is informative, while calculation is dominant when affect is uninformative, along with a principle governing the behavioral tendencies of each valuation mechanism, this paper develops a more parsimonious account of some classic choice anomalies. In particular, it is shown that a variety of seemingly disparate choice anomalies can arise from a common mechanism – a shift in the relative dominance of valuation by feeling or calculation, which itself arises due to a change from categorically different stimuli to incrementally different stimuli in the decision task.

3 - Consumer Search: An Empirical Foundation

William Allender, Arizona State University, 1926 E. Yale Drive, Tempe, AZ, 85283, United States of America, William.Allender@asu.edu, Timothy Richards

A comprehensive set of consumer search experiments are presented. These experiments contribute to the literature in a number of ways. Specifically, an active debate in the consumer search literature surrounds the relationship of consumer search intensity and price changes. Past theoretical and empirical research has found that search intensifies with price increases (Yuan and Han 2011, among others), while others have found the opposite to hold (Tappata 2009). Through several experiments we resolve this debate. What's more, by using several different measures of consumer search (number of products in the market, price dispersion, time spent searching, etc.) we provide empirical evidence for their validity and use in empirical ScanTrack studies. Finally our study includes several mediating factors that have been proposed to affect consumer search such as risk aversion, and sequential (or ordered) search (Moorthy Ratchford and Talukdar 1997 and Arbatskaya 2007). The results of our consumer search experiment not only resolve several debates that currently exist in the consumer search literature, but also provide a valuable foundation for future theoretical and empirical work in the field of economics and marketing.

4 - Market Disruptions and Brand-switching Behavior in Emerging Markets

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Customer retention and developing customer loyalty using various schemes are some of the key objectives of businesses. Marketers try to attract and retain customers by building brand trust and ensuring that they satisfy their consumers. Customer retention becomes easier in situations where consumers have to incur switching costs to change brands - for example, in switching cellular service providers in the United States where consumers are typically locked in a contract and would have to pay a penalty for termination. The key objective of this research is to study what happens to the intention to switch and customer-brand relationships when switching costs become minimal due to market disruptions and/or changes in regulatory framework. Are carryover effects of brand trust, loyalty, and satisfaction strong enough to ensure customer retention, or do the dynamics of the customer-brand relationship itself undergo a complete upheaval in such a context? This is the main focus of this work. Additionally we study whether cultural aspects like interdependent self-construal and collectivism play a role in brand switching behavior. To investigate this, we carried out a two-time dipstick study in three metros of India, wherein data was collected at two points of time- first, at three months before a specific market disruption and the second after six months. We use a Bayesian approach to classify subjects based on their latent switching propensities. Preliminary results suggest a strong impact of social network, satisfaction, and loyalty with service providers on intention to switch. We also segment consumers on various dimensions including demographic and other individual level variables, and provide recommendations on how marketers can sustain brand loyalty in an emerging market.

5 - The Attributes of Attributes

Seshan Ramaswami, Associate Professor of Marketing Education, Singapore Management University, 50 Stamford Road 0501, Singapore, Singapore, rama@smu.edu.sg

Most theories of product evaluation and choice are based on the idea that products are bundles of attributes. Consumer beliefs about, preferences for, weights or constraints on, and cut-offs for these attributes ultimately combine to determine consumer choice. However, not all attributes of products are scalable onto a common utility scale; also, different types of attributes may play different roles in the choice process. In this conceptual paper, we describe a typology of attributes and summarize the literature on how various properties of attributes affect the impact of these attributes on judgment and choice. We conclude with a discussion of methodological implications for predicting evaluation and choice based on attribute perceptions.

■ FA05

05- Essex Center

Uncovering Managerial Insights From Video Data

Cluster: Special Invited Sessions

Invited Session

Chair: Min Ding, Professor, Pennsylvania State University, Smeal College of Business, 408 Business Building, University Park, PA, 16802, United States of America, minding@psu.edu

1 - Modeling the Dynamic Influence of Group Interaction and the Store Environment on Shopper Preferences and Purchase Behavior

Xiaoling Zhang, Nanyang Technological University, Singapore, IN, Singapore, xlzhang@ntu.edu.sg, Shibo Li, Raymond Burke

Consumer shopping is a dynamic process that is influenced by a variety of contextual and environmental factors, including store layout, product displays and promotions, personal selling, and store crowding. In many retail settings, shoppers are accompanied by others who can exert a powerful influence on the shopping process and purchase outcomes. This paper models the impact of these factors on shopper behavior using a Hierarchical Bayes framework and a video tracking and point-of-sale transaction database from a specialty apparel store. The shopper's likelihood of buying a product in each department or "zone" of the store is modeled as a function of the shopper's path through the store, interactions with salespeople, crowding conditions, product touch, and trial. In addition, the shopper's interactions with members of his or her group can increase or decrease the likelihood of buying a product in a specific category. The paper predicts how shoppers' personal interactions dynamically influence their purchase tendencies for different group compositions.

2 - An Intelligent Video Ad System

Li Xiao, Pennsylvania State University, University Park, PA, United States of America, lux104@psu.edu, Min Ding

It is a new trend in retailing that many promotions are done through a video screen installed near/on the shelf. It will show a short video or static image promoting a certain product or event. After one ad is done, a new one will be shown. The sequence of these ads to be shown is pre-determined. This video ad system has an obvious advantage of playing multiple ads but using only one space. However, the performance of this video ad system can be potentially improved since a customer who does not like the first (or two or three) ads will unlikely stick around to watch the other ads. In this paper, we propose and test an intelligent video ad system to improve the performance of the current system. The intelligent video ad system tracks customer's facial expression and body movement when s/he is viewing an ad. When a customer views one ad, the system will (1) tracks the customer's engagement through facial expression and (2) tracks general areas of screen at a given time that customer is paying attention to. By comparing this focal location on the screen with the content of the ad at that time point, we can infer the specific aspects of the ad that this customer is paying attention. By analyzing these data in real time, the system will then search the ad database, and select and play a new ad next that is more likely to attract customer's attention and result in positive attitudinal and behavioral consequences. This intelligent video ad system will improve the

efficiency of promotions by targeting different customers with the ads they are interested in, and will likely increase the effect of ad, and eventually the sales of products, than the current system.

3 - Impact of Retailer Promotions on Store Traffic – A Video-based Technology

Shyda Valizade-Funder, University of Mainz, Dionysius Strasse 1B, Mainz, 55099, Germany, valizade@marketing-science.de, Kamel Jedidi, Oliver Heil

To attract traffic to their stores, retailers spend heavily on promotion and advertising. By understanding how to build traffic, retailers can assess the productivity of their advertising and promotional activities. The main objective of our research is to examine the relationship between daily traffic and out-of-store promotional activities for search goods. There are several features that distinguish our field study from previous research. First, to obtain a reliable measure of traffic, we use a video-based technology to count the actual number of people entering the store, as opposed to the commonly used sales transaction data in the retail literature. The video technology has the ability to distinguish between male and female traffic. This allows us to investigate the differential impact of the promotions by gender. In addition, our study focuses on a non-durable goods service context as opposed to a consumer packaged goods situation that dominates current retailing research. Finally, we consider a set of out-of-store promotion activities of the retailer as opposed to single media effects. Our results show that the depth of promotional activities had a positive and significant effect on female traffic but did not significantly affect male traffic. This is in contrast to print ads, which have a positive and significant effect on male store traffic but no effect on female shoppers. Also, our results show that – except for radioópromotional activities (print, outdoor, flyer) have a positive impact on traffic. We conclude the paper by discussing managerial implications for retailers and suggesting directions for future research.

4 - Fitting Room 2.0 – Real Time Garment Recommender

Shasha Lu, Fudan University, Shanghai, China, fdshashalu@gmail.com, Li Xiao, Min Ding

The total sales in clothing industry in the United States in 2010 is $214 billion, of which $159 billion comes from clothing stores (http://www.census.gov/retail/). Selling garments to customers, however, faces many challenges. One such challenge is that a customer, in general, will not evaluate all garments offered by a retailer before moving on to a different retailer. While a retailing chain usually maintains a large number of varieties at its warehouses, it only displays a much smaller set at a given store. Even with this smaller set in a store, a customer will not have time to go through them all. As a result, a customer might leave without purchasing anything when in fact the retailer has a desirable garment this customer will like. In this paper, we propose and test a method to remedy this problem, using video data of customers evaluating different pieces of garments after putting them on. We place a mirror with a video camera on top, outside the fitting rooms, to capture the cloths each customer tries and his/her facial expression and body language, as well as his/her decisions (whether he/she keeps that item). The video data will be analyzed to infer his/her preferences, taking into consideration of his/her physical features as well as other clothes he/she wears. Finally, our model will recommend a set of garments he/she should consider purchasing based on the inferred preferences. This intelligent fitting room technology will likely increase sales, increase cross selling, and decrease returns.

■ FA06

06- St. George B

Consumer Health & Marketing: The Impact of External Cues & Internal Motivations on Consumers' Food Choices

Cluster: Special Invited Sessions

Invited Session

Chair: Kusum Ailawadi, Tuck School, Dartmouth, Hanover, NH, United States of America, kusum.ailawadi@dartmouth.edu

1 - Changes in Healthy Food and Beverage Sales Following a 2-Stage Labeling and Choice Architecture Intervention at a Large Hospital Cafeteria

Jason Riis, Harvard Business School, Boston, MA, United States of America, jriis@hbs.edu, Lillian Sonnenberg, Susan J. Barraclough, Anne N. Thorndike

A major contributor to obesity is consumption of energy dense food purchased outside the home. Labeling menus with caloric information is a new federal policy to reduce obesity but will be effective only if consumers notice, understand, and act upon the information. Reading nutrition labels requires both high literacy and numeracy, and research has found black race and low income are associated with low literacy, numeracy, and performance on reading labels. Studies evaluating the effectiveness of calorie-labeling have had mixed results, and studies focusing on low-income and minority consumers have found no effect. In this study, we applied principles of behavioral economics to develop a two phased intervention at a large hospital cafeteria. The first phase involved labeling all foods according to a traffic light color code with healthy foods labeled green, unhealthy foods labeled red, and moderate foods labeled yellow. In the second phase of the study we made green (healthy) items more salient throughout the cafeteria. Across both phases of the 6 month study period, healthy purchasing increased significantly. The largest changes occurred among beverages where sales of red beverages decreased 25% and were offset by an increase in sales of yellow and green beverages. A separate analysis of loyalty card data for 4,642 hospital employees found that black and Latino employees and employees with the lowest education level had the least healthy eating patterns at baseline, but despite baseline differences, employees from all racial backgrounds and job types increased healthy eating patterns during the intervention.

2 - How Packaging Makes Us Fat: Volume Estimation Heuristics and Size Preferences

Pierre Chandon, Professor of Marketing, INSEAD, Boulevard de Constance, Fontainebleau, 77300, France, pierre.chandon@insead.edu, Nailya Ordabayeva

Given the current concerns about overconsumption, understanding consumer response to product supersizing and downsizing is an important issue for policy makers, consumer researchers, and marketers. Consumers could simply read the size information on the front of packages; yet surveys show that very few do it and that most rely on package size as a proxy for how much product it contains. In this research, we model how people intuitively estimate volume changes. Specifically, we develop six theory-based models of how people combine changes in height, width, and length to estimate volume change (multiplicative, additive, linear, contour, surface area, and diagonal) and examine how well they predict consumers' intuitive volume estimates for a variety of changes in package size and shape (supersizing, downsizing, and elongation). We find that people strongly underestimate product size changes, particularly when packages and portions change in three vs. two vs. just one spatial dimension (height, width, and length). We also find that these errors occur not because people miss that some dimensions are changing, but because they add instead of multiplying the changes in height, width, length. Drawing on these results, we show that marketers can manage perceptions of product supersizing and downsizing, can influence how much people use, how much they are willing to pay, and what size they prefer.

3 - Drivers of Regular Food Purchases and the Impact of a Change in Health Status: The Case of Diabetes Diagnosis

Kusum Ailawadi, Tuck School, Dartmouth, Hanover, NH, United States of America, kusum.ailawadi@dartmouth.edu, Dhruv Grewal, Yu Ma

We empirically examine how households' own abilities and internal and external barriers affect their food choices in normal circumstances and when there is a major change in a health status. Using a unique combination of households' longitudinal grocery purchase information and rich survey data on their health status, we identify "treatment" households with a new diagnosis of Type 2 diabetes and match them to a control group of households without a diagnosis. Thus, we can quantify food purchase response to diagnosis with a before-and-after-with-control-group analysis. We find that households make significant changes in their at-home food purchases in response to diagnosis. Some changes, such as reduction in purchases of sugar beverages and juice, are desirable; but others, such as increased purchases of processed meats, are not. Consistent with prior research showing that women engage in less risky behavior and more healthy behavior than men, we find that treatment households where the diagnosed patient is a woman make better changes in response to diagnosis. However, the impact of most individual abilities and barriers on food choice does not change significantly after diagnosis. Thus, these variables explain food choice in general but do not explain why some treatment households make better changes than others. The study's findings have important implications for marketers, consumer behavior researchers, and public health professionals.

4 - Unintended Nutrition Consequences: Firm Responses to the Nutrition Labeling and Education Act

Joel Huber, Duke University, Fuqua School of Business, Durham, NC, United States of America, jch8@mail.duke.edu, Christine Moorman, Rosellina Ferraro

This paper investigates how firms responded to standardized nutrition labels on food products required by the Nutrition Labeling and Education Act (NLEA). Using a longitudinal quasi-experimental design, we test our predictions using two large-scale samples that span thirty product categories. Results indicate that the NLEA reduced brand nutritional quality relative to a control group of products not regulated by the NLEA. At the same time, among those regulated products, brand taste increased. While this reduction in nutrition represents an unintended consequence of regulation, there were a set of category, firm, and brand conditions under which the NLEA produced a positive effect on brand nutritional quality. We find that firms were more likely to improve brand nutrition when firm risk or firm power is low. Greater risk occurs when the firm is introducing a new brand rather than changing an existing brand and weaker power in a category is reflected by lower market share in a category. Further, firms competing in low-health categories (e.g., potato chips) or small-portion categories (e.g., peanut butter) improved nutrition more than firms competing in high-health categories (e.g., bread) or large-portion categories (e.g., frozen dinner). Recommendations for firm strategy and the design of consumer information policy are examined in light of these surprising firm responses.

■ FA07

07- St. George C

Extant Research on Customer Management

Cluster: Special Invited Sessions

Invited Session

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

1 - The Effect of Continuously Rewarding Customers: A Study of Frequency Reward Programs Linked to the World Championship Soccer

Alec Minnema, University of Groningen, P.O. Box, NL, 900AV Groningen, Groningen, Netherlands, a.minnema@rug.nl, Tammo H.A. Bijmolt, Mariëlle C. Non

This research presents the first empirical study on the effectiveness of Frequency Reward Programs (FRPs) with continuous reinforcement schedules and collaboration with manufacturers (i.e. offering extra premiums at some products). We examine FRPs at five different supermarket chains using a market-wide household panel. The results show that the effectiveness of the examined FRPs on spending level is higher than in previous studies on FRP effectiveness. However, we demonstrate that the effect on spending level vanishes when the FRP ends. Furthermore, we find that the FRP has no significant effect on non-participating households. This study corroborates the negative moderation of Share of Wallet (SOW) on FRPs effectiveness, FRPs are most effective in increasing spending levels for households with a small SOW. A second significant positive moderator is the appreciation of the FRP. Moreover, the results indicate that participating in competing FRPs does not have a significant effect on FRPs effectiveness at the focal retailer. We find strong evidence for self-selection because participating households have higher visiting frequency and spending levels at the focal supermarket before the start of the FRP. Households who participate in competing FRPs visit the supermarket less frequent and spend a smaller amount at the supermarket in the period before the start of the FRP. Finally, we show that offering an extra premium with a product (i.e. supply funded premiums) positively affects the purchased amount of the sponsored products and this effect does not differ significantly between the examined product categories. As usual, we discuss theoretical and managerial implications and suggest directions for future research.

2 - Decomposing Long Term Returns From Retailer Customized Coupons: Retention, Category Incidence or Brand Switching

Rajkumar Venkatesan, Associate Professor, University of Virginia, 100 Darden Boulevard, Charlottesville, VA, 22903, venkatesanr@darden.virginia.edu, Paul Ferris, Dusan Curcic

We compare response to retailer sponsored coupons that are targeted and customized to the individual consumers' purchase histories. Response to customized coupons could differ from typical sales promotions for three reasons. First, brand switching is expected to account for a higher proportion of consumer responses to sales promotions that are available to all consumers. On the other hand, brand switching may not be a big factor for customized coupons because retailers are more likely to promote brands that consumers prefer. Second, sales promotions are considered a short term tactic with minimal long term effects. Anecdotal evidence suggests that retailers use customized coupons to improve customer loyalty in addition to short term sales lifts. Third, a substantial portion of the sales lift for customized coupons is provided by consumers who receive the customized coupon campaigns but do not redeem the coupons, i.e., the exposure effect. However, coupon redeemers are the major source of sales lift for non-customized coupons. Data for the study is obtained from a group of regional grocery chains that were part of a quasi-experiment. A hidden Markov model of category incidence and brand choice is used to decompose the long term effects of customized coupons on consumer retention, category incidence, and brand switching. The long term returns are contrasted between customized and non-customized coupons, and coupon redeemers and non-redeemers. Implications for retailers and brand managers are derived.

3 - Assessing Participation Loyalty in Online Communities

Liron Sivan, Tel Aiv University, Rishon Le Zion, Israel, lirons@gmail.com, Gal Oestriecher-Singer, Barak Libai

Participants in online communities are becoming an important asset for firms. On one hand, engaged users help firm to learn about the needs of the market and can help in the introduction of new products by generating ideas and spreading word of mouth. For social media site operators, participation drives revenues, for example via advertising income. Thus, the ability to predict participants' loyalty to the online community and the factors that affect it are essential to assess the health of the community and its business related value. In this study we demonstrate how probability models traditionally used for customer loyalty analysis can be successfully used to assess participation patterns, and thus the future value of online communities. We analyze data taken for multiple online forums, and explore the factors that affect the usefulness of this approach.

4 - Effects of Direct Mail Characteristics on Campaign Effectiveness

Kay Peters, University of Hamburg, Dept of Marketing and Media Management, Von-Melle-Park 5, Hamburg, 20146, Germany, kay.peters@uni-muenster.de, Sebastian Feld, Heiko Frenzen, Manfred Krafft, Peter C. Verhoef

Designing effective direct mail pieces is considered a key success factor in direct marketing. However, design recommendations are manifold and often conflicting. Published empirical research on this topic is still scarce, and extant studies have not been able to demonstrate generalizable findings. Compared with prior work, our study aims to provide more generalizable findings for the effects of direct mail design characteristics by analyzing 677 direct mail campaigns from non-profit organizations and financial service providers. We investigate the effects of (1) various envelope characteristics on opening behavior, and (2) characteristics of the envelope content on consumers' keeping of direct mail pieces. The study thus sheds light on a black-box that enables managers to design more effective mail pieces based on a large sample investigation. We show that visual design elements on the outer envelope – rather than sender-related details – are the predominant drivers of opening behavior. Factors such as letter length, provision of brand information in the letter, and personalization positively influence the keeping rate. Industry specific design characteristics drive the keeping rate but not the opening rate. We also observe that opening and keeping behavior are uncorrelated, implying that opening a direct mail piece is only a necessary condition for responding to the offer, but not per se a driver of direct mail response.

■ FA08

08- Adams

The Dynamic Effects of Strategic Responses to Market Incentives I

Cluster: Special Invited Sessions

Invited Session

Chair: Ahmed Khwaja, Yale University, New Haven, CT, United States of America, ahmed.khwaja@yale.edu

Co-Chair: K. Sudhir, Yale University, New Haven, CT, United States of America, k.sudhir@yale.edu

1 - Incentives from Employee Pay and Promotion System: Evidence from A Reform in A Large Japanese Auto Sales Firm

Tat Chan, Associate Professor, Washington University in St. Louis, Campus Box 1133, One Brookings Drive, Saint Louis, MO, United States of America, chan@wustl.edu, Hideo Owan, Tsuyoshi Tsuru

We study the economic consequences of a human resource system reform, using personnel and employee output data from one of Japan's largest auto sales chains from 1998 - 2004. The human resource system has three major components: a base wage, a performance-based commission, and a performance rating. To improve worker productivity, the firm introduced a drastic change in its employee pay and promotion schemes. Employee pay was changed from combining a base wage with nominal commissions to a high-powered commission scheme with a guaranteed wage. Wages were designed to increase over years depending on the performance rating. Furthermore, increasing employee promotion to the branch and sales manager level, largely based on the performance rating, was observed during the data period. Underperforming salespeople were also assigned to non-sales jobs with lower wages (lateral transfer). The reform produced heterogeneous productivity effects on workers. While in response to greater commission rates some incentive effects were observed, the reform overall has only brought a modest increase in productivity for young workers but not for senior workers. To study the economic consequences of the various components of the reform, we develop a dynamic model of workers' lifetime choice of sales effort, incorporating the non-linear pay scheme and the future opportunity of promotion and lateral transfer. The ultimate goal of this study is to investigate why the reform has only brought a slight improvement in the firm's sales, even though the economics literature has documented the relationship between worker effort and performance-related pay systems.

2 - Dynamic Choices under Uncertainty in the Presence of Moral Hazard: Estimating a Model of Health Care Decisions

Ahmed Khwaja, Yale University, New Haven, CT, United States of America, ahmed.khwaja@yale.edu

This paper develops and estimates a model of moral hazard in dynamic choices under uncertainty in the context of health care decisions. The mode is estimated using a unique longitudinal data set which contains individual level information about actual health related consumption choices. The model allows for repeated and sequential decisions by an individual regarding purchase of health insurance, medical treatment and health related activities. Health insurance generates moral hazard as consumers don't face the real price of medical care. Moreover, there is heterogeneity in moral hazard across individuals and within individuals over time. This leads to dynamic selection in to health outcomes, consumption of medical care and medical expenditures. Health is modeled as human capital which like a durable good can be accumulated through investment or depreciated by individual choices. Hence, the longevity of the consumer is

endogenous to choices in the long run. The health status of individuals is partially unobservable to the researcher and persistent over time. A simulation procedure based on non-parametric kernel smoothing is developed to account for such variables is estimating the model. The analysis provides insights that may be applicable in other contexts where there are dynamic decisions being made in the presence of contracts which may induce moral hazard in consumption, such as cell phone usage under 'unrestricted data and calling plans, "unlimited" online movie subscription accounts etc.

3 - What Killed the Blackberry? Demand Side Drivers of Mobile Phone Purchases

Vineet Kumar, Harvard Business School, One Soldiers Field Road, Boston, MA, United States of America, vkumar@hbs.edu, Timothy Derdenger

We examine sales of mobile phones in the US. The mobile phone industry is characterized by high levels of innovation, and is fiercely competitive. In Spring 2007, Apple introduced the iPhone, a path-breaking device that many commentators blamed for the decline in sales of RIM's Blackberry. We investigate how the introduction of a highly innovative product and the additional incentives introduced by software availability can influence consumer purchases of hardware devices. The model captures several key features of the platform setting, modeling both hardware purchases and the introduction of "app stores" that result in higher software availability. Dynamics are especially important in this setting, given the nature of hardware purchases, as well as the exclusive contracts that consumers commit to upon purchasing the phones, that affect their future options. We also investigate the factors that were most prominent in stealing demand from a market leading product and firm.

4 - A Dynamic Model of Subprime Mortgage Default: Estimation and Policy Implications

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The increase in defaults in the subprime mortgage market is widely held to be one of the causes behind the recent financial turmoil. Key issues of policy concern include identifying the main drivers behind the wave of defaults and predicting the effects of various policy instruments designed to mitigate default. To address these questions, we estimate a dynamic structural model of subprime borrowers' default behavior. We propose a simple and intuitive estimation method, and use our model estimates to simulate how borrowers' default behavior would change under various counterfactual scenarios. The counterfactual exercises allow us to quantify the importance of various factors, such as home price declines and loosened underwriting standards, in explaining the recent increase in subprime defaults. Furthermore, we use simulations to assess the effects of principal write-downs and other foreclosure mitigation policies on the behavior of various subsets of borrowers.

■ FA09

09- Helicon

Consumer Preference Elicitation: Insights and New Methods

Cluster: Special Invited Sessions

Invited Session

Chair: Lan Luo, Assistant Professor of Marketing, University of Southern California, Marshall School of Business, Los Angeles, CA, 90089, United States of America, lluo@marshall.usc.edu

1 - The Strategic Importance of Predictive Uncertainty in Conjoint Design

Matthew Selove, University of Southern California, Los Angeles, CA, United States of America, mselove@gmail.com, John Hauser

Even if firms have precise partworth estimates, predictive uncertainty (which arises due to randomness in customer behavior and attributes not included in the conjoint study) has strategic implications. Firms make strategic errors that reduce profits if they overestimate or underestimate predictive uncertainty. If firms use low-quality market research and thus overestimate uncertainty in prediction, they might forego strategic differentiation of product positions and earn less profit in equilibrium. Conversely, if firms evaluate predictive uncertainty with calibration data only, rather than external validation tests, they might underestimate uncertainty and choose differentiated positions that are not as profitable in equilibrium. We demonstrate these effects theoretically and empirically, with applications to simulated partworths and a real conjoint study on student apparel. In an apparel application, we find that high-design-quality and low-design-quality conjoint studies lead to different uncertainties, different heterogeneity estimates, and different strategic positions. Firms that rely on low-design-quality studies or ignore external-validity uncertainty make strategic errors and choose strategies that leave money on the table.

2 - Dynamic Experiments for Estimating Preferences: An Adaptive Method of Eliciting Time and Risk Parameters

Olivier Toubia, Columbia Business School, New York, NY, United States of America, ot2107@columbia.edu, Eric Johnson, Theodoros Evgeniou, Philippe Delquié

We present a method that dynamically designs elicitation questions for estimating risk and time preferences. Typically these parameters are elicited by presenting decision makers with a series of choices between alternatives, gambles or delayed payments. The method dynamically (i.e., adaptively) designs such choices to optimize the information provided by each choice, while leveraging the distribution of the parameters across decision makers (heterogeneity) and capturing response error. We explore the convergence and the validity of our approach using simulations. We then use an online experiment to compare our approach to a standard approach used in the literature that requires comparable task completion time. We assess predictive accuracy in an out-of-sample task and completion time for both methods. For risk preferences, our results indicate that the proposed method predicts subjects' willingness to pay for a set of out-of-sample gambles significantly more accurately, while taking respondents about the same time to complete. For time preferences, both methods predict out-of-sample preferences equally well while the proposed method takes significantly less completion time. For risk and for time preferences, average completion time for our approach is approximately three minutes. Finally, we briefly review three studies that used the proposed methodology with various populations, and discuss the potential benefits of the proposed methodology for research and practice.

3 - Voice Analysis for Incorporating Uncertainty in Consumer Responses

Hye-jin Kim, Pennsylvania State University, University Park, PA, United States of America, hxk262@psu.edu, Min Ding

Marketing research methods, such as conjoint analysis and customer satisfaction, usually collect consumer responses in text formats (choice, rating, ranking, etc.). The estimation, in turn, tend to focus on the response itself (which is one-dimensional) and often fail to recognize that the response sometimes may not be reflecting what a subject really thinks. This paper proposes the use of the human voice as an alternative data input format for incorporating uncertainty in consumer responses. While voice provides responses to surveys just as existing data input formats, researchers can potentially infer constructs such as uncertainty, excitement, and engagement which in turn can be used to supplement responses to obtain more accurate insights. Using voice also allows researchers to bear less cost and location restrictions than physiological or neurological methods (e.g., eye tracking or fMRI). While using the human voice for inferring constructs has been prevalent in other fields such as computer science, its use in marketing has been negligible. We use machine learning and pattern recognition techniques to infer uncertainty in voice responses and use this information to infer the distribution of possible range of responses from subjects. We conduct an empirical study to test the validity and feasibility of this method. The results and implications for marketers and academic researchers are discussed.

4 - Consumer Preference Elicitation of Complex Products using Support-vector-machine (SVM) Active Learning

Dongling Huang, Assistant Professor, Rensselaer Polytechnic Institute, 110 8th Street, Troy, NY, United States of America, huangd3@rpi.edu, Lan Luo

Estimating consumer preferences for complex products has always been an essential challenge to marketing academia and business practitioners. We propose an adaptive question design algorithm using support-vector-machine (SVM) active learning method. This approach starts with attaining a prior for each consumer via a configurator and employing simple decision heuristics. Conditional on these, we incorporate an active learning algorithm into a consider-then-choose method where a screening process takes place at the first stage and a compensatory choice process occurs at the second stage. In our approach, each subsequent question is designed adaptively to maximize information about each individual's product preferences. We illustrate the algorithm empirically in a web-based digital camera study. Despite the large number of possible product configurations, the algorithm runs with no noticeable delays between questions. We further demonstrate that the proposed method outperforms several existing methods in predicting validation choices. Lastly, we conduct synthetic data experiments to examine the scalability and performance of our algorithm under various problem sizes and varying levels of response errors. Results from simulation studies reveal that the proposed approach yields satisfactory performances in various settings. Overall, our findings suggest that the proposed approach is promising in effectively eliciting consumers' preferences for complex products.

■ FA10

10- St. George D

New Product Development

Contributed Session

Chair: Vish Krishnan, Professor, University of California, Rady School of Business, San Diego, CA, United States of America, vkrishnan@ucsd.edu

1 - Optimal Sampling Network for New Product Test Marketing

Inseong Song, Associate Professor, Seoul National University, 1 Gwanak-ro, Gwank-gu, Graduate School of Business, Seoul, Korea, Republic of, isong@snu.ac.kr, Hongsuk Yang

The development of new products is crucial for a business to maintain its competitive advantages, but the introduction of new products is risky. To avoid huge losses from launching unsuccessful products, marketers try to test the market potential of a new product in the early stages of the development process. Similarly, it is not uncommon for a multi-store retail chain to test the potential profitability of a new product in a few selected stores before it introduces the product to the entire chain. Since test marketing would involve huge costs, marketers need to find a better way to select markets for testing while keeping the number of test markets as low as possible. This study proposes a model to develop an optimal sampling network with which one can identify the optimal combination of markets for test marketing. Based on a simple demand model, an approach to find an optimal sampling network that would lead to a minimum variance of the estimate of the market size of a new product is developed. It is also demonstrated that the samples based on the proposed procedure produces a much more accurate estimate of the market size for a new product than randomly chosen samples do.

2 - How does Customer Participation Affect Task Performance? The Role of Relationship Multiplexity

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In business markets, customer firms increasingly outsource new product development (NPD) activities to external suppliers. Frequently, these customers participate in their outsourced NPD project. In many industries, the practice of customer participation is complicated by the existence of multiple types of ties in the relationship between supplier and customer: relationship multiplexity. We investigate the consequences of customer participation on the supplier's task performance, a key outcome in outsourced NPD projects. In particular, we examine the moderating effects of different types of relationship multiplexity on the relationship between customer participation and supplier task performance, as evaluated by the supplier itself and the outsourcing customer. We study three functional roles beyond the customer role: competitor, partner, and supplier. Drawing on role theory, we argue that the different behavioral expectations associated with the roles in a multiplex relationship cause role conflict, role synergy, or role ambiguity, respectively, which affects a supplier's task performance. Hypotheses are tested using project-level data on 140 NPD projects of a contract R&D organization in the aerospace industry. Results indicate that involving customers that act as partners in other projects increases task performance, but the effect holds only for partnerships that were self-initiated. Participation of customers that act as suppliers decreases task performance. Counter to expectations, participation of customers that act as competitors lowers supplier task performance as evaluated by the customer, whereas it increases the task performance as evaluated by the supplier itself, suggesting that the customer participation may affect suppliers and customers differently.

3 - Who's Lying? A New Take on Traditional FMCG Concept Testing

Raimund Bau, RWTH Aachen, Moritz-Sommer-Str 4, Duesseldorf, Germany, raimund.bau@rwth-aachen.de, Tilo Halaszovich

In traditional concept tests the percentage of people who state that they would buy the product with absolute certainty is not rarely well above 30%. In contrast, real product penetration rates are almost always in single digit percentages in the FMCG industry. Consumers obviously vastly exaggerate their behavior in concept test. Because it is unclear how pre-launch test scores and market performance are really linked marketing practitioners often struggle to use pre-test information to make informed decisions. We propose a two stage algorithm which aims (1) to improve the prediction power of concept testing scores and (2) to uncover the general characteristics which lead to exaggeration in such tests. First we estimate the relationship between observable consumer and product related variables and the four most common concept test results measures in a linear model. In a second step we integrate this model into a mixed logit model on revealed preference data and test how the actual preferences are linked to the stated preferences. The empirical model is estimated on more than 70 concept tests with over 7000 participants and household panel data with 30.000 respondents covering several new product introductions which resulted from the concept tests.

4 - Extend or Trim: The Effect of a Firm's Product Portfolio on its NPD Plan

Vish Krishnan, Professor, University of California - San Diego, Rady School of Business, San Diego, CA, United States of America, vkrishnan@ucsd.edu, Sreekumar Bhaskaran

New product development rarely occurs in a vacuum; typically firms that engage in developing new products also sell similar products, albeit of lower quality, to their consumers. This presents an interesting dilemma for the firm after a new product is developed and ready to be launched. Should this product replace the existing line of products, or should both the new and old products be sold simultaneously to consumers. In this paper, we develop a framework for studying such an integrated product development and positioning problem. We show that a firm's current product portfolio and its subsequent positioning strategy have significant impact on its new product development choices. Indeed, firms that ignore its current product portfolio while making its development decisions can make suboptimal decisions: this can have significant impact on investment levels, market coverage as well as prices. The importance of this integrated approach assumes greater significance under competition. For example, by strategically choosing new product attributes and prices, a firm can thwart competitive entry or even deter mutually destructive price competition.

■ FA11

11- Empire

New Product Development and the Marketing/Operations Interface

Cluster: Special Invited Sessions

Invited Session

Chair: Glen Schmidt, University of Utah, Salt Lake City, UT, United States of America, glen.schmidt@utah.edu

1 - How Important are Raw Ideas in Innovation Success?

Laura Kornish, Associate Professor, University of Colorado-Boulder, Boulder, CO, United States of America, kornish@colorado.edu, Karl Ulrich, Nitin Joglekar

Recent research has failed to show a significant relationship between initial evaluations of ideas and measures of market success (Dahan et al. 2011). This negative result reinforces the beliefs of some that in new product innovation the idea itself doesn't matter because "execution is everything". However, there are no studies in the literature that investigate in depth whether, and how much, the quality of the idea matters. We attempt to fill that gap. In this study, we investigate, both analytically and empirically, the question of how much the idea matters in the success of a new product. Our analytical model is based on the notion that success in innovation is conjunctive success depends on the multiplicative combination of the idea, other factors under the company's control such as distribution and communication choices, and variables outside of the company's control such as the market conditions. Given the conjunctive relationship, we look at the effect of the idea filtering process on the perceived relationship between ideas and outcomes. We find that filtering and the importance of other factors combine to obscure any relationship between ideas and outcomes that there may be. Empirically, we use data from Quirky.com – a community-based product development website. This unique data set includes descriptions of the raw ideas originally proposed, the ultimate product designs that resulted from those ideas, and sales data. We augment the data from Quirky.com with multiple measures of idea quality that we obtained. On the one hand, we find empirical support for two claims that support the perspective that the idea doesn't matter: a) the quality of an idea is hard to measure accurately and b) the idea itself cannot ensure success. On the other hand, we do find that the raw idea matters; that is, the quality of the raw idea is a significant predictor of market outcomes, in spite of the effect of filtering and the variance introduced by other factors. The most immediate practical implication is support for the practice of investing significant resources in opportunity identification and selection.

2 - Product Design for Flexible Needs

Karthik Ramachandran, Assistant Professor, Southern Methodist University, Dallas, TX, United States of America, karthik@cox.smu.edu, Aydn Alptekinoglu, Joseph Kissan

In this paper we address a product design dilemma. Is it better – from a firm's perspective – to make a product custom or flexible? Custom products allow consumers to specify certain attributes of the product and have it made to those specifications (e.g., length of a golf club). Flexible products, on the other hand, allow them to adjust some attributes of the product as they use it (e.g., weight of a dumbbell). The essential elements of our stylized model are that consumers have shifting preferences, and they bear a disutility from having the ëwrong' product and from reconfiguring the product to match with their current preference. We capture consumer behavior parsimoniously on a Hotelling line; consumers are at either end-point in any given time period, and they occupy those two states over time according to a simple Markov chain. Products can be at any point on the line. We analyze three scenarios: the firm offers (1) one custom product, at mid-point of the Hotelling line; (2) two custom products, one

for each end-point; and (3) one flexible product that can be configured on demand for either end-point. We characterize the optimal purchase and usage patterns for consumers, and solve for optimal prices and profits in each scenario. Comparing the scenarios, we develop insights on whether the firm should offer custom versus flexible products. Our results explain: • Why consumers may not always take advantage of adjustable nature of flexible products (they buy and never reconfigure them); • Why flexible products are typically sold at premium prices; • Why more stability in consumer preferences may give higher incentive for the firm to offer flexible products.

3 - Customer Valuation of Modularly-upgradeable Products

Sezer Ülkü, Assistant Professor, Georgetown University, Washington, DC, United States of America, su8@georgetown.edu, Claudiu V. Dimofte, Glen Schmidt, Paul Messinger

While product modularity is often advocated as a design strategy in the operations management literature, little is known about how consumers respond to modular products. In this research we undertake several experiments to explore consumer response to modularly upgradeable products in settings featuring technological change. We consider both the initial product choice (between a modularly upgradeable product and an integral one) and the subsequent upgrade decision (replacement of a module vs. full product replacement). First, we show that consumers tend to discount the cost savings associated with modular upgrades excessively (insufficiently) when the time between the initial purchase and the upgrade is short (long). This suggests that modular upgradability as a product feature has higher profit potential for slowly rather than rapidly improving products. Second, we observe a preference reversal between the initial purchase and the point of upgrade: At the point of initial purchase, people foresee making a full product replacement in the future, yet, when faced with the actual upgrade decision, they are more likely to revert to modular upgrades. Finally, we discuss and test several pricing and product design strategies that the firm can use to respond to these cognitive biases.

■ FA12

12- Parliament

Bayesian Estimation of Structural Models in Marketing

Cluster: Special Invited Sessions

Invited Session

Chair: Andrew Ching, University of Toronto, Toronto, ON, Canada, andrew.ching@rotman.utoronto.ca

Co-Chair: Masakazu Ishihara, New York University, Stern School of Business, New York, NY, United States of America, mishihar@stern.nyu.edu

1 - Bayesian Estimation of Non-stationary Discrete Choice Dynamic Programming Models

Masakazu Ishihara, New York University, Stern School of Business, New York, NY, United States of America, mishihar@stern.nyu.edu, Andrew Ching

We develop a Bayesian Markov chain Monte Carlo (MCMC) algorithm for estimating non-stationary discrete choice dynamic programming (DDP) models. The proposed algorithm has the potential to reduce computational burden significantly when some of the state variables are continuous. In a conventional approach to estimating such a non-stationary DDP model, researchers achieve a reduction in estimation time by evaluating value functions at only a subset of state points and applying an interpolation method to approximate value functions at the remaining state points (e.g., Keane and Wolpin 1994). Although this approach has proven to be effective, the computational burden could still be high if the model has multiple continuous state variables or the number of periods in the time horizon is large. We propose a new estimation algorithm to reduce the computational burden for estimating this class of models. It extends the Bayesian MCMC algorithm for stationary DDP models proposed by Imai, Jain and Ching (2009) (IJC). In our algorithm, we solve value functions at only one randomly chosen state point per time period, store those partially solved value functions period by period, and approximate expected value functions nonparametrically using the set of those partially solved value functions. We conduct a Monte Carlo exercise where consumers make durable goods purchase timing decisions. Monte Carlo results show that our algorithm is able to recover the true parameter values quite precisely. Finally, similar to IJC, our algorithm allows researchers to incorporate flexible unobserved heterogeneity, which is often computationally infeasible in the conventional two-step estimation approach (e.g., Hotz and Miller 1993; Aguirregabiria and Mira 2002).

2 - Dynamic Demand and Dynamic Pricing in a Storable Good Market

Matthew Osborne, Bureau of Economic Analysis, US Department of Commerce, Washington, DC, United States of America, matthew.osborne@bea.gov

We estimate a forward-looking structural dynamic model of consumer stockpiling behavior in a storable product category, and use the demand estimates as an input to a stylized supply side model. The demand side model builds on the existing structural econometric literature on stockpiling in three ways. First, our specification for consumers' forecasts of future prices is very flexible: consumers understand that promotions are brief and that prices will soon return to their previous regular price. Second, we allow consumption to be endogenous: consumers track their inventory of each brand of the product and optimally choose how much to consume every week. Third, we model continuously distributed unobserved heterogeneity in tastes and price sensitivities. We extend the newly developed Bayesian MCMC approach to estimate the model on individual level scanner data of canned tuna purchases, where two major brands comprise the bulks of sales. We use our demand estimates to recover firm marginal costs that rationalize observed pricing behavior. We develop a stylized supply side model that uses the demand and cost estimates as inputs, and use it to predict the impact of a merger of the two firms on intertemporal pricing patterns.

3 - An MCMC Approach to Estimating Demand for Differentiated Durable Products using Aggregate Data

Yutec Sun, University of Toronto, Toronto, ON, Canada, ysun@rotman.utoronto.ca, Masakazu Ishihara

This paper proposes a novel approach to estimating Gowrisankaran and Rysman (2011)'s structural model of dynamic demand for differentiated durable products using aggregate-level data. Although their model framework has gained increasing popularity in the empirical literature, the high computational cost for estimating the model has led to growing demand for more computationally efficient estimation strategy. I introduce Imai, Jain, and Ching (2009)'s Markov Chain Monte Carlo (MCMC) algorithm to compute Gowrisankaran and Rysman (2011)'s GMM estimator in order to overcome the computational limitation. To incorporate the MCMC in the classical estimation setting, I transform the GMM estimator into a Laplace type estimator (LTE) developed by Chernozhukov and Hong (2003). The advantage of the proposed approach is two folds. First, it reduces the computational cost of Gowrisankaran and Rysman (2011)'s GMM approach while maintaining the rich unobserved heterogeneity. Secondly, because the LTE avoids imposing arbitrary distributional assumption on endogenous variables as in the GMM approach, it is more suitable for the analysis of equilibrium framework, compared to alternative approaches such as simulated maximum likelihood, control function, and Bayesian methods that require additional assumption on either conditional or joint distribution between endogenous prices and unobserved common demand shocks.

4 - A Simple Structural Model of Individual Demand for Multiple Related Goods

Andres Musalem, Duke University, 100 Fuqua Drive, Durham, NC, 27708, United States of America, amusalem@duke.edu, Kenneth Wilbur, Patricio Del Sol

Nearly all theoretically motivated models of individual consumer demand assume ex ante that the consumption utility of each good is independent of the quantity demanded of every other good. This is a strong restriction but it simplifies the consumer's utility maximization problem, making its solution computationally tractable. The few papers that have relaxed this assumption all suffer from a curse of dimensionality in the number of products chosen by the agent. This paper shows that a weaker assumption on the ratio of marginal utilities can achieve a similar simplification without imposing additive separability in utility. It offers a theoretically founded model of individual consumer demand for any non-negative, continuous quantities of multiple related goods. Bayesian estimation is used to make the model relatively fast, flexible and parsimonious. The model is estimated using data on Chilean advertisers' television audience purchases. We estimate the degree to which advertisers desire to spread their budgets across networks, programs and hours.

■ FA13

13- North Star

Social Influence I

Contributed Session

Chair: John Roberts, Professor, ANU and LBS, Crisp 1078 CBE, Australian National University, Canberra, AC, 0200, Australia, john.roberts@anu.edu

1 - Sales Force Targeting Strategy Incorporating Social Contagion among Decision-makers

Jiaoyang Li, Doctoral Student, Texas A&M University, Mays Business School, College Station, TX, 77845, United States of America, kli@mays.tamu.edu, Venkatesh Shankar

We study how firms target decision-makers when social contagion effects among them exist. We empirically examine this important issue in the pharmaceutical context where physicians are the decision makers. Our research fills important gaps in two streams of literatures,sales force targeting strategy and social contagion. First, research on sales force targeting strategy does not consider social contagion effects. We show that a targeting strategy that ignores social contagion among physicians is sub-optimal. Second, the social contagion literature in the pharmaceutical domain has examined social contagion effects on decisions associated with high uncertainties such as adoptions of a new drug or prescriptions of a mature drug only after a major regulation change. We analyze social contagion effects even for a mature drug in a stable environment. Third,

we address three challenges in social contagion research that hinder firms from leveraging social contagion effects among connected physicians: (1) How to identify physician ties in an economical and scalable way? (2) How to measure a physician's social influence? (3) Who matters in the social network? We use administrative claim information on patient sharing patterns among physicians together with geographical information to infer physician ties. We estimate a hierarchical Bayesian model with physician-specific response to social contagion after controlling for marketing. We identify and quantify the effects of important network member characteristics, such as opinion leaders (influencers), influenceables (those susceptible to social influence) and convertibles (those responsive to marketing).

2 - Investigating Neighborhood Effects in Customer Acquisition Models Across Multiple Product Categories

Philippe Baecke, PhD student, Ghent University, Tweekerkenstraat 2, Gent, 9000, Belgium, philippe.baecke@ugent.be, Dirk Van den Poel

Within analytical customer relationship management (CRM), customer acquisition models suffer the most from a lack of data quality because the information of potential customers is mostly limited to socio-demographic and lifestyle variables obtained from external data vendors. Particularly in this situation, taking advantage of the spatial correlation between customers can improve the predictive performance of these models. This study compares an autoregressive and hierarchical technique that both are able to incorporate spatial information in a model that can be applied on a large dataset, typical for CRM. Predictive performances of these models are compared in an application that identifies potential new customers for 25 products and brands. The results show that a multilevel model performs at least as well as, and for some products and brands even significantly better than a more often used autologistic model. Further, this application provides interesting insights for marketing decision makers. It indicates that especially for publicly consumed durable goods neighborhood effects can be identified. Though, for the more exclusive brands, incorporating spatial information will not always result in major predictive improvements. For these luxury products, the high spatial interdependence is mainly caused by homophily in which the spatial variable is a substitute for absent socio-demographic and lifestyle variables. As a result, these neighborhood variables lose a lot of predictive value on top of a traditional acquisition model that typically is based on such non-transactional variables. In comparison with publicly consumed durable goods, the added value of incorporating spatial interdependence is much less for private durable goods and consumer packaged goods.

3 - Testing Agent-based Models of Innovation Diffusion: the Additive Approach and the Threshold Approach

Sebastiano Delre, Assistant Professor, Bocconi University, Via Roentgen 1, Milan, 20136, Italy, sebastiano.delre@unibocconi.it, Eitan Muller

In this study we compare two different modeling approaches of peer-to-peer influence: the additive approach and the threshold approach. We use two Agent-Based Models (Goldenberg et al. 2002 and Watts and Dodds, 2007) to implement the two approaches and we adopt the indirect inference method in order to estimate the values of their parameters against real innovation diffusion curves. Our results indicate that the additive approach is much more flexible respect to a wide range of diffusion patterns, especially when fitting slow diffusions. They imply relevant managerial implications on how to ignite new product diffusions and how to help exogenous word-of-mouth campaigns.

4 - Calibrating the Belief Structures of Stakeholder Groups with Respect to Climate Change Policy

John Roberts, Professor, ANU and LBS, Crisp 1078 CBE, Australian National University, Canberra, AC, 0200, Australia, john.roberts@anu.edu, Hieu Ha, Pamela Morrison

Debates about government policies to address climate change have generated considerable controversy. Most opinion has it that a vast majority of scientists firmly believes that government policy to ameliorate the effects of climate change is an urgent priority, while opinion amongst executives and the community at large is more evenly divided. Before formulating policies to market climate change amelioration programs to the community it is necessary to calibrate the degree to which there is a disconnect between the belief structures of these three groups. We formulate a framework for understanding the structure of perceptions about climate change (prevalence, its consequences and the ability of governments to act), before calibrating our model for scientists, firms and individuals, thus identifying sources of belief differences and divergence of views about the most appropriate policies.

■ FA14

14- Defender

Measuring Brands

Contributed Session

Chair: Luming Wang, University of Manitoba, 676 Drake Center, Winnipeg, Canada, luming_wang@umanitoba.ca

1 - An Empirical Assessment of the Vampire Effect of Celebrity Endorsers and its Moderators

Carsten Erfgen, Postdoctoral Researcher, University of Hamburg, Welckerstrasse 8, Hamburg, 20354, Germany, carsten.erfgen@wiso.uni-hamburg.de, Sebastian Zenker, Henrik Sattler

Well-known celebrities are used very frequently in marketing communication to attract consumers' attention in the cluttered media environment. Companies spend large amounts of money to entice celebrities to endorse their brands. Such enormous investments benefit the company only if they translate into favorable consumer awareness of the brand, compared with a similar advertisement with an unknown endorser. But brand managers voice many concerns about this return on their investments in celebrities. Some managers speculate that, at least in some conditions, celebrities might overshadow the advertised brand, such that consumers remember only the celebrity, not the brandóthe vampire effect. This study introduces the concept of the vampire effect, defining it as the differential brand awareness effect in an advertisement between an advertising stimulus with a celebrity endorser compared with the same advertising stimulus with an unknown but equally attractive endorser. This research analyzes empirically the existence of the vampire effect and its moderators in a series of four experiments with 1,843 respondents, which reveal convincing evidence of its existence. The vampire effect only occurs in conditions of low involvement or low congruence between the endorser and the brand; brand familiarity is not a significant moderator of the effect. Using an online attention-tracking method, the authors analyze the viewing behavior of consumers and find that in advertisements featuring celebrities, people view the brand name later than they do for an advertisement with an unknown endorser and the ratio of viewing time of the endorsers' face, rather than the brand, increases. These results have important managerial implications for the selection of celebrity endorsers.

2 - Modeling the Age-related "Reminiscence Bump" in Brand Recall

Gilles Laurent, Professor, HEC Paris, 1 Avenue de la Liberation, Jouy-en-Josas, 78350, France, laurent@hec.fr, Raphaèlle Lambert-Pandraud

We model brand recall on the basis of recent psychological research from Janssen and colleagues, which has evidenced a 'reminiscence bump for autobiographical as well as public events: people tend to recall a disproportionately large number of events from their adolescence and early adulthood. In categories as different as cars, radio stations, and beauty products, we show that, similarly, older consumers are more likely to recall brands that they first encountered during their adolescence and early adulthood. Managerial implications are important as brand recall is a key factor in brand consideration and brand choice. More importantly, we extend previous results by showing that consumers' cognitive decline (speed of processing, working memory, and inhibitory capacity) plays a mediating role. We start from Chessa and Murre Memory Chain model (2007), where the memory of an event depends on the probability of encoding at the time of the event and on the probability of forgetting since then. On this basis, we develop a model of brand recall by older consumers, incorporating three factors (i) the probability of encoding a new brand declines with consumer age: encoding a new brand at 60 is more difficult than encoding a new brand at 30; (ii) the probability of retrieving a brand declines with consumer age, through the mediation of cognitive decline at time of test; (iii) in contrast with biographical or public events that occur once, consumer contact with a brand can be repeated multiple times, e.g. by listening daily to a specific radio station.

3 - Evaluating the Favorability of Brand Association Networks using Brand Concept Maps

Oliver Schnittka, Postdoctoral Researcher, University of Hamburg, Welckerstrasse 8, Hamburg, Germany, schnittka@econ.uni-hamburg.de, Henrik Sattler, Sebastian Zenker

Brand image constitutes an important element of brand equity. Understanding brand image demands the identification of a network of strong, unique, and favorable brand associations, since consumers store brand information in the form of associative networks. John et al. (2006) have introduced brand concept maps (BCM) as a powerful approach to measure brand image according to the structure of the underlying brand association networks and reveal the strength and uniqueness of brand associations. Interestingly, BCM as well as other consumer mapping techniques (e.g., Zaltman's metaphor elicitation technique) do not reveal the favorability of brand associations. This study extends the original-BCM approach with information about the favorability of single brand associations and further develops a new metric, brand association network value (BANV) that quantifies overall network favorability. Our advanced-BCM approach and the new BANV metric are managerial relevant in that they allow to compare the favorability of networks at both individual brand association and aggregate network levels. We illustrate the relevance of our BANV metric within an empirical application and demonstrate its validity.

4 - A Psychometric Theory that Measures Up to Marketing Reality: An Adapted Many Facet IRT Model

Luming Wang, University of Manitoba, 676 Drake Center, Winnipeg, Canada, luming_wang@umanitoba.ca, Adam Finn

Marketplace has been defined by the interaction between consumers and brands, which has been recognized by a majority of marketing literature with an exception, if it is not the only one, measurement literature. Measurement researchers in marketing have been continuously working on improving the quality of measurement of marketing constructs by applying psychometric theories from the early Classical Test Theory to later generations such as Generalizability Theory and Item Response Theory. But only main effects (normally consumers, sometimes brands) have been focused on and interactions between them are either ignored or treated as the measurement error. It is such a shock considering the humongous literature in other areas of marketing (e.g., marketing segmentation, CLV, and CRM) that build their entire frameworks on the interpretation and usage of this interaction. In the current research, we propose a new Many Facet Item Response Theory model to fill this gap in measurement literature. Consumers (and brands) are proposed to be fully described by two sets of index: individual main effects (and brand main effects) and brand-specific individual effects (or individual-specific brand effects). Soft drink brand equity data are used for the empirical examination.

■ FA15

15- Great Republic

Marketing Metrics

Contributed Session

Chair: Koen Pauwels, Ozyegin University, Kusbakisi Cad. No:2, Altunizade Üsk, Istanbul, 34662, Turkey, Koen.Pauwels@ozyegin.edu.tr

1 - Valuing Growth: How Marketing Contributes to Value From Future Profit Growth

Tobias Hornig, PhD Candidate, University of Cologne, Albertus-Magnus Platz, Cologne, 50923, Germany, tobias.hornig@wiso.uni-koeln.de, Marc Fischer

Top managers and investors are increasingly demanding higher transparency on the financial impact of investments from marketing managers. Extant research shows that marketing is indeed value relevant. For many firms, the largest portion of value comes from expected future growth. The value from future growth is driven by various components: profitability, sustainability of excess return, earnings growth, and the cost of capital. Except for cost of capital, marketing research has been silent about marketing's role in driving these important firm value drivers. In this paper, we decompose the impact of brand equity on firm value that results from expected future growth. Based on a broad sample of 344 firms across a variety of industries and periods, we estimate how publicly reported changes in financial brand values change investors' expectations about future profitability, earnings growth, and the sustainability of excess return. Our results suggest that brand equity increases improve all of these expectations. The by far largest impact appears to be on the ability of firms to secure their excess return over a longer time period. The study adds substantive new insights into the role of marketing for value creation. Much is known about the effectiveness of advertising, promotion, etc. with respect to product-market outcomes such as brand choice and sales. Our study contributes to the literature on empirical generalizations by relating marketing to key metrics of the financial community.

2 - Consumer Attitude Metrics for Guiding Marketing Resource Allocation

Dominique Hanssens, Professor, University of California-Los Angeles, Anderson School of Management, 110 Westwood Plaza, Los Angeles, CA, 90095, United States of America, dominique.hanssens@anderson.ucla.edu, Gokhan Yildirim, Koen Pauwels, Shuba Srinivasan, Marc Vanhuele

Marketing managers often use consumer attitude metrics such as awareness, consideration and preference as performance indicators because they represent their brand's health and are readily connected to marketing activity. However, their translation into sales performance is insufficiently established to allow financially focused executives to value marketing's contribution and make sound resource allocation decisions. We propose four criteria – potential, responsiveness, stickiness and sales conversion – that determine the connection between marketing actions, attitudinal metrics, and sales outcomes. Building on consumer involvement theory, we formulate hypotheses on how these criteria operate differently across conditions of high versus low consumer involvement with the product category. We test our approach with a rich dataset of four-weekly marketing actions, attitude metrics, and sales for several consumer brands in two categories over a seven-year period. The results quantify how marketing actions affect sales performance through their differential impact on attitudinal metrics, as captured by our proposed criteria. As predicted, high consumer-involvement conditions require brands to shift consumer attitudes, while low-involvement conditions allow temporary sales hikes without a meaningful attitude shift. Based on these insights, we provide specific recommendations on marketing allocation for different brands, and we validate them in a hold-out sample. For managers and researchers alike, our criteria offer a verifiable explanation for changing marketing elasticities and a tangible connection between marketing and financial performance metrics.

3 - Is Your Brand Going Out of Fashion? A Quantitative, Causal Study to Predict Brand Value From Search Query Data

Maureen Schumacher, Google, 10 Tenth Street, Suite 600, Atlanta, GA, 30309, United States of America, mschumacher@google.com, V. Kumar

Can Internet search query data be a relevant predictor of consumer value? Can Internet search query data be a relevant predictor of financial measures of brand value? Can Internet search query data enrich existing financial measures of brand valuation tools and provide more timely insights to brand managers? Brand valuation remains an important topic even in the midst of the current financial recession as brand value contributes significantly to earnings across all sectors. The usefulness of the "consumer information processing" framework for brand, consumer and firm forecasting is examined. To develop our hypotheses, we draw from the growing body of work relating web searches to real world outcomes, to determine if a search query for a brand is causal to, and potentially predictive of brand, consumer and firm value. The contribution to current literature is that search queries can predict perception, whereas previous research in this nascent area predicted behavior and events. In this study, we propose arguments underpinning this research as follows: the theoretical background relative to brand valuation and the theoretical framework based on an in-depth review of how scholars have used search query data as a predictive measure across several disciplines including economics and the health sciences. From a practitioner perspective, unlike traditional valuation methods search query data for brands is more timely, actionable, and inclusive.

4 - Is the Classic Funnel Dead? Sales Impact of Classic and New Online Funnels

Koen Pauwels, Ozyegin University, Kusbakisi Cad. No:2, Altunizade Üsk, Istanbul, 34662, Turkey, Koen.Pauwels@ozyegin.edu.tr

The rise of the connected consumer has led many to propose that the classic purchase funnel is dead, replaced by a new, mostly online consumer decision journey. While 'new funnel' metrics offer the benefits of timeliness and passive tracking, classic funnel metrics are more representative and have improved over decades of market research experience. Which funnel is best at predicting sales over a wide range of products and services? We address this question for 36 brands over 15 categories, including services, fast moving consumer goods and durables. Dynamic system models allow for direct and indirect marketing effects on the new and the classic purchase funnel and in turn on sales. We find that the new funnel-only model often predicts better than the classic funnel model, but that the model with both funnels predict sales best for most brands. Among classic funnel metrics, awareness complements the new funnel, while classic lower funnel metrics can be replaced by the new funnel. The new funnel dominates the classic funnel for services, but also improves sales predictions for many consumer products. Offline marketing actions are strong drivers of new funnel metrics, whether paid, owned or earned media. We conclude with the relative benefits of classic and new funnel in guiding marketing actions to raise performance.

■ FA16

16- St. George A

Retailing and Operations: Analytic Models

Cluster: Special Invited Sessions

Invited Session

Chair: Anne T. Coughlan, John L. & Helen Kellogg Professor of Marketing, Northwestern University, Kellogg School of Management, Evanston, IL, United States of America, a-coughlan@kellogg.northwestern.edu

1 - Wardrobing: Is it that Bad?

Ahmed Timoumi, Koc University, Rumeli Feneri Yolu, Istanbul, 34450, Turkey, atimoumi@ku.edu.tr, Anne T. Coughlan

In a 2008 survey, about 64% of U.S. merchants experienced "wardrobing" behavior by consumers buying their items (Barnard 2009). An item is said to have been "wardrobed" when it is bought by a consumer; used for a short time; and then returned to the store as if it were unused, for a full or partial refund (Enkoji, 2009, Segal 2010). Since these returned products cannot be sold as new, many retailers resort to selling them as open-box items, with a concomitant need to lower the price of these products. This paper considers the benefits and costs of wardrobing by analyzing an analytical model of a retailer selling one product over two periods in a heterogeneous market with a segment of "regular" consumers who can extract their usage value from the product in both periods or choose to wait to buy until the second period; and a segment of "opportunist" consumers who extract their usage value from the product only in the first period (for example, the wedding weekend; Super Bowl weekend; etc.) and

return it in the second period for a refund. Our research shows that the retailer always prefers to serve the opportunist segment which returns the product after using it, as compared to preventing wardrobing (even if doing so were costless), in direct contrast to the business press attitude that wardrobing is harmful to the retailer and thus unethical, fraudulent, or otherwise criminal. Our research also provides a new theoretical explanation to the low (sometimes zero) restocking fees charged by retailers for items even during periods with high levels of wardrobing behavior (e.g., LCD TVs before Super Bowl weekend).

2 - Billboard or Scarcity Effects of Inventory on Demand

Gerard Cachon, University of Pennsylvania, The Wharton School, Philadelphia, PA, United States of America, cachon@wharton.upenn.edu

This paper looks at the question of whether inventory increases or decreases demand. In particular, does inventory generate a billboard effect (makes the item, all else being equal, more desirable) or is it associated with a scarcity effect (scarce items are more desirable because they are viewed as more popular). Auto industry data is applied to attack the research question.

3 - Why Would a Retailer Want to Use a Category Captain?

Skander Esseghaier, Associate Professor, Koç University, Rumeli Feneri Yolu, Case 173, Istanbul, 34450, Turkey, sesseghaier@ku.edu.tr, Ahmed Timoumi

Many retailers rely on one national brand manufacturer, called the "category captain", for the management of the entire product category. Captains get access to privileged category data (including data about competitor brands) and recommend a category plan (e.g., shelf space allocation) that affects the store level demand for all brands in the category. Why would a retailer share privileged category data with one of the brand manufacturers and delegate critical category decisions? Why are competing brand manufacturers not protesting? This research addresses these questions. Our starting point is that store demand response to a category decision varies across brands in the category. As large retailers carry myriad of categories, they find it impossible to assess the extent of differences in brand responsiveness for all categories. Yet, understanding how a category decision differentially enhances store demand across brands is critical to optimize the pricing of these brands relative to the category decision; failure to do so results in poor pricing and inferior profit. We develop a signaling model to show that a retailer may benefit by delegating category decisions to a brand manufacturer that has the ability to assess the differences in responsiveness across brands. Results indicate that category decisions taken by the informed category captain can reveal the captain's information about brands' differences in responsiveness. The revealed information allows the retailer to optimize its retail pricing of all brands relative to the captain's category decision; it also allows the competing manufacturer to better wholesale price its own brand. Through better pricing, both retailer and competing manufacturer are better off, even when the captain behaves opportunistically.

4 - R&D Lead Time and Product Line Strategies

Oded Koenigsberg, Columbia University, New York, NY, United States of America, ok2018@columbia.edu, Eyal Biyalogorsky

Most marketing models that consider product design and R&D models in marketing assume that products are ready for production as soon as the developers finalize designs. This assumption is hardly ever valid for most industries. It takes time to design (and to produce, and deliver) a product, and during that period, competitors can react and demand can change. In this work we examine the effects of such considerations on marketing decisions and show that the firm's introduction strategy changes when there is R&D lead time and that it depends on the market's beliefs regarding the perceived quality of its product line in the marketplace.

5 - Price-matching Policies in a Multichannel Retail Setting

Elie Ofek, Harvard Business School, One Soldiers Field Road, Boston, MA, United States of America, eofek@hbs.edu, Pavel Kireyev, Vineet Kumar

It has become commonplace in recent years for retailers to operate in a multichannel setting, that is, to offer their goods for sale both offline and online. Such retailers face the challenge of coordinating their internet and in-store pricing policies as consumers continue to draw heavily on digital technologies to inform their purchase decisions. One important component of firms' pricing strategy involves the possible use of cross-channel price-matching guarantees, through which the retailer commits to charging customers the lowest price in either of its channels upon request. Interestingly, major multichannel retailers exhibit significant heterogeneity in their willingness to offer cross-channel price matching – with some retailers offering full price-matching for all products while others explicitly stating they will not match their own prices across channels. In this research, we study the advisability of cross-channel price-matching policies in an analytic model of multichannel retailing with consumers that are heterogeneous in their need for in-store services (sales assistance, ability to touch and feel physical products, etc.). In the monopoly case, we find that a retailer that does not offer a self-matching guarantee will price higher online than offline to extract more value from consumers that benefit from the convenience of online shopping. Yet when the number of consumers with a high need for in-store services is large enough, the retailer prefers to self-match across channels and price higher offline, even though some consumers will request the price match after visiting the store. This happens because by instituting the price matching policy, the retailer endogenously partitions the market into segments that differ in the amount of price information they possess, which allows the retailer to achieve more effective price discrimination and hence greater profits. We extend the model to let some consumers have access to internet pricing information in-store through their mobile smart devices. Surprisingly, an increase in the number of such mobile consumers may strengthen the price-discrimination effect by preventing in-store customers from delaying purchase and going home to purchase online. This results in higher prices and profits for the retailer. Lastly, we explore multi-channel price matching in a competitive context (across firms and across channels). We show that the need to decide on whether to match prices across channels qualifies and enriches a number of findings in the extant literate on competitive price-matching policies (all of which have been conducted in the single-channel context). Taken together, our findings provide managerial insights into when and how strategic cross-channel price-matching may benefit multi-channel retailers.

Friday, 10:30am - 12:00pm

■ FB01

01- Essex Ballroom South

Relationships Among Social Media Actors

Cluster: Internet and Interactive Marketing

Invited Session

Chair: Donna Hoffman, Professor, University of California - Riverside, Riverside, CA, United States of America, donna.hoffman@ucr.edu

1 - Flourish or Perish: The Drivers of Amateurs' Success at Social Net-literature Sites

Shibo Li, Associate Professor of Marketing and Weimer Faculty Fellow, Indiana University, 1309 E. 10th Street, Bloomington, IN, 47405, United States of America, shili@indiana.edu, Amy Wenxuan Ding

One interesting phenomenon at social net literature sites is the mushrooming of amateurs contributing to the user generated content online. Despite its importance, no past research in the marketing literature has examined the drivers of the amateurs' success at such sites. In this study, we propose that the readers at social net literature sites face double uncertainties on the two qualities of the amateurs' books on the basis of the signaling theory: the general quality and the reader-book match quality. We examine the whether and how many aspects of the readers' both click and recommendation behaviors by proposing a new count model – a multivariate discretized Type II Tobit model with log transformation. We set up the model in a hierarchical Bayes framework which accounts for the individual author and works heterogeneity as well as potential endogeneity. We estimate the model using the data on the amateurs' book publishing from a leading Chinese social net literature site. We document the evidence of the existence of double quality uncertainties and the overall results are consistent with the signaling theory. The general readers and the registered users tend to rely on different quality signals. We also show that competition at the focal site may not always be a bad thing. Instead, higher competition intensity and variation may create a positive category-level effect on the readers' clicks and recommendations. This study has important managerial implications for social net literature site managers, publishers, amateur authors and marketers.

2 - Networking for Success

Florian Stahl, Assistant Professor, University of Zurich, Department of Business Adminstration, Plattenstrasse 14, Zurich, 8032, Switzerland, florian.stahl@uzh.ch, Lucas Bremer, Mark Heitmann, Asim Ansari

The growth of online social networks and the decreasing effectiveness of traditional marketing have lead to a surge of interest in using such networks for marketing purposes. Actors embedded in such social networks are interested in understanding how to leverage the interactions and relationships among network members to increase their popularity and garner online success. In this paper we analyze how the network activities that an actor engages in influences the actor's egocentric positions within the network and how such activities in combination with these network positions eventually impact marketing success. In particular, we propose a dynamic framework and study short-term and long-term effects of networking activities on online success as well as on network positions. Our sample consists of a set of 440 music artists who actively operate profiles on multimedia online social network. Personal network information is tracked monthly over a period of one year. Our results indicate that online success is determined by both the social network structure and networking activities of the music artists rather than by unobserved factors like their outside popularity. Most importantly for marketing, acquiring new friends has a long-term impact on online success whereas communicating with friends and providing new content affect online success only in the short run. The findings of our study provide several insights into the use of personal online social networks for promoting products and services online.

3 - The Role of Social Interactions and Incentives in Driving Consumer Behavior

Kamer Toker, PhD Student, State University of New York at Buffalo, School of Management - Marketing, 215 Jacobs Management Center, Buffalo, 14260, United States of America, ktyildiz@buffalo.edu, Minakshi Trivedi, Ercan Yildiz, Huan Liu

The growth of online social networks has led to a surge of interest among companies in using social media not only for marketing and customer interaction purposes, but also for various external and internal programs including educational services, employee wellness initiatives and enterprise collaboration networks. Due to this emerging trend, both companies and marketing scholars seek to explore how effective various social media tools such as online social networks and incentives (e.g. rewards) are in influencing consumer behavior. In our study, we focus on this issue by utilizing a unique data set from an employee wellness program deployed in an international consulting company. The program provides a web based portal to encourage participation, where individuals can observe their peers' activities in addition to converting their own participation points into monetary incentives. Our data set allows us to identify both online and offline interactions between participants as well as the specific monetary incentive used. Our initial results suggest that offline and online social networks, as well as incentives have a significant, though varying effect on individuals' participation levels. Through our model specification and data set, we also address identification problems which may arise normally in networked data. We believe that our study will potentially help companies better understand the relative impact of social media tools on both consumer and employee behaviors.

4 - Predicting Identification with Social Media Groups: Flourishing Independents or Languishing Interdependents

Donna Hoffman, Professor, University of California - Riverside, Riverside, CA, United States of America, donna.hoffman@ucr.edu, Thomas P. Novak, Randy Stein

How does self-construal, well-established as a construct that defines social behavior, shape interactions with social media applications? Using a recently proposed approach to the estimation of conditional indirect effects, we demonstrate how peoples' self-construal predicts identification with the groups they interact with when using social media (ISM). People with an interdependent self-construal who are low on psychological well-being achieve ISM by using social media to connect with other people, while people with an independent self-construal who are high on psychological well-being achieve ISM by using social media to interact with content relevant to their interests. The path from both goals types to ISM is mediated by expected positive affect from using social media. We discuss how indirect experiences of connectedness derived from content interactions explain how independents, ostensibly unconcerned with social roles, can achieve ISM, and evaluate the marketing implications of our findings.

■ FB02

02- Essex North Center

Online Customer Behavior - II

Cluster: Internet and Interactive Marketing

Invited Session

Chair: Amit Mehra, Assistant Professor and ISB Research Fellow, Indian School of Business, Gachibowli, Hyderabad, India, Amit_Mehra@isb.edu

1 - Do Consumers Refer Deals to Friends? Effects of Tipping Point and Pricing Strategy on Daily Deals

Namil Kim, Doctoral Student, Department of Management Science,KAIST, 335 Gwahak-ro, Yuseong-gu, Daejon, 305701, Korea, Republic of, namil.kim@kaist.ac.kr, Jihwan Lim, Joonhyuk Yang, Wonjoon Kim

The advent of Groupon.com has resulted in a trend of daily deal services in e-commerce. However, there has been little research that examines this new business phenomenon. To identify the hidden mechanisms of this industry, the authors focus on pricing strategy and social influence in daily deal services. In their analysis of 29,058 deal-level sale observations from two searchable meta-sites that index daily deals, the authors found that discount rates nonlinearly increase sales with a U-shaped relationship, and that the elasticity of changes in demand for deals is greater with experience goods. The authors also found evidence of social influence within daily deal services, where minimum quantity setting increases the quantity sold. These results underscore the strategy of setting the deal price and the usefulness of social influence in enhancing vendors' sales performances.

2 - Consumer Behavior Analysis using the Behavioral Perspective Model From the Context of E-mail marketing

Valdimar Sigurdsson, Associate Professor, Reykjavik University, Iceland, valdimars@hr.is, Gordon Foxall, Vishnu Menon

While there is a growing literature on analyzing the antecedents of online shopping behavior, not many have explored the actual behavior in real and complex settings. The authors explore a possible way to analyze individual consumer responses in a real digital environment using experimental interventions. An e-mail marketing experiment was conducted based on the Behavioral Perspective Model to investigate online consumer choice. The current study extends the domain of behavior analysis into e-mail marketing and buying behavior in the affluent and non-laboratory online setting. Conversion e-mails were sent to two groups from the same marketing database of registered consumers interested in children's books. The experiment involved sending utilitarian (economic/functional) and informational (social) advertising stimuli with a clear call for action. Key measurements consisted of individuals receiving the e-mail, opening it, clicking on a link, and buying the target books. Aggregated results showed that the informational stimuli were more successful in inducing consumers to open the e-mails whereas the utilitarian stimuli were beneficial in increasing buying behavior. Individual responses to the e-mails were analyzed and it was identified that those consumers who bought the target books did so either when they received utilitarian or informational stimuli. Further more, data for individual consumer behavior indicates possible stimulus control in the case of particular consumers and potentials for functional analysis. The results also show different appropriateness of stimuli for shaping individual consumer responses online.

3 - User-Generated Content and Political Opinions

Pinar Yildirim, University of Pittsburgh, Katz School of Business, Pittsburgh, PA, United States of America, tyildirim@katz.pitt.edu, Tansev Geylani, Esther Gal-Or

User-generated content (UGC) is increasingly common in the news media. Most newspapers allow their readers to include political opinions on the news website via comments, videos, and blogs, yet what drives UGC is unknown. This study focuses on one aspect of content drivers: political beliefs. We contribute to the literature on UGC by analyzing the relationship between (1) frequency of activity in the online news platforms and extremism of an individual's political beliefs (2) the content generated by the users as a reaction to the content generated by the professionals and (3) role of social dynamics in the activism of the users. To our knowledge, this is the first study investigating the relationship between political extremism and content generation in online platforms. The study is also investigating whether content generators are likely to post more often when professional content is similar to their opinions or opposing to their opinions. Finally, the study is trying to understand whether the group dynamics, in other words, the connectivity of the readers through a social network is likely to lead them to be more active online. We investigate the relationship between political opinions of a news reader and her tendency to create content using a data collection of 2 years from Wall Street Journal. Our findings show that readers with extreme opinions are more active in content generation. They comment on a higher number of news articles and comment more frequently compared to readers with more moderate political opinions, controlling for the impact of social dynamics (political opinions of other readers) and journalists' political opinions.

4 - Pricing on Brick-and-Mortar and Online Retail Channels with Multichannel Customer Shopping

Amit Mehra, Assistant Professor and ISB Research Fellow, Indian School of Business, Gachibowli, Hyderabad, India, Amit_Mehra@isb.edu, Subodha Kumar, Jagmohan Raju

The availability of online retail channel in addition to the traditional physical store channel has resulted in customers altering their shopping behavior to take advantage of the benefits of each channel. A problem with the online channel is that customers are unable to assess products as well as they can in physical stores due to a product's non-digital attributes. These are product attributes such as fit of clothes or their styling that is difficult to figure out from a website interface. Hence, if customers rely only on the online channel for product evaluation, they may end up buying a product that is not the best suited to their needs. They may, however, circumvent this problem by first going to the store to check out the product and then buy online if the product is available at a lower price on that channel. How should firms' pricing react to this kind of shopping behavior by customers? What implications does this have on the sales from the two channels? We study this problem using an analytical modeling approach. This analysis is useful in setting appropriate multichannel prices and having a better idea on how to stock the online and physical store inventories corresponding to sales in each of these channels.

■ FB03

03- Essex North West

Social Media and WOM - I

Cluster: Internet and Interactive Marketing

Invited Session

Chair: Sascha Steinmann, University of Siegen, Hoelderlinstrafle 3, Siegen, 57068, Germany, steinmann@marketing.uni-siegen.de

1 - How Engagement Experiences with Social Media Affect Online Usage and Cause Marketing Effects

Tiffany Ting-Yu Wang, Associate Professor, KNU, No.1 Kainan Road, Luzhu Shiang,, Taoyuan, 33857, Taiwan - ROC, tiffanyt.wang122@gmail.com

While empirical evidence on media engagement and advertising effectiveness has been well documented, few studies have addressed the relationships between engagement experiences with social networking sites and mobile online usage. In the hierarchical regression analysis of the data from a mid-size sample online survey, interactive engagement experiences - more uniquely characteristic of online media – were found to increase Chinese-speaking users' use of Facebook website in general via mobile phones to greater extent than personal engagement experiences. The main effect of community connection experience (B = 0.37) is shown to be larger than that of utilitarian experience (B = 0.28). The experience of being transported into a better mood within the socially networked context results in greater attention and liking towards ads from this site. In contrast, FB consumers' utilitarian experience with engaging social media content such as tips-giving leads to an irritation experience with ads on this site, that is, feeling forced to look at ads. In particular, we will examine how media engagement experiences with sustainability fans site on FB impact users' energy-saving behavioral intentions. The implications of the findings may help researchers and marketers identify context-specific measurement of consumer experiences and match engagement experiences to the experiences relevant for building better brands.

2 - Do We Need a Consumer-centric Ranking Systems? A Caution Tale From TripAdvisor.com

Lijia Xie, Temple University, 1801 North Broad Street, Philadelphia, PA, 19122, United States of America, hmkaren@temple.edu, Chih-Chien Chen, Shin-Yi Wu

Technological advances over past decades have led to the proliferation of User-Generated Content (UGC) on various social media platforms (e.g., Yelp, TripAdvisor, Priceline). However, the current ranking algorithms of UGC sites remain largely unknown and controversial. Moreover, such ranking systems tend to induce consumers to focus on one single characteristic dimension of products (e.g., price, review score, etc.), failing to account for consumer heterogeneity in product preferences. In this paper, we adopt a structural model to estimate the economic impact of various hotel characteristics and review features. We then propose a consumer-centric ranking strategy that ranks each hotel according to the consumer demand. We use a unique dataset of six-year transactions of 4,203 hotel properties in Texas which is supplemented with extensive UGC data published for each hotel on TripAdvisor.com. This empirical study provides a better ranking system to signal product quality on UGC sites and to improve the decision making process of consumers.

3 - The Effect of Visual Representation on the Persuasiveness of Online WOM Messages

Anthony Asare, Assistant Professor of Marketing, Quinnipiac University, 275 Mt Carmel Ave, Hamden, CT, 06518, United States of America, aasare@comcast.net, Adwait Khare, Lauren Labrecque

WOM represents one of the most important sources of information transfer by consumers and the popularity of online review websites, and other social media has made WOM even more influential. This is because thousands of consumers post reviews which many more potential consumers read before making purchase decisions. Although online WOM information is useful, its benefits are often not realized, because consumers are increasingly overloaded with information in electronic environments. Reviews of a single product can sometimes number in the thousands, thus making it exceedingly difficult for a consumer to read all the reviews written about a product or service. To make it easier and more efficient for consumers to utilize reviews, companies tend to use different kinds of visual representation to summarize and synthesize reviews that have been written on online sources. Such visual representation is very commonly used on online review sites and includes stars, bar graphs, pie graphs and colors with different levels of hue and saturation. The visual representation literature shows that although visual representations can improve decision making efficiency, they may also bias decisions by focusing attention on a limited set of alternatives and increasing the salience of less diagnostic information. This study examines the extent to which visual representations can affect consumer decision making, particularly in online WOM environments. The paper focuses on the effects of colors, symbols and formats on the persuasiveness of online WOM messages and also examines the moderating effect of different characteristics such as provider, recipient, message and product characteristics.

4 - The Impact of Social Distance in Virtual Brand Communities on Consumer Behavior

Sascha Steinmann, University of Siegen, Hoelderlinstrafle 3, Siegen, 57068, Germany, steinmann@marketing.uni-siegen.de, Gunnar Mau, Hanna Schramm-Klein, Gerhard Wagner, Jan Quickels

The concept of social distance implies that the perceived distance between a communicator – the brand – and the addressee – the members of a virtual brand community – depends on the degree of personalization of the message. In this context a higher degree of personalization lowers the perceived social distance between individuals, e.g. due to personalized messages and will have a positive effect on the members' perception and evaluation of the brand as well as on their purchase behavior, compared to an impersonal communication style. Besides the style of communication used, the pictorial presentation of the brand in the profile picture is another element which could affect social distance in virtual brand communities. The presence of an avatar could decrease social distance between the brand and the members' of the fanpage which will lead to a more positive perception and evaluation of e.g. the personality of the brand as well as in a more positive attitude towards the brand, compared to the use of the common brand logo. Therefore, to study the impact of social distance in online brand communities We conducted an experiment (N = 108, between subject design) to study the effects of the brand communication style (personal vs. impersonal) and the pictorial presentation of a brand (avatar vs. brand logo) on a fanpage in an online social network (facebook) on the members' attitude towards the brand, on brand personality, and their actual and intentional shopping behavior. The results show that a personal communication with the members' of the fanpage and a pictorial presentation of the brand within the community could have a positive impact on the attitude towards the brand, the perception of brand personality, and shopping behavior.

■ FB04

04- Courier

Goals and Decision-Making

Contributed Session

Chair: Remi Trudel, Assistant Professor, Boston University, School of Management, Boston, MA, United States of America, rtrudel@bu.edu

1 - Information Search, Overconfidence and Investor Returns

Sheila Goins, Assistant Professor, University of Iowa, S320 Pappajohn Business Building, Iowa City, IA, 52242, United States of America, sheila-goins@uiowa.edu, Thomas Gruca

Information search is generally regarded as a critical step in the consumer decision making process. While appropriate for products and most services, does information search benefit consumers in their investment decisions? Market efficiency suggests that gathering information is valueless since investors can learn from the information reflected in market prices, and yet, a very large segment of the financial services industry is dedicated to providing information to individual investors. Adding to the quandary, research shows that when investors expend effort to gather information, they are likely to be overconfident in their investing activities, leading to lower returns. We use archival data from two movie box office futures market. Our dataset also includes ex ante written forecasts, self assessments of forecast confidence, estimates of time invested in the forecasting activity and pre-opening prediction market trading activity. Our dataset enables us to confirm the link between information search, overconfidence and trading behavior and reveals the contingent benefit of increased information search. We find that the largest determinant of returns is accurate forecasts. We also find evidence of overconfidence, however, that overconfidence is a boon to those proven to be right, but quite harmful to those proven wrong. The inherent problem for investors is that accuracy is only revealed ex post. In this way, the contingent value of information search epitomizes the inherent risk and return of investing behavior.

2 - Modeling Consumer Decision-making under Multiple Goals

Lianhua Li, PhD Candidate, University of Alberta, School of Business, University of Alberta, Edmonton, AB, Canada, lianhua@ualberta.ca, Jennifer Argo, Joffre Swait

To our best knowledge, this research is the first attempt in any literature to model multiple-goal-driven choice by conceptualizing the simultaneous achievement of multiple goals within a single decision. It calls for reexamination of the widely-accepted notion of a "taste vector", which in standard one-goal models actually confounds goal importance with attribute usefulness in goal attainment, with consequent theoretical and managerial implications. From a theoretical point of view, the proposed framework suggests that heterogeneity in attribute importance weights should be examined after goals are controlled for. With better understanding about how tastes differ across goals, marketers can design products that better address consumers' need for achieving different goals and communicate more effectively with consumers about how certain product attributes help achieve specific goals.

3 - Can Small Victories Help Win the War? Evidence From Consumer Debt Management

Blakeley McShane, Northwestern University, 2001 Sheridan Road, Evanston, IL, 60208, United States of America, b-mcshane@kellogg.northwestern.edu, David Gal

The question of how individuals should structure goal-directed activity to maximize the likelihood of goal attainment is one of theoretical and practical significance. In particular, should individuals begin by attempting relatively easy tasks or more difficult ones? How might these differing strategies affect the likelihood of completing the overarching goal? We examine this question in the context of an important goal for a large number of consumers, namely getting out of debt. Using a dataset obtained from a debt settlement firm, we find that (i) closing debt accounts is predictive of eliminating one's debts irrespective of the dollar balance of the closed accounts whereas (ii) the dollar balance of closed accounts is not predictive of debt elimination when controlling for number of accounts closed. These findings suggest that completing discrete subtasks might motivate consumers to persist in pursuit of a goal. We discuss implications for goal pursuit generally and for consumer debt management specifically.

4 - Helping Consumers Get Out of Debt Faster: How Debt Repayment Strategies Affect Motivation to Repay Debt

Remi Trudel, Assistant Professor, Boston University, School of Management, Boston, MA, United States of America, rtrudel@bu.edu, Keri L. Kettle, Gerald Häubl

There is significant concern over consumer debt in North America. As of September 2011, American consumers owe $791 billion in revolving debt – 98% of which is credit card debt (US Federal Reserve, 2011). Our position is that personal debt is largely a behavioral problem. Moreover, consumers with problematic levels of debt – i.e., those of greatest concern – tend to have their financial liabilities distributed across multiple debt accounts leaving them with different strategies for paying down their debt accounts. For instance, they can repay their accounts sequentially (one at a time) or simultaneously (allocating the same amount to each account). In this research, we examine how debt repayment strategies influence consumers' motivation to pay off debt. Consumers with low self-control (but not those with high self-control) exhibit greater motivation when paying off their debt accounts sequentially (versus simultaneously). This effect persists whether the strategy is chosen or assigned, is strengthened by a recommendation, and moderated by the attainability of getting out of debt. These results are compelling given that low self-control consumers are more likely to have debt.

■ FB05

05- Essex Center

2011-12 Gary L Lilien ISMS-MSI Practice Prize Competition - Finalists Presentations

Cluster: Special Invited Sessions

Invited Session

Chair: Russell Winer, New York University, Stern School of Business, 40 W 4th Street, New York, NY, 10012, United States of America, rwiner@stern.nyu.edu

1 - Creating a Measurable Social Media Marketing Strategy for Hokey Pokey: Increasing the Value and ROI of Intangibles and Tangibles

V. Kumar, Georgia State University, 35 Broad Street Suite 400, Atlanta, GA, 30303, United States of America, vk@gsu.edu, Vikram Bhaskaran, Rohan Mirchandani, Milap Shah

This work focuses on how Hokey Pokey, a super-premium ice-cream retailer with over a dozen outlets based deployed social media to enhance its growth and profitability. Hokey Pokey offers "customized mix-in flavors", which the firm thought customer-developers could share using incentives and social media. They developed a model and measurement approach to link social media measures such as "comments" and "conversations" to financial metrics. They then developed a field test to evaluate the effectiveness of social media using their approach and found, among other effects, that the social media campaign lead to an increase in sales revenue growth of 40%, a 33-fold increase in the number of positive word of mouth instances, a 49% growth in brand awareness and an 83% ROI on the social media campaign.

2 - Category Optimizer™: A Dynamic Assortment, New Product Introduction, Price-Optimization and Demand-Planning System

Ashish Sinha, Professor, University of New South Wales, Quadrangle Bldg, Sydney, Australia, a.sinha@unsw.edu.au, Anna Sahgal, Sharat Mathur

Category Optimizer – is an advanced analytics tool that is used by retailers and manufacturers alike to make assortment, price-optimization and demand-planning decisions. It uses readily available scanner store data to estimate a market share model, and subsequently, uses these results to inform strategic and tactical decision making. The authors describe an application at Beringer California Collection (BCC) that helped guide the pricing, selection of and order of entry of products to introduce, the channels to use and the timing of introduction the products that lead to a profit increase of 70% for BCC with no loss of market share for the firm.

3 - PROSAD: A Bidding Decision Support System for Profit Optimizing Search Engine Advertising

Bernd Skiera, Professor, Goethe University Frankfurt, Grueneburgplatz 1, Frankfurt, 60323, Germany, skiera@wiwi.uni-frankfurt.de, Nadia Abou Nabout, Steffen Vogel

The authors present a model-based decision support system to enable optimal bidding for key words as well as facilitating human intervention in the process of bidding for those key words. They apply the approach in a field experiment at SoQuero, a Frankfort-based online advertising agency that manages search engine optimization campaigns for more than 40 advertisers. They show that the existing system (which yields an average keyword position of 2.97 versus 3.79 for the DSS-purchased keywords) leads to significant overpayment for the keywords, with profits after acquisition costs of -0.13 euro per keyword for the existing system versus 6.24 euro per keyword with the DSS.

■ FB06

06- St. George B

Pharmaceutical Marketing

Cluster: Special Invited Sessions

Invited Session

Chair: Japp Wieringa, University of Groningen, Roden, Netherlands, J.E.Wieringa@rug.nl

Co-Chair: Stefan Stremersch, Erasmus University, Erasmus School of Economics, Rotterdam, Netherlands, stremersch@ese.eur.nl

1 - The Role of Free Samples in the Pharmaceutical Industry: An Empirical Analysis

Puneet Manchanda, Professor of Marketing, University of Michigan, Ross School of Business, 701 Tappan Street, Ann Arbor, MI, 48109-1234, United States of America, pmanchan@umich.edu, Sridhar Narayanan, Renna Jiang

The pharmaceutical industry spends close to ten billion dollars on providing free samples to physicians. Firms in this industry expect that these samples will be dispensed to patients, with the expectation that these patients would then become regular consumers of the drug. In this study, we investigate the role of sampling in the prescription decision of the physician. There are multiple reasons why physicians may dispense samples – in order to learn about the patient-drug match, to learn about a (new) class of drugs, to subsidize the cost of drugs to patients that cannot afford them etc. We empirically investigate these issues using data on samples dispensed by physicians to a panel of patients and their prescription patterns for the same panel of patients. Our objectives in carrying out this research are threefold - to measure the effect of sampling on both short and long run prescription decisions of physicians, to understand the reasons that drive the physician's use of samples and to provide some guidelines to firms vis-à-vis their sampling strategy. The extant literature on the role and effectiveness is quite sparse and usually focused on consumer packaged goods. Our endeavor is to add to this literature both in general terms and with respect to the unique institutional features of the pharmaceutical industry.

2 - On the Use of Practitioner Budgeting Rules

Marc Fischer, Professor of Marketing and Market Research, University of Cologne, Albertus Magnus Platz, Cologne, 50923, Germany, marc.fischer@wiso.uni-koeln.de, Nils Wagner

The marketing budget allocation process receives great attention within a company. Surveys among managers identify that some budgeting rules, such as "Percentage of Sales", are predominantly used in companies for the marketing budget determination. But due to some serious methodological flaws the insights into the budgeting process based on these survey results are limited. This study extends the knowledge about budgeting behavior by conducting a descriptive study in which the authors analyze the application of rules in the budgeting process of companies. Therefore, the authors develop a marketing budget model that relates three dominant budgeting rules to the observed marketing budget outcome. This allows the identification of each rule's impact on the budget decision for each brand contained in the dataset. Additionally, the authors analyze moderating effects, which influence the application of single budgeting rules. The empirical dataset includes 518 drugs from four prescription drug categories and five European countries. The brand-times series cover a period of 12 years. The results show that the budgeting rules are indeed applied by practitioners, but the application differs across market and life-cycle conditions. Specifically, managers overestimate the application of profit-oriented methods, while they underestimate the influence of competition on the budget decision.

3 - International Growth of Generic Drugs

Vijay Ganesh Hariharan, Assistant Professor of Marketing, Erasmus School of Economics, Burgemeester Oudlaan 50, Rotterdam, 3000DR, Netherlands, hariharan@ese.eur.nl, Vardit Landsman, Stefan Stremersch, Isabel Verniers

A generic drug is comparable to a branded drug in dosage form, strength, route of administration, quality, performance characteristics, and intended use. Generics are typically named after their constituent molecules and are significantly cheaper than their branded counterparts. Patent-protection for the branded drug starts whenever a firm submits its initial filing for approval of a molecule. Once this period ends, generic firms can enter the market at lower prices and branded drugs increasingly lose sales to the cheaper generics. Although generic drugs are important to contain healthcare costs and increase efficiency in healthcare resource allocation, existing academic literature offers very little insights on the factors driving the growth of generic drugs. In this study, we investigate the effects of regulatory policies and competitive characteristics on the growth of generics across countries. Our analysis use a comprehensive data set consisting of sales and marketing spending of several molecules across countries along with country-specific information on patent expiry, ingredient compositions, brand names, and regulatory policies. Preliminary findings indicate that while pricing regulations typically hurt generic growth, policies targeted towards doctors and pharmacists tend to increase generic share. Our study provides useful implications to pharmaceutical firms, public policy makers, doctors, and patients.

4 - How, When and to Whom Should Pharmaceutical Innovations be Promoted?

Katrin C. Reber, Univerity of Groningen, Roden, Netherlands, K.Reber@rug.nl, Japp Wieringa, Peter S. H. Leeflang, Philip Stern

Pharmaceutical companies continually launch new drugs into the marketplace, and for these drugs, timely adoption by and diffusion across physicians is crucial to commercial success and the ability to recover the high and risky investments. In this study we investigate what marketing strategies are effective to ensure the successful market introduction of new drugs, and how marketing response varies by product-related, decision-maker-related, and time-varying factors. Combining these three dimensions simultaneously we provide a broader picture of how these factors jointly influence the effectiveness of marketing communication. This helps understanding why and how new products are accepted differently, and may provide guidelines for managers regarding (1) the introduction of other innovations in the same category, and (2) the improvement of marketing resource allocation across products, physicians, and time. For our empirical analyses we have access to the complete prescription history of a panel of 1505 UK-based physicians over 23 year. We also have information on the detailing history of each of the physicians as well as on various physician characteristics. We base our analyses on a four-segment-trial-repeat model where we consider a time-dependent Markovian structure for the transition probabilities. To accommodate physician and product heterogeneity in the model a hierarchical Bayesian setup is followed.

■ FB07

07- St. George C

Customer Relationship Management II

Contributed Session

Chair: J. Andrew Petersen, Assistant Professor, University of North Carolina at Chapel Hill, McColl Building, CB 3490, Chapel Hill, NC, 27599, United States of America, Andrew_Petersen@unc.edu

1 - Further Understanding Customer Loyalty: Explaining Variance in Drivers Across Firms & Industries

Yi-Chun Ou, PhD Candidate, University of Groningen, P.O. Box 800, Groningen, 9700 AV, Netherlands, y.c.ou@rug.nl, Thorsten Wiesel, Peter C. Verhoef

Research has shown the positive effect of customer equity drivers (CEDs) such as value equity, brand equity, and relationship equity on customer loyalty. In addition, it is generally agreed on that those effects differ across customers, firms, and industries. However, systematic research about the reasons for this variance of CEDs effects is missing since most work is either speculative, includes only one potential explanation of variation, or examines only one CED. As such, the objective of this study is to contribute to the current body of knowledge by explaining the differential effects of all three CEDs on customer loyalty across 90 firms in 17 industries. In doing so, we capture firm and industry effect jointly, by controlling for customer characteristics. Using data of 8436 customers of 90 service companies across 17 industries, we adopt a multilevel approach to account for the hierarchical data structure. In line with previous research, we find positive effects of CEDs across companies and industries, while the effects are quite heterogeneous and hence context-specific. Our included firm and industry characteristics explain between 16% and 58% of this cross-firm variance and about 99% of the cross-industry variance. Thereby, contractual settings explain most of the variance across companies and industries. Beyond contractual settings, innovative ability, revenue ranking, dynamics, average advertising expenses, and visibility to others have significant impacts. However, our results mostly do not support the contextual variables that have been speculated on in the literature. Our results have various academic as well managerial implications.

2 - The Impact of Return Policy on Transaction- and Relationship-level Behaviors: Theory and Empirics

Xiaoqing Jing, Assistant Professor of Marketing, Georgia Institute of Technology, 800 West Peachtree Street, Atlanta, GA, 30308, United States of America, xiaoqing.jing@mgt.gatech.edu

Retailers' return policies influence both consumer choices and operations costs. While many retailers adopt a lenient return policy to encourage purchases and maintain customer relationships, others may choose a restrictive policy in order to prevent excessive returns and control operations cost. In this paper, we theoretically and empirically investigate the impact of return policy on consumers' transaction- and relationship-level behaviors. Our theoretical model reveals that a greater return hassle may generate different impacts on consumers under different conditions and, in the worse-case scenario, may discourage purchases but not returns. Meanwhile, increasing return hassle always reduces consumer surplus, suggesting a detrimental effect on customer relationships. We further conduct an empirical study using data from a retailer who shifted from a three- to a one-month return policy. We develop a joint model of purchase quantity, return incidence, and return timing to examine the impact of the policy change. The results show that a more restrictive return policy decreases firm profitability, as customers purchase less frequently and return faster, but do not return less. We also find that tightening the return policy generates a negative effect on key relationship marketing metrics such as customer acquisition and loyalty development. These findings are consistent with the predictions of the theoretical model in the worst-case scenario.

3 - Product Warranties as Reputation Mechanisms: An Investigation in Business-to-business Markets

Lu Tai, University of Arizona, 1130 E. Helen Street, Room 320, Tucson, AZ, 85721, United States of America, ltai@email.arizona.edu, Tirthankar Roy, Mrinal Ghosh

Theoretical and empirical research on product warranties has primarily focused on their role as signals of unobservable product quality. Based on the seminal work by Spence (1977) and Grossman (1981), the basic argument is that high-quality sellers, by virtue of having lower expected failure rates and warranty costs, will offer more comprehensive warranty provisions as a signal of their product quality, compared to low-quality sellers. Realized product quality (or performance or reliability) in many contexts, however, also depends on customer-side activities (e.g., operational complexity in which the machine is used, care, maintenance, etc.) which are often unobservable and many theoretical models (e.g., Cooper and Ross 1985; Lutz and Padmanabhan 1995) have developed insights into the warranty provisions in such double-sided moral hazard setups. In this paper, we use primary data obtained from manufacturers of industrial equipment to systematically investigate the role of warranty provisions in these double-sided moral hazard settings. These investigations are conducted at both the product-line level as well as at an individual customer relationship level. Specifically, at the product-line level, we study the influence of product and aggregate customer-base characteristics on the level of warranty comprehensiveness offered on that product-line. Then using data obtained on individual customer-level relationships (where the customer uses the said product-line) and taking the product-line level warranty as exogenous, we study the relationship between that customer's characteristics and their perception of realized quality of the product-line. Implications for theory and practice are drawn.

4 - The Effect of National Culture on Consumer Behavior and Response to Marketing Initiatives

J. Andrew Petersen, Assistant Professor, University of North Carolina at Chapel Hill, McColl Building, CB 3490, Chapel Hill, NC, 27599, United States of America, Andrew_Petersen@unc.edu, V. Kumar, Tarun Kushwaha

As the heterogeneity of national cultures in different countries continues to increase, it is becoming more imperative that we understand how cultural differences impact consumer behavior. Our study contributes to the rich literature in cross-national and cross-cultural investigation by analyzing how national culture plays a role in two distinct phenomena. First, we want to understand how national culture helps to explain variance in purchase decisions across all consumers independent of firm-initiated marketing efforts through what we call the Cultural Behavioral Effect. Second, we want to understand how a consumer's national culture helps to explain the variance in the effectiveness of firm-initiated marketing efforts on consumer behavior through what we call the Cultural Marketing Interaction Effect. The Cultural Behavioral Effect helps to describe the variance in a consumer's behavior from a given national culture independent of firm-initiated marketing efforts. The Cultural Marketing Interaction Effect helps to describe the variance in responsiveness of a consumer from a given national culture to firm-initiated marketing efforts. We test these hypotheses using Hofstede's 5 dimensions of national culture and 36 months of data from a large multinational financial services firm using a random stratified sample of 15,750 customers (450 customers each from 35 different countries of origin). We find empirical evidence which supports our hypotheses related to both the Cultural Behavioral Effect and the Cultural Marketing Interaction Effect, suggesting that national culture does play a major role in both a consumer's behavior and responsiveness to firm-initiated marketing efforts.

■ FB08

08- Adams

The Dynamic Effects of Strategic Responses to Market Incentives II

Cluster: Special Invited Sessions

Invited Session

Chair: Ahmed Khwaja, Yale University, New Haven, CT, United States of America, ahmed.khwaja@yale.edu

1 - Identification of Dynamic Models of Rewards Programs

Andrew Ching, University of Toronto, Toronto, ON, Canada, andrew.ching@rotman.utoronto.ca, Neelam Jain, Susumu Imai, Masakazu Ishihara

"Frequent-buyer" type of rewards program is a commonly used marketing tool for retailers to compete for market shares. It also provides an unique environment for studying consumer's forward-looking behavior. The consumer's problem can be formulated as a stationary infinite horizon discrete choice dynamic programming model. We study the identification issue of this dynamic model of rewards program. To illustrate our identification arguments, we use a simple dynamic store choice model where stores offer "frequent-buyer" type rewards programs. In the model, consumers face random price promotion and need to make the trade-off between obtaining higher utility today and moving closer to receiving a gift in the future. We show that under fairly general conditions, the parameters of this model, including the discount factor, can be identified at the individual level. In particular, we show that the relationship between store choice probabilities and the distance towards the rewards cut-off point varies with the discount factor in a very nonlinear fashion. We also conduct several Monte Carlo experiments to provide evidence on how well the model parameters can be identified in practice.

2 - Dynamic Pricing with Negative Buyer Herding

Guofang Huang, Yale University, New Haven, CT, United States of America, guofang.huang@yale.edu, Hong Luo, Jing Xia

This paper first tests the existence of information spillover through time-on-the-market using novel panel data from the used car retail market. Motivated by the test results and patterns in the data, it then develops and estimates a structural model of dynamic pricing with negative buyer herding to analyze the causes of the observed large variation in dealers' inventory turning rates from three perspectives: the extent of buyer herding, the dealer's information about market demand and the cost of adjusting prices over time. Finally, the paper uses the estimated structural model to quantify the value of superior information about market demand and the impact of potential information revelation policies.

3 - An Empirical Model of Dynamic Merger Enforcement

Przemyslaw Jeziorski, University of California-Berkeley, Haas School of Business, Berkeley, CA, United States of America, przemekj@haas.berkeley.edu

A broad goal of merger enforcement is to prevent mergers that significantly reduce competition and might lead to a decrease in consumer or total welfare. In most countries, an antitrust agency pre-announces the rules of enforcement and then operates within a set of endogenously proposed mergers. Therefore, changes in these rules (for example moving from non-equilibrium to equilibrium analysis, or from static to dynamic analysis), will affect the dynamics of the industry not only through approval/rejection decisions, but also through changes in the conduct of forward-looking companies. Such changes might involve proposing a different set of mergers for a review, as well as adjustments in entry/exit and product repositioning decisions. This paper proposes the first fully computable, dynamic empirical model that addresses these challenges in the markets with differentiated products. The proposed framework can be used to compute endogenous long-run response to different antitrust regimes, predicting a set of proposed mergers as well as a set of active products that determines prices and welfare. As a result it allows to study endogenous mergers waves, post-merger entry/exit and product repositioning. The framework was constructed with an empirical analysis in mind, allowing for a large set of possible demand structures and incorporating persistent unobserved heterogeneity among firms along with aggregate shocks. The model is subsequently applied to assess an impact of regulatory regime changes on dynamic incentives to merge in the radio industry. For that purpose I estimate the dynamic model, and recompute a dynamic equilibrium for different antitrust regimes, reporting profits and consumer welfare

4 - Dynamic Learning and Exit in a Competitive Industry

Hongju Liu, Assistant Professor, University of Connecticut, 2100 Hillside Road Unit 1041, Storrs, CT, United States of America, hliu@business.uconn.edu, Qiaowei Shen

This paper presents a model of firms making exit decisions in a competitive industry. We model the process as the result of learning and selection in a dynamic game setting. Firms are uncertain about their true capability of competing in the market. Meanwhile, they are uncertain of the true types of their competitors. Sales of each time period provide a noisy signal of the capabilities of the competing firms and the firms use the demand signals to update their belief of themselves as well as their competitors in Bayesian fashion. Firms strategically decide whether to exit the industry each period given the learning results and the expectation of the competition dynamics. We estimate the model using a data set of China's evolving microwave industry. We also separately evaluate the importance of self-learning, learning-of-others and competition in driving the exit decisions through simulations.

■ FB09

09- Helicon

Choice Models I

Contributed Session

Chair: Bas Donkers, Erasmus University, Erasmus School of Economics, Rotterdam, Netherlands, donkers@ese.eur.nl

1 - Measuring Incrementality and Substitutability in Automotive Purchases

Jihoon Cho, PhD Student, University of Michigan, 701 Tappan St., Ann Arbor, MI, 48109, United States of America, jihoonch@umich.edu, Fred Feinberg, Richard Gonzalez, Mike Palazzolo

Companies producing large-scale durables lack the ability to rapidly introduce products to, or remove them from, the market. Lead times are lengthy, development costs high. In making such decisions, they must gauge all the consequences of a product (de-)introduction. In automobiles, if deleting a model caused customers to simply buy another — perhaps even a higher-margin one — from the same company, that would be a judicious decision; if it instead caused defection to a competitor, perhaps for life, it would be a poor one. Similar logic applies to introducing a new model that results in excessive cannibalization of existing vehicles. We introduce a novel methods, incrementality and substitutability, to gauge the full impacts of either regional or national model introductions or deletions. Coupling consideration set and purchase incidence models with multi-year, large-scale cross-sectional data on household-level purchases, we provide metrics for how a potential product deletion (or introduction) leads to share redistributions both within and outside the focal firm, purchase deceleration, defections to or from the secondary market, as well as the impacts of economic inputs (e.g., fuel prices) and legislation (e.g., CAFE standards). Projections are made for a large-scale auto manufacturer for various product line decisions over a 5-year planning horizon.

2 - The Value of Field Experiments

Jimmy Li, Massachusetts Institute of Technology, 77 Massachusetts Ave, Cambridge, MA, 02139, United States of America, qjli@mit.edu, Duncan Simester, Paat Rusmevichientong, John Tsitsiklis, Spyros Zoumpoulis

In recent years, many firms have had greater opportunities to conduct field experiments to help improve their marketing decisions, but the feasibility of using field experiments to optimize marketing decisions remains relatively unstudied. We investigate decisions that require estimating a large matrix of cross-product demand elasticities and ask: how many experiments are required as the number of products grows? Our main result demonstrates that even for complex marketing problems, improvements in profits can be achieved even after relatively few experiments. In particular, under certain assumptions the number of experiments required grows just logarithmically with the number of products. These findings potentially have important implications for the application of field experiments. Firms may be able to obtain meaningful estimates using a practically feasible number of experiments, even in settings with a large number of products. The relevance of our findings is confirmed through simulations using realistic parameters gathered from a real-world large-scale pricing experiment.

3 - The Effect of Constructed Preferences on Consumer Search for Durable Goods

Daria Dzyabura, Massachusetts Institute of Technology, 100 Main Street, E62-582, Cambridge, MA 02142, United States of America, dariasil@mit.edu

I study the role of preference construction in consumer search for durable goods. In most models of consumer search, preferences are static and known to the consumer, and through the search process the consumer learns about the products available on the market. I propose a model of search behavior based on a formal model of the way preferences get constructed during the process of product search. I introduce uncertainty about preferences, rather than product attributes and explore important implications for product recommendations. The recommending agent can be either an online system or a human agent. Qualitative evidence from interviews with real estate agents suggests that one of the biggest challenges in buyer–agent interaction is that consumers do not know exactly which product attributes are important to them when they start searching. Consumers learn what they like and dislike as they examine products. Recommendations bring products to the consumer's attention and impact his/her preferences. This changes search objectives and the entire search path. I derive analytical results about the length and effectiveness of search and the value of product recommendations. I provide survey data from real estate agents that is consistent with the model's assumptions and predictions, and which suggest critical experiments to distinguish the proposed theory from alternative explanations.

4 - Unity Makes Strength: Combining Binary Prediction Methods to Optimize Financial Performance

Bas Donkers, Erasmus University, Erasmus School of Economics, Rotterdam, Netherlands, donkers@ese.eur.nl, Peter C. Verhoef, Aurelie Lemmens

Predicting binary outcomes, such as customers' response to mailings, customer adoption or defection, contract renewal and upgrade decisions, or even product purchase decisions is a central task for marketing academics and practitioners. Along with the rapid developments over the last decades in the marketing modeling field, as well as in computer science, a plethora of methods is now available to them and they are often confronted with the question: 'Which method is most appropriate for my data? To offer managers an answer to this important question, we have investigated the performance of the most prominent binary prediction methods in marketing science, both in a broad simulation study, as well as over a large collection of actual data sets originating from different marketing contexts and industries (banking, insurance, charity, telecommunication, catalog retailing and public transportation). We first demonstrate that, in contrast to what academics and practitioners have searched for, no single method consistently outperforms all others as data characteristics significantly influence the predictive ability of each method. Based on the simulation study, we shed light on which marketing contexts should be paid attention to when choosing for a prediction method. Finally, we propose to resolve the delicate issue of method selection by proposing to combine them using latent class methodology, assuming that different customers come from different classes, each with their own best prediction method. This allows us to benefit from the strength of each method. Our method turns out to outperform single methods on average and to substantially reduce the variance in predictive ability across data sets.

■ FB10

10- St. George D

Innovation I

Contributed Session

Chair: Elina Petrova, Assistant Professor of Marketing, Washington State University, 2710 Crimson Way, CIC 125F, Richland, WA, 99352, United States of America, epetrova@wsu.edu

1 - Predicting a Patent's Lifetime Value (PLV) using Patent Rank

Monte Shaffer, Eller College of Management, 1130 East Helen Street, McClelland Hall # 116D, Tucson, AZ, 85721-0108, United States of America, monte.shaffer@gmail.com, Len Jessup, U.N. Umesh, Avimanyu Datta

Assessing a patent's value objectively is a vital element of venturing as identifying and managing radical innovation separates successful business ventures from failures. We present a method to objectively assess a patent's value; then, with some information available, we are able to predict a patent's total lifetime value and provide the potential value a venture can objectively place on each patent innovation. Using Patent Rank, we present a statistical-assessment technique that objectively discerns race horses (patents fast out of the gate that win races) and mules (slow and steady) from show ponies (patents that look good on paper). Using this technique, one can then assess the value of not only a single innovation, but also a portfolio of innovations for a firm, a sector, or an industry. We demonstrate this by examining nearly 200,000 patents from 70 firms in the IT industry. This new market information should improve the assessment of entrepreneurial opportunities.

2 - Spatial Success Factors for Product and Process Innovation in the Renewable Energy Sector

Anke Kutschke, Chair of Marketing and Innovation Management, Brandenburg University of Technology Cottbus, Erich-Weinert-Str. 1 Building 10, Cottbus, 03046, Germany, anke.kutschke@tu-cottbus.de, Alexandra Rese, Daniel Baier

The growth of the renewable energy sector with its innovative products and processes affords a high level of inter-organizational cooperation. Besides traditional success factors for this inter-organizational cooperation - e.g. product or process advantage, proficiency, synergy, trust, commitment, and communication (see Rese, Baier 2011) - spatial success factors (e.g. closeness to markets, suppliers, other research organizations and universities) seem to play an important role (e.g., Jaffe 1989, Agrawal 2001, Yusuf 2008). However, an empirical examination w.r.t. this importance that goes beyond the usual cluster discussion as well as local politics and policy analysis is missing up to now. Consequently, this paper analyzes the situation of 300 German inter-organizational cooperations in the renewable energy sector w.r.t. to this question. Spatial proximities between cooperations, markets, suppliers, other research organizations and universities are measured and integrated in a spatial model. The analysis shows the importance of the spatial success factors, also in relation to the traditional ones. References Agrawal, A. (2001): University-to-Industry Knowledge Transfer: Literature Review and Unanswered Questions, International Journal of Management Review, 3, 4, 285–302 Jaffe, A. B. (1989): Real Effects of Academic Research, The American Economic Review, 79, 5, 954–970 Rese, A., Baier, D. (2011): Success Factors for Innovation Management in Networks of Small and Medium Enterprises, R&D Management, 41, 2, 138-155 Yusuf, S. (2008): Intermediating Knowledge Exchange between Universities and Businesses, Research Policy, 37, 1167-1174.

3 - Optimal Licensing of an Agricultural Innovation: Fees versus Licenses

Di Fang, Arizona State University, 7231 E. Sonoran Arroyo Mall, Santan Hall, Mesa, AZ, 86682, United States of America, dfang3@asu.edu, Timothy Richards, Bradley Rickard

Developing and marketing new varieties is essential to sales and profit growth in U.S. fruit and vegetable markets. Innovations, whether in agriculture or elsewhere, are licensed by the inventory using either fixed-fees, per-unit royalties or a combination of both. Whereas the early theoretical literature found that fixed fees are optimal (Arrow, 1962), per-unit royalties are more often observed in practice (Sen and Tauman, 2007). We consider a Cournot duopoly that produce a homogenous product in the final market and we come to the conclusion that only a royalty licensing to both firms can generate positive profit for the patent holder. This is under the consumption that the degree of innovation in the new technology is relatively large. If the degree of innovation is small, royalty payment can not compensate for the initial cost occurred to the patent holder.

4 - The Impact of Openness in Innovation on Firms' Performance

Elina Petrova, Assistant Professor of Marketing, Washington State University, 2710 Crimson Way, CIC 125F, Richland, WA, 99352, United States of America, epetrova@wsu.edu, Jean Johnson, Sanjay Sisodiya

Greater assimilation of externally sourced know-how (openness in innovation, or OII) as a vehicle to expedite the NPD process and shorten the pathway to product commercialization holds promise for smarter business practices but warrants more empirical research. OII is hailed as an efficient method to enhance firms' performance by complementing and augmenting firms' internal R&D efforts. However, researchers have recently started to question the boundaries of its expediency. We operationalize and, in a series of two papers, explore the impact of OII on firms' market performance and innovation outcomes. The first study examines the impact of OII and its domains on the efficient transformation of key strategic inputs into sales revenue. In addition to uncovering sub-optimality in the allocations of key strategic inputs in a sample of high-tech industries, we also find class-specific effects of OII and its distinct domains. We identify systematic firm and industry characteristics that explain these disparate effects. The second study investigates the joint effects of OII and internal R&D on the impact and originality of firms' patented innovations and on the extent to which they can be considered revolutionary. Our measures approximate firms' intangible but sustainable assets such as industry captaincy, reputation and authority, as well as brand equity. Such assets carry significant option value as they can potentially be monetized through greater market rents, extra sales revenue, or higher profits. Accounting for the environmental effects of technology intensity and market turbulence, we find that firms' innovation output can be adversely affected by a policy toward greater openness. The characteristics of the environment further modulate these effects.

■ FB11

11- Empire

Supply Chain Issues at the Marketing-Operations Interface

Cluster: Special Invited Sessions

Invited Session

Chair: Chakravarthi Narasimhan, Washington University at St Louis, John M. Olin School of Business, St. Louis, MO, United States of America, narasimhan@wustl.edu

1 - Multilateral Bargaining and Downstream Competition

Liang Guo, Associate Professor, Hong Kong University of Science and Technology, Department of Marketing, Hong Kong, China, mkguo@ust.hk, Discussant: Itai Ashlagi, Ganesh Iyer

We examine multilateral bargaining in vertical supply relationships which involve an upstream manufacturer who sells through two competing retailers to the end consumers. In these relationships the negotiations are inter-dependent and a bargaining externality may arise across the retailers. In addition, the timing by which the manufacturer negotiates with the retailers becomes important. The manufacturer may negotiate simultaneously with the retailers or sequentially with one retailer at a time. In simultaneous bargaining the retailers negotiate without knowing if an agreement has been reached in the other retail channel, whereas in sequential bargaining the retailer in the second negotiation is able to observe whether an agreement was reached in the first negotiation. This observability of the existence of a prior agreement in the case of sequential negotiations can endogenously affect the bargaining externality. We show that simultaneous bargaining is optimal for the manufacturer when the retail prices (and profitability) are similar, while sequential bargaining is preferred when the dispersion in the retail prices is sufficiently large. Moreover, multilateral bargaining can buffer downstream competition and thus lead to positive retail profits even in markets that are close to perfect competition.

2 - Engine Mix Planning Optimization Across an Auto Fleet

Fred Feinberg, Professor, University of Michigan, 701 Tappan St., Ann Arbor, MI, 48109, United States of America, feinf@umich.edu, Jihoon Cho, Richard Gonzalez, Mike Palazzolo, Morris Cohen

Models of consumer choice typically focus on brands; or, in the case of automobiles, specific models. Auto companies wish to gauge demand for their entire product lines, but a more pressing problem concerns how to meet scalable capacity for specific parts, capacity that must be plotted out years in advance. For example, if the firm accurately predicts overall auto demand, they may still mispredict the engine mix ratio (e.g., V4 vs. V6), leading to (say) too many V6s and too few V4s. This in turn causes unmeetable demand for the latter and the need to resort to consumer incentives and other marketing vehicles to clear excess V6-based inventory, irrespective of consumer demand for particular auto models. We develop a decision support system for engine mix optimization and capacity prediction that melds traditions from brand choice modeling in marketing and dynamic programming from operations. Key objectives include (1) incorporating capacity constraints for each type of engine (only some of which may be planning), (2) modeling prices observed in the market, which are partly endogenous (based on under/oversupplies); and (3) firms' shifting of the scarcer engine types to their more profitable models. The role of governmental regulation and economic demand shocks are discussed.

3 - The Economics of Joint Production in Services: Complementarity, Returns to Scales and the Client-provider Boundary

Guillaume Roels, Assistant Professor, University of California-Los Angeles, Anderson School of Management, Los Angeles, CA, United States of America, guillaume.roels@anderson.ucla.edu

This paper analyzes the economics of joint production in services, between a client and a service provider. We study how efforts change when they become more complementary, when their returns to scale increase, and when their distribution shifts from the service provider to the client. We identify non-monotone effects of these changes, revealing a trade-off between operational efficiency, leading to greater effort exertion and more specialization, and complementarity, pushing for greater effort alignment. In particular, with double moral hazard, we show that the optimal contract must balance incentives when efforts are complements, but may degenerate to a fixed-price contract when efforts are substitutes. We bound the loss of efficiency from double moral hazard and show that it is relatively small with scarce resources and low returns to scale. Our analytical framework generates insights into the nature of service innovations in various industries, such as education, healthcare, insurance, and restaurant industries.

■ FB12

12- Parliament

Bayesian Methods II

Contributed Session

Chair: Duncan Fong, Professor, Pennsylvania State University, 455B Business Building, University Park, PA, 16802, United States of America, i2v@psu.edu

1 - An Alternative Approach to Choice Based Conjoint Analysis

Sudhir Voleti, Assistant Professor, Indian School of Business, AC2 L1, ISB Campus, Gachibowli, Hyderabad, AP, 500032, India, sudhir_voleti@isb.edu, Seenu Srinivasan, Pulak Ghosh

Conjoint analysis continues to be popular with over 14,000 applications each year. Choice based conjoint (CBC) analysis that offers the more realistic discrete choices to respondents have gained popularity in recent years. CBC is currently the most widely used method of conjoint analysis accounting for over four-fifths of all conjoint studies. The CBC employs a multinomial logit model with heterogeneous parameters across the population. The most popular method to estimate CBC is Hierarchical Bayes (HB) estimation with heterogeneity captured by a multivariate normal distribution, or a mixture of multivariate normal distributions. Respondent preference heterogeneity, however, may potentially take more complex or non-standard shapes. We posit that more flexible, distribution-free methods are likely to yield better predictive validity. In this presentation we propose a Bayesian semiparametric method that (i) robustly estimates consumers' part-worths, (ii) flexibly and parsimoniously captures respondent heterogeneity, and (iii) offers superior predictive power based on holdout sample analysis compared to benchmark specifications. The empirical test is carried out over six CBC data sets with the realistic "none of the above" option included.

2 - Design and Analysis for a Selective Choice Process

Qing Liu, Assistant Professor, University of Wisconsin-Madison, 975 University Ave, Madison, WI, 53706, United States of America, qliu@bus.wisc.edu, Ty Henderson

Consumers are known to selectively process only a small subset of product attributes and levels (variables) when faced with a large number of options in a choice context (e.g. Yee et al. 2007). In an increasingly feature-rich product marketplace where consumers selectively evaluate information there is a need to understand how such information processing shortcuts affect our understanding of the choice process so that companies can design better products and improve the buying experience. Statistical models such as Bayesian variable selection (e.g. George and McCulloch 1993) have been used to analyze data from a selective choice process. Rather than modeling individual-level attribute consideration thresholds which characterize the extremes of the heterogeneity distribution in non-compensatory choice models (e.g. Gilbride and Allenby 2004), variable selection implies a zero value for an attribute. We propose a method for modeling this sparsity that incorporates auxiliary stated data. We discuss the implications of modeling a selective choice process on product planning and point to challenges in constructing experimental designs when the number of variables selected is small relative to the total number of variables in the study.

3 - Generalized Direct Sampling for Hierarchical Bayesian Models

Michael Braun, Associate Professor of Marketing, Massachusetts Institute of Technology, Sloan School of Management, 77 Massachusetts Ave., Cambridge, MA, 02139, United States of America, braunm@mit.edu, Paul Damien

We develop a new method to sample from posterior distributions in hierarchical models without using Markov chain Monte Carlo. This method is generally applicable to high-dimensional models involving large data sets. Illustrative analysis exemplifies the ease with which one could implement our method, which results in independent samples from the posterior distributions of interest. This method eliminates the need to be concerned with chain convergence and autocorrelation.

4 - A Heterogeneous Bayesian Regression Model for the Analysis of Cross-sectional Data

Duncan Fong, Professor, Pennsylvania State University, 455B Business Building, University Park, PA, 16802, United States of America, i2v@psu.edu, Peter Ebbes, Wayne DeSarbo

Multiple regression is frequently used across the various social sciences to analyze cross-sectional data. However, it can often times be challenging to justify the assumption of common regression coefficients across all respondents. This manuscript presents a heterogeneous Bayesian regression model that enables the estimation of individual level regression coefficients in cross sectional data involving a single observation per response unit. A Gibbs sampling algorithm is developed to implement the proposed Bayesian methodology. A Monte Carlo simulation study is constructed to assess the performance of the proposed methodology across a number of experimental factors. We then apply the proposed method to analyze data collected from a consumer psychology study that examines the differential importance of price and quality in determining perceived value evaluations.

■ FB13

13- North Star

Entertainment Marketing I

Cluster: Special Invited Sessions

Invited Session

Chair: Min Ding, Professor, Pennsylvania State University, Smeal College of Business, 408 Business Building, University Park, PA, 16802, United States of America, minding@psu.edu

1 - "I Got You Babe": Brand Alliances in Live Music

Anita Elberse, Associate Professor, Harvard University, Harvard Business School, Boston, MA, United States of America, aelberse@hbs.edu, Vankat Kuppuswamy

Seeking to test theories on the performance and optimal composition of strategic alliances between brands, we examine such alliances in the context of live music. Alliances between touring artists are common – most concerts have headlining and supporting acts – and artists typically engage in a variety of different partnerships over time. This creates helpful research conditions, for instance when it comes to the ability to control for the underlying quality of brand allies. We use proprietary concert-ticket-sales data, specified at the level of individual concerts, for a sample of 180 randomly selected headlining and corresponding supporting acts over a period of ten years, yielding thousands of observations. We analyze these data using an econometric model that explains the performance of artist alliances as a function of the relative strength of each ally as well as a range of control factors, and that accounts for the potentially endogenous relationship between the nature of the alliance and its touring performance. We outline both the theoretical and managerial implications of our empirical results.

2 - Understanding Consumer Preference of Films From Voice Responses

Min Ding, Professor, Pennsylvania State University, Smeal College of Business, 408 Business Building, University Park, PA, 16802, United States of America, minding@psu.edu, Hye-jin Kim

The challenge in understanding consumer preferences of movies comes from the complexity of product. In other words, there are many factors such as the genre, plot, combination of actors, and directing, which interacts with each other and makes predicting the performance difficult. The objective of this paper is to propose and test a new methodology of an 'audio-based focus group, which will

help practitioners better understand viewers' preferences and their reactions to movies, as well as identify the factors that affect their preferences. We record multiple groups of people having conversations and evaluating a series of movies. The recordings are used to conduct voice analysis, where we infer various emotions such as excitement and uncertainty, detect relevant keywords, and understand the dynamics of the group. Our analysis should provide insights on more subtle but important drivers of viewers' preferences than the traditional focus group studies.

3 - An Investigation of the Relationship Between Minimum Guarantees and Movie Revenues

Mark A.A.M. Leenders, University of Amsterdam, Amsterdam Business School, Amsterdam, 1018 TV, Netherlands, m.a.a.m.leenders@uva.nl, Gerda Gemser, Charles B. Weinberg

Successful development and commercialization of new products is essential to obtain a sustainable competitive advantage. However, there is substantial uncertainty surrounding new product development (NPD), in part due to the difficulty of accurately predicting product demand before launch. While it may seem straightforward that forecast accuracy increases the closer one gets to launch, there are some countervailing forces. These include the following: an escalating commitment to a new product over time may interfere with objective assessment of a product's potential value, new uncertainties may emerge due to environmental or competitive factors, and commitments at prior stages can constrain future decisions. We study these issues within the context of the movie industry. In this study, a clearinghouse company provided data on the minimum guarantees of movies that were sold before completion (n= 86). The data include both mass market and art house movies. The minimum guarantee is an estimate of the value of a movie late in its development process and represents the minimum amount that a buyer will pay to a seller of a movie. Data on a movie's characteristics (e.g., production budget, star power, and genre) are available early in the production process. Our measure of market success is revenue from worldwide box office and US video sales. Our results will test whether adding information on the minimum guarantee improves the accuracy of revenue forecasts based on early development stage predictors only, thus providing insight into the value of late stage market forecasts in NPD.

4 - What is Advertising Content Worth? Evidence From the Motion Pictures Industry

Vithala R. Rao, Professor of Marketing, Cornell University, Johnson Graduate School of Management, Ithaca, NY, United States of America, vrr2@johnson.cornell.edu, S. Abraham Ravid, Suman Basuroy

The large literature on the impact of advertising on consumers and firm behavior in marketing and economics has tried to distinguish between the informative and the persuasive roles of advertising. The extant literature typically uses advertising expenditure and implicitly assumes that advertising content is homogeneous. We analyze the contents of print ads in the motion picture industry to see whether the persuasive content or the informative content is more impactful on revenues. We estimate a simultaneous equation system via the GMM method and find that the persuasive content (role) of advertising is more significant than the informative content (role). Overall, we find that content elements matter in different ways. External validation components – persuasive contents, are much more important than other ad contents for predicting revenues and returns. Thus, we provide an interesting insight to this debate.

5 - The Impact of Social Networks on the Success of Innovation: A Study of the Hollywood Motion Picture Industry

Jurui Zhang, PhD Candidate, University of Arizona, Eller College of Management, Tucson, AZ, United States of America, jurui.zhang@gmail.com, Yubo Chen, Yong Liu

Innovation drives the economy and is critical for firms' survival and growth. In this study, we propose that the social networks embedding members of the innovation team play particularly important roles in fostering creativity, attracting resources, and influencing the innovation performance. We develop a conceptual framework that enables us to make predictions on how different network structures may result in different market performance of the new product developed. In testing the predictions, we construct a collaboration social network of the Hollywood movie industry and focus on the roles of movie directors to examine the effects of social networks. The movie industry provides an excellent context to study social network and innovations – numerous new movie titles are produced each year, and movie projects involve complex team work and the team members collaborate across different projects. Our data identified 2,310 major actors/actresses, directors, writers and producers from 27,103 movies released from 1941 to 2005. We address the endogeneity problem endemic to social network studies through a panel approach. Our findings provide important implications for managerial practice and academic research on innovations, teams and collaborations, and social networks.

■ FB14

14- Defender

Brand and Intellectual Property Management

Cluster: Special Invited Sessions

Invited Session

Chair: Yi Qian, Assistant Professor, Northwestern University, Kellogg School of Management, Evanston, IL, United States of America, yiqian@kellogg.northwestern.edu

1 - Cosmetics in the Brand – Impacts of Counterfeit Cosmetics

Chayoun Kim, Northwestern University, Evanston, IL, United States of America, chayoun-kim@kellogg.northwestern.edu, Yi Qian

Counterfeiting has been spreading over different industries, ranging from footwear to apparel, from handbags to sunglasses, from pharmaceuticals to electronics. Recently, counterfeiters cosmeticize their brand (faking it) even to cosmetic products. Using a unique panel data on a Korean cosmetic brand that has been infringed by counterfeits, we study the impacts counterfeits have on consumers' purchase behaviors of the authentic brand.

2 - Selling Intellectual Property Through Auctions: Understanding the Effects of Information Presentation

Joseph Derby, Texas Tech University, Lubbock, TX, 79409, United States of America, joseph.derby@ttu.edu, Mayukh Dass, Yi Qian

This paper examines the effects of information presentation on the outcome of Intellectual Property auctions. We collected data from eight IP auctions held between 2006-2008 and examine how the information presentation in these auctions have affected the realized price of IP. In particular, we qualitatively identify auctions where information presented is either organized or unorganized, and then empirically examine the how the effects of IP value drivers affect auction outcome across them. We tie our conceptualization to the linkage theory for auctions and extend the information quantity aspects of linkage theory to information quality and presentation aspects. Our research opens a new area for the marketization of ideas and IP. In particular, we show that information presentation is a crucial element of IP marketing, and therefore, should be taken seriously by IP marketing managers. Moreover, our study provides empirical evidence linking auction house information policy with IP auction outcomes whose implications can go beyond the IP auction setting. For example, our results indicate that information presentation is important, which can also become an important factor during private IP deals. Prior academic research on the role and importance of intangible assets to firms has primarily focused on competition, strategy, legal and accounting literatures, with research mainly in the areas of managing and valuing intangible assets, and their importance to business strategy. Our study is an initial attempt to understand the process of IP monetization, and examine the marketing of IP. We hope that our study will encourage other researchers to start looking into marketing issues of IP and help us understand the IP market more efficiently.

3 - Innovation and the Market for Technology in the Biopharmaceutical Industry

Manuel Hermosilla, Northwestern University, Evanston, IL, United States of America, m-hermosilla@kellogg.northwestern.edu, Eric Anderson, Yi Qian

To an important extent, innovation of biopharmaceuticals is fueled by drug candidate licensing deals, whereby commercialization rights of developing drugs are transferred between firms. In this paper we investigate firms' licensing strategies by looking at pipeline adjustments of over 160 biotechnology firms. Using the variation imposed by the exogenous demand shock associated to instauration Medicare part D (i.e., a large-scale prescription drug insurance subsidy program), we assess the efficiency of this market.

4 - Dyadic Patent Citation and Firm Performance

Yantao Wang, Northwestern University, Kellogg School of Management, 2001 Sheridan Road, Marketing Department, Evanston, IL, United States of America, yantao-wang@kellogg.northwestern.edu, Yi Qian, Sha Yang

Firms in an industry are likely to interact with each other in different ways. Because of these interactions, one firm's performance is not independent from the influence of other firms. One important form of firm interaction is patent citation. Dyadic patent citation reflects firm interaction in the form of innovative interdependence between two firms and the diffusion of knowledge among firms. Therefore, the first goal of this paper is to use annual information on the number of patents firm i (sender) cites from firm j (receiver) to measure knowledge interdependence, and to explain the interdependence by the dyad-specific characteristics of the two firms, the characteristics of the sender and the receiver, and latent dyad-, sender-, and receiver- specific factors. Knowledge diffusion can have important implications on the invention of new products, which in turn impacts the firm's performance. Therefore, our second goal in this paper is to predict firm performance using firm's sensitivity to its role as a sender as well as a receiver in the citation process while controlling for other time-varying characteristics of the firm. We build a two-step econometric model to simultaneously estimate the citation and performance equations using Bayesian MCMC method that also accounts for firm heterogeneity.

■ FB15

15- Great Republic

Marketing Productivity and Customer Value II

Cluster: Special Invited Sessions

Invited Session

Chair: Xueming Luo, Eunice & James L. West Distinguished Professor of Marketing, University of Texas at Arlington, S West Street, Arlington, TX, United States of America, luoxm@uta.edu

1 - "Firing" Customers: Does It Pay Off, and When? Exploring the Impact of Customer Divestment on Stock Returns

Hui Feng, Indiana University, Kelley School of Business, Bloomington, IN, United States of America, huifeng@indiana.edu, Lopo L. Rego, Neil A. Morgan

Given the significant share of unprofitable customers in many firms' customer base, the management of unprofitable customers and in particular their divestment is a topic that has received increasing interest from both academics and practitioners. Using an event study methodology, we examine stock market reactions to firms' customer divestment announcements in both B2B and B2C markets. Initial findings on a sample of 98 customer divestment announcements over the period of 1998 through 2009 suggest that firms divesting unprofitable customers enjoy positive abnormal stock returns. Drawing on signaling theory and market-based asset theory, we also identify a number of customer divestment characteristics (e.g., divestment strategy, publicity valence, divestment size, proactiveness) and firm characteristics (e.g., marketing capabilities, firm size) that serve as boundary conditions under which firms may benefit more or less from divesting unprofitable customers.

2 - Stock Market Intelligence and Marketing Mix Upgrades

Simone Wies, PhD Candidate, Maastricht University, Department of Finance, Maastricht, Netherlands, s.wies@maastrichtuniversity.nl, Jaako Aspara, Arvid O. I. Hoffmann, Joost Pennings

In the context of shareholder complaint behavior we investigate how firms deal with reputational risks of negative stakeholder voice by using product-advertising as strategic response to shareholder complaints. We rely on a unique database on shareholder complaints in the United States for the period from 1997 until 2009, and show that firms exposed to increased shareholder complaints boost their advertising intensity in the subsequent year. As test of the reputational mechanism, we show that complaints more (less) likely to generate publicity strengthen (reduce) a firm's likelihood of responding with an advertising increase. Finally, we show that firms are more likely to increase advertising intensity under certain firm characteristics that are supposed to increase the impact of such a strategy. Overall, this study's results offer new insights into the marketing-finance interface and shed light on a reverse chain of reasoning that is yet underresearched.

3 - The Role of Online User Generated Content and the Interrelationship between Product Development and Product Adoption

Nga N. Ho-Dac, PhD Candidate, University of Utah, Salt Lake City, UT, United States of America, n.hodac@utah.edu, Stephen J. Carson, William L. Moore

Extant studies have been showing that online user generated content (OUGC) plays an important role in communicating value which affects sales and product adoption positively. The results of this study reveal that in addition to communicating value, OUGC can create value which benefits both product development and adoption processes. Specifically, OUGC is informative for product development. In addition, OUGC increases product adoption indirectly through its role in product development because product development and adoption influence each other positively. The interrelationship between product development and adoption can be explained by signaling theory which suggests that developers take the number of downloads as a signal of users' future intention and adjust their development accordingly and that users take development activities as a signal of developers' commitment to the project. The insights from this study benefit all parties: platform owners, developers, and users.

4 - Discretionary Spending Intentions under Financial Constraints – The Role of Self-Concept Clarity and Perceived Stress

Gulen Sarial Abi, Koc University, Istanbul, Turkey, gabi@ku.edu.tr, Zeynep Gurhan-Canli

Financial constraints can be a major source of stress for individuals. Previous research suggests that high (vs. low) self-concept clarity individuals are less likely to perceive their situation as stressful. In a series of three studies, we examine the effect of self-concept clarity (SCC) and perceived stress on intentions to purchase discretionary items under financial constraints. We find that elaboration on potential outcomes (EPO) (vs. no elaboration) and long (vs. short) duration of financial constraints increase stress perceived by high SCC individuals. Because high SCC individuals adopt active coping strategies (e.g., planning) under highly stressful situations, we find that they are less likely to spend on discretionary items when they elaborate (vs. do not elaborate) on potential outcomes and under long (vs. short) duration of financial constraints.

■ FB16

16- St. George A

Sales Force: Game Theory

Contributed Session

Chair: Xiaolin Li, Doctoral Student, Carlson School of Management, University of Minnesota, 321 19th Ave. S, Suits 3-150, Minneapolis, MN, 55455, United States of America, lixx1012@umn.edu

1 - Sales Force Career Tournaments

Somnath Banerjee, Doctoral Student, University of Central Florida, 4000 Central Florida Blvd, 308 M, BA 2, Orlando, FL, 32816-1400, United States of America, sbanerjee@bus.ucf.edu, Axel Stock

Rank based appraisal systems, like the 20-70-10 Forced Ranking policy implemented at GE, are increasingly being used as strategic levers by organizations to incentivize and sort sales people. Although these schemes are popular in industry practice, they raise some puzzling issues that have not been studied in the academic Marketing literature: What percentage of sales people are to be promoted, laid off and left in same position as part of such policies i.e. why use a 20-70-10 policy and not a 30-60-10 policy or something else, and how do these percentages change with sales force characteristics and market conditions? Are the incentive and sorting motives of such policies aligned? In this paper we use an agency theoretic framework to study how rank based appraisal systems are to be designed in an optimal manner. Our results suggest that in absence of costs from promoting and laying off employees the firm should use an up-or-out contract, but costs from forced ranking lead to a situation where a proportion of middle ranked employees need to be left in the same position. Furthermore, we find that this proportion decreases in the number of sales people and the profit margin, and increases with the reservation wage of laid-off employees. We extend the model to consider another common industry practice, the possibility of promotion to a managerial position as part of the appraisal system, and identify conditions under which the incentive and sorting aspects of the policy are not aligned. Moreover, we show that, counter intuitively, effort has an inverted u-shaped relationship with risk aversion in this case.

2 - Sales Force Allocation in Competitive Environments

Amit Pazgal, Professor, Rice University, 6100 Main Street (MS 531), Houston, TX, 77005, United States of America, pazgal@rice.edu, Noah Lim

We research the allocation of sales people to different territories or geographical markets by competing firms. Sales and profit in each territory depend not only on the sales person assigned by the firm but also on the quality of the one assigned by its rival as well as market characteristics. We provide sufficient conditions for the existence and uniqueness of pure strategy equilibria of two kinds. The first equilibrium has both firms match strengths putting their best people head to head in the best markets and the second has firms putting their strongest people against the opponent's weakest. We show using economic experiments that subjects' decisions converge towards these equilibria.

3 - Bonuses Versus Commissions: A Field Study

Raghunath Rao, Assistant Professor, The University of Texas at Austin, 1 University Station, B6700, Austin, TX, 78712, United States of America, Raghunath.Rao@McCombs.utexas.edu, Sunil Kishore, Om Narasimhan, George John

Quota-based bonuses and quota-commissions are the two most common incentive compensation schemes. We uncover differential effects of these plans using twelve quarters of detailed monthly data from 458 sales groups of a pharmaceutical firm that switched from a bonus to a commissions plan. The switch increased sales productivity by around 20%. This effect was heterogeneous across ability deciles with much larger increases for lower ability deciles. Both the firm (revenues) and salespeople (income) are better off after the switch. There is a stark contrast in the impact of these two plans on effort against non-incentivized tasks and on output fluctuations induced through 'timing games'. We find that a bonus plan is strictly inferior in short-term revenues and rife with the prevalence of timing games but this is offset by the neglect of non-incentivized tasks under commission plans. We build a simple theoretical model in the personnel economics tradition to help explain our findings.

4 - Interim Feedback and Reference Dependency in Multistage Tournaments

Xiaolin Li, Doctoral Student, Carlson School of Management, University of Minnesota, 321 19th Ave. S, Suits 3-150, Minneapolis, MN, 55455, United States of America, lixx1012@umn.edu, Om Narasimhan, Haitao Cui

It is common practice in organizations to provide interim feedback on the performance of salespersons, especially in settings that resemble tournaments. It is unclear, however, what the impact of this practice is on both intermediate and final outcomes, i.e., salesperson effort and final sales. A relatively recent theoretical literature casts a pessimistic light on interim feedback, suggesting that it is best for firms not to provide it. This is clearly at odds with its widespread prevalence in practice. In this paper, we attempt to resolve this anomaly by investigating the principal's optimal feedback strategy in a multistage tournament when faced with salespersons displaying loss aversion and varying in ambition

levels. Our analysis also shows that when agents' loss aversion is not too high, providing feedback will benefit both the principal and the agents. Further, we show that the impact of feedback on effort (and consequently output) varies depending on the agent's levels of ambition and loss aversion.

Friday, 1:30pm - 3:00pm

■ FC01

01- Essex Ballroom South

Social Media and Brands

Cluster: Internet and Interactive Marketing

Invited Session

Chair: Glen Urban, David Austin Professor of Marketing, Massachusetts Institute of Technology, E62-536, 77 Massachusetts Avenue, Cambridge, MA, 02139, United States of America, glurban@mit.edu

1 - The Social Response: Predicting Word of Mouth after a Product Failure

Jameson Watts, University of Arizona, 5051 N Sabino Canyon Rd, Tucson, AZ, 85750-6458, United States of America, jamesonw@email.arizona.edu, Shankar Ganesan

Product failures are becoming pervasive in the marketplace triggering a significant amount of media attention, policy scrutiny, and public outcry. Product failures could result from an inability to meet a mandatory safety standard, a defect that could cause harm to consumers, unreasonable risk of serious injury or death, or failure to comply with a voluntary standard adopted by the specific industry. Many such product failures have led to well-publicized product recalls. For example, Bridgestone Corporation of Japan recalled 6.5 million Firestone brand tires on August 7, 2000, which were reportedly exhibiting tendencies to come apart at high speed causing vehicles to rollover. In crafting a response to such events, firms are paying greater attention to the flow of information related to such product failures in the social media. Given this need to understand and manage the nature of discourse, firms are interested in identifying who is likely to post and what they are likely to say in a social media vehicle. Thus, the focus of this paper is on understanding the online behavior (in the form of comments on Twitter) of consumers following a product failure. Using data from more than 4000 consumers, we examine the factors that affect the posting of comments (and their type) following incidents of product failure. Our results show that commenting behavior is a complex phenomenon that is based on the combination of audience size, product familiarity, opinion leadership, and severity of the crisis. Our results offer ways to identify dissatisfied consumers in an online environment and manage the negative consequences from such product failures.

2 - Microblogging and Cascading: What it Means for Brands

Tolga Akcura, Ozyegin University, Kusbakisi cad No 2, Uskudar, Istanbul, Turkey, tolga.akcura@ozyegin.edu.tr, Kemal Altinkemer, Chen Hailiang

Microblogging is gaining importance and shaping the marketers' strategies by focusing on both the communications within the consumers themselves as well as the two-way interactions between the consumers and brands. Already, marketers are striving to create brand evangelists on social media by actively engaging with and shaping the online communities. This study focuses on identifying and analyzing the determinants of microblogging behavior associated with brands. In specific, can we differentiate brands based on the microblogging characteristics? What are the important variables of interest? How do the strong brands differentiate themselves versus the weak brands and the category averages? For this purpose, we collected data on the brand related microblogging behavior. We investigate the descriptive characteristics such as frequency, innovation, diversity and sentiment within the frame of a proposed model. The model accounts for both innovation and imitation effects as well as cascading behavior which may be observed amongst social networks. We present the important findings based on the model and how our model adds insights on the descriptives of the collected data.

3 - Do Customers Always Mean What They Say? An Empirical Analysis of Voicing Behavior on Twitter

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

With social media coming into the center stage of customer relationship management and branding strategies, firms in a broad range of industries start to actively monitor and intervene to address customers' complaints online. Current practices, however, are mostly primitive and reactive in nature. In this paper, we investigate what drives individual customer voicing decisions on social media platforms and examine how well their voiced sentiment represents the underlying customer relationship with the company. We propose a choice model in which customer voicing decisions (complaint, compliment, and silence) are driven by hidden Markov relationship states. Applying the model to a unique customer level panel data on customer voicing history on Twitter with firm interventions, we show that unlike offline situations, customers don't always say (voiced sentiment) what they mean (the underlying relationship states with the company). We establish that various social factors lead to the divergence: i) the desire to project a customer's own image in the social space; ii) the effect of messages received by a customer in a localized network, and iii) the intention and expectation to seek redress when voicing a complaint. We run simulations to explore i) whom to target firm's service intervention to improve long-term ROI (return on investment); ii) the difference in long-term ROI (return of investment) between aiming at improving voice sentiment versus improving true relationship. We are among the first to evaluate the effectiveness of firm intervention on building relationship and managing voicing behavior in a social CRM context. Our results shed lights on how to improve firm's sentiment management strategies.

4 - Social Media and Generating Consideration Through Customer Discovery of New Information

Glen Urban, David Austin Professor of Marketing, Massachusetts Institute of Technology, E62-536, 77 Massachusetts Avenue, Cambridge, MA, 02139, United States of America, glurban@mit.edu, Renee Gosline, Nell Putnam-Farr, Joyce Salisbury

The recent explosion of social media has enabled brands to connect to their consumers in interactive ways. In this study we test in a panel based experiment the proposition that social media is effective in increasing brand consideration. The social media environment is a branded app game respondents use to design new cars and possibly win prizes (weekend with a new car) for their best designs. We vary the embeddedness in the social media (no community interactions vs. extensive community links), customizability (many design options versus few) and discovery (no blog access versus blog access) in a factorial experiment with a sample of 1,110 potential car buyers. We measured consumers' consideration of the brand sponsor at three stages during the experiment (pre, intermediate — after use of app, and post). Our findings show that a highly-rated app, combined with the discovery of positive new information from independent social media blogs, is most effective at increasing consideration. This positive effect on the focal brand grew stronger over time, while subjects' consideration of competitive brands declined over time. We argue that social media transparency can increase consideration when a brand has the confidence to lead consumers to discover new information from independent, objective sources. We also find that embeddedness in social network communities manufactured by the brand can have no or negative effects on consideration when new information is not provided. Without new positive information, social networks can be detrimental if a brand is not positively perceived.

■ FC02

02- Essex North Center

Customer Responses to Online Strategies - I

Cluster: Internet and Interactive Marketing

Invited Session

Chair: Avi Goldfarb, University of Toronto, Toronto, ON, Canada, agoldfarb@rotman.utoronto.ca

1 - Shaping Imitation: A Test of Competing Theories in the Context of Retailers' Adoption of E-commerce

Ralitza Nikolaeva, ISCTE - Lisbon University Institute, Av. das Forças Armadas, Lisbon, 1649-026, Portugal, ralitza.nikolaeva@iscte.pt, Amit Bhatnagar, Sanjoy Ghose

Imitative behavior in technology adoption has been documented in various industries. Yet there has been no attempt to explore how imitation motives can affect the spread of innovations. The study's goal is to empirically characterize the imitation case of retailers' adoption of the Internet. We use two summary articles on imitation theories to create a classification matrix of organizations' imitation motives. Based on this matrix, we develop hypotheses to distinguish between different types of imitation – information versus rivalry and search for effectiveness versus risk reduction. For hypotheses testing we use a discrete hazard rate model to analyze the empirical data. In this framework we discuss the importance of accounting for non-linearity by employing a flexible multivariable model-building technique based on fractional polynomials. The predominant evidence points to information-based imitation supported by the findings of diminishing returns of the imitation of direct rivals and that retailers' adoption decision is influenced by de novo startups' entry and industry-level adoption contagion. We discuss the strategic implications of the observed mimetic behavior and its links to market structure.

2 - The Efficacy of Firm Responses to Online Consumer Protests

David Langley, TNO Netherlands Organisation for Applied Scientific Research, Eemsgolaan 3, Groningen, Netherlands, david.langley@tno.nl, Tijs van den Broek

The internet and specifically social media are making it ever easier for consumers to join protests which target brands, firms or even industries. Protests, including boycotts, have received significant research attention but we know little about how firms should respond when faced with an online protest. We present a model based on stakeholder management theory, which includes four firm response strategies: ignoring, counteracting, accommodating dialogue and complying with the protest request. We conduct an experiment that uses a two factor between subjects design, based on the four response strategies. The subjects were asked to indicate their preference for a dairy brand and were then shown a protest website targeting this brand followed by either no firm response or an online news item describing the firm's response. One control group saw no protest website. Analysis shows that in most conditions the consumers' attitude towards the brand is significantly reduced. This indicates that online protests do indeed tarnish the reputation of the target firm. Results related to the firm response show that the damage is maximized in the ignore condition. Perhaps counter intuitively, the comply condition does not elicit the most favorable consumer perception. Overall, the consumers that had recently taken part in some form of protest had a lower purchase intention in the experiment than other consumers but their attitude towards the brand was no different. This study shows that firms are well advised to prevent online protests and to adopt a proactive CSR strategy. We conclude with management recommendations, assess the limitations of our research and draw up directions for future research.

3 - Telemedicine: Its Acceptance and Adoption by Medical Professionals

Huma Amir, Institute of Business Administration, Main Campus, University Road, Karachi, 75270, Pakistan, hamir@iba.edu.pk

Telemedicine was introduced in Pakistan by the National Disaster Management Authority (NDMA) in Technical Collaboration with Telecare (Pvt) Ltd in order to provide remote health-care to victims of 2010-2011 floods that swept across major areas of Pakistan. The project is first of its kind in Pakistan and has been initiated by the government of Pakistan's NDMA body with Sindh province as its pilot project. A 24-hour service is provided through remote access to generalists and specialists who are stationed in an up-to-date and modern facility in Karachi and are accessible to patients through the net. Remote examination and care are provided via TMU's (Telemedicine Mobile Units) which are equipped with wireless biomedical sensors that measure vital signs of patients, and have live video connectivity that transmits images for remote examination by doctors. The success of the project offers an opportunity for use of telemedicine in metropolitan areas as well. The novelty of the project warranted an exploratory research to understand the viability of telemedicine usage and its acceptability by physicians for their urban patients before carrying out a survey of larger audience. For the purpose, discussions were held with doctors involved with the NDMA project and two focus groups were conducted to gauge perceptions of general physicians and specialists regarding the benefits of telemedicine, its acceptability, and future prospects. One focus group targeted users of telemedicine at the specialist facility in Karachi while the other focused on non-user physicians. Focus group findings led to a survey of 210 physicians and results show a conservative attitude towards introduction of telemedicine which is seen as a non-starter apart from its benefits during calamities.

4 - Technology, Age, and Shifting Privacy Concerns

Avi Goldfarb, University of Toronto, Toronto, ON, Canada, agoldfarb@rotman.utoronto.ca, Catherine Tucker

The digital revolution has increased the collection and commercial use of detailed individual data. This paper explores how this phenomenon has affected the evolution of consumer privacy concerns over time. We measure privacy concerns by reluctance to disclose income in an online setting. Using over three million survey responses collected by a marketing research company over eight years, our data show three key patterns: (1) Refusals to reveal information have risen over time, (2) Older people are much less likely to reveal information, and (3) The difference between older and younger people has increased over time. We present suggestive evidence that the overall increase in refusals and the expanding gap between older and younger people is partly due to broadening perceptions of the contexts in which privacy is relevant.

■ FC03

03- Essex North West

Social Media and WOM - II

Cluster: Internet and Interactive Marketing

Invited Session

Chair: Tomoko Kawakami, Professor, Kansai University, 3-3-35 Yamatecho, Suita, Japan, ktomoko@kansai-u.ac.jp

1 - Social Learning and Trial on the Internet

Jae Young Lee, Doctrate Candidate, Wharton School, 3730 Walnut Street, Philadelphia, PA, 19104, United States of America, forza2j0@gmail.com, David Bell

Internet retail sales are impeded when consumers have difficulty acquiring information about non-digital product attributes. Firms therefore employ creative (and sometimes costly) methods such as two-way free shipping to help consumers resolve the problem of incomplete consumer knowledge on non-digital attributes. We argue that consumers and firms can benefit from social learning processes that occur "naturally" and emanate from neighborhood characteristics. We use trial data from Bonobos.com, a leading US online retailer for men's fashion apparel, to demonstrate that social learning occurs. We further show that geographic variation in "neighborhood" social capital moderates this process and explains geographic variation in online sales. We find that social learning reduces pre-trial consumer disutility by reducing bias in consumers' initial evaluation of non-digital attributes. The estimates imply that up to 50% of all trials in the first three and a half years of Bonobos' sales were influenced by social learning. In addition, social learning is more efficacious in neighborhoods with more social capital. Our estimates imply that a one-standard deviation reduction in the social capital stock of all zip codes would slow trials and reduce them by about 4%.

2 - Too Much Face and Not Enough Books? The Effect of Social Media Usage on College Students

Jun Wu, Assistant Professor, Savannah State University, 3219 College Street, Savannah, GA, 31404, United States of America, wuj@savannahstate.edu, Anshu Arora

Social media like Facebook and Twitter have become an integral part of most college students' daily lives. It is found that 90% of college students using social networking sites (Smith and Caruso, 2010) and students spend an average of over 1 hour and 40 minutes a day on Facebook (Junco, 2011). Excessive social media users are found to be less involved with their real life communities (Nyland et al. 2007), have low self-esteem and low wellbeing (Valkenburg et al. 2006), and even a lower GPA (Kirschner, Karpinski, 2010). The negative effects can be short-term and temporary and/or long-term and permanent, which are compelling and worth discussing as this addiction is not just an academic issue but a major societal issue. However, there are very few scientific literatures addressing the addictive and negative qualities and impacts of social networks (Kuss and Griffiths, 2011). The few existing literatures even have some limitations. For example, the causal relationship between low self-esteem and excessive social networking sites use is unclear (Kuss and Griffiths, 2011). For another example, the four existing peer-reviewed studies did not give a consistent relationship between social networking sites and academic performance (Junco, 2012). Keeping in view the limitations, this research study addresses the following research questions: 1) Does excessive social networking sites' usage result in low self-esteem and lower academic performance? What is the causal relationship between them? 2) Are there any confounders, for instance, students' multitasking while studying, or maybe students spend less time on preparing / studying for classes? If these factors exist, then what are the effects of using social networking on the students' and societal well-being as a whole?

3 - Social Effects on Consumers' Adoption vs. Defection Decisions

Irit Nitzan, Ben Gurion University of the Negev, Guilford Glazer Faculty of Business, Beer-Sheva, Israel, iritnitz@tau.ac.il, Aurelie Lemmens, Vardit Landsman

Much research has focused on how social influence (conveyed through word of mouth, imitation or merely presence of social contacts) affects a customer's decision to adopt a new product. In contrast to the case of products' adoption, social aspects in the context of defection are largely unexplored, and in particular, no direct comparisons have been made between the social aspects of adoption processes versus those of defection processes. In this project we aim to bridge this gap by exploring concurrently both adoption and defection processes of a given product, across a given social network, in a given marketing situation. We compare the two processes, pointing out similarities and differences in their mechanisms. This investigation is carried out, using a unique dataset that includes information on the communication among one million customers of a cellular company, and allows us to construct a large-scale social system of customers. In addition, the data include information about these customers' adoption and defection decisions for a particular add-on service. This research can assist managers to better understand the social mechanisms that drive adoption and defection decisions, and may help companies improve their prediction abilities and budget allocations with respect to these two central consumption decisions.

4 - Word-of-mouth Transmission Modes and New Product Adoption: An Empirical Evidence from Japan

Tomoko Kawakami, Professor, Kansai University, 3-3-35 Yamatecho, Suita, Japan, ktomoko@kansai-u.ac.jp, Mark E. Parry

This study distinguishes among three types of word-of-mouth communication based on mode of transmission: personal interaction (pWOM), social networks (sWOM), and web-based interactions that do not occur through social networks (wWOM). The two types of virtual word-of-mouth (sWOM and wWOM) potentially expose consumers to a relatively wider variety of information because some virtual informants may be very dissimilar from the potential adopter and have opinions of more "experts". These "information breadth" benefits should be particularly important for technology-based consumer innovations. Moreover, these benefits should be stronger for wWOM than for sWOM. Thus we hypothesize that (1) positive wWOM will have the strongest impact on the perceptions potential adopters have of key innovation attributes and (2) sWOM will have the second strongest impact on those perceptions. The distinction between personal word-of-mouth and virtual word-of-mouth is also important because consumers tend to solicit personal word-of-mouth from informants they trust. That trust is based in part on the potential adopter's belief that his/her tastes and preferences are similar to those of the pWOM informant. We expect that high levels of trust increase the weight consumers place on negative word-of-mouth reports. Thus we hypothesize that (1) negative pWOM will have the strongest impact on the perceptions potential adopters have of key innovation attributes and (2) sWOM will have the second strongest impact on those perceptions. We test these hypotheses using data collected in Japan from potential adopters of digital products with network externalities such as smart phones, e-readers and 3D portable game players.

■ FC04

04- Courier

Cross-Cultural Applications

Contributed Session

Chair: Hester van Herk, Professor, VU University Amsterdam, De Boelelaan 1105, Amsterdam, 1081 HV, Netherlands, h.van.herk@vu.nl

1 - In the Mood to Buy? Understanding the Interplay of Mood Regulation and Congruence

Robert Wilken, ESCP Europe Business School Berlin, Heubnerweg 8-10, Berlin, 14059, Germany, rwilken@escpeurope.eu, Helmut Schneider, Erik Maier

Existing research explains the influence of mood on consumer behavior using either mood congruence or mood regulation theory. The product category determines the applicability of each theory and thus acts as a moderator. However, this perspective is limited and cannot fully uncover the interplay of the two theoretical approaches. Therefore, this study tests whether consumers' beliefs about their ability to change their moods through consumption drives the likelihood of mood regulation. For products with mood-lifting capabilities, the degree of mood regulation among consumers should depend positively on their beliefs about their ability to change their mood with consumption. In a cross-cultural setting, we use data from Turkey and Germany to differentiate consumers' beliefs about the changeability of moods. Willingness to pay serves as the dependent variable, in contrast with mood research that has focused almost entirely on nonmonetary forms of consumer behavior. Three empirical studies confirm the predictions. Our results can be embedded into existing research that has established mood-congruent effects for (1) neutral products in general and (2) mood-lifting products when consumers are in good moods.

2 - Impact of Marketing Signals on Product Performance: A Cross-country Analysis

M. Billur Akdeniz, University of New Hampshire, 203D McConnell Hall, Durham, NH, 03824, United States of America, billur.akdeniz@unh.edu, M. Berk Talay

Consumers use available signals in the environment to reduce uncertainty and evaluate the product's quality among its competition. Based on this premise, marketing scholars have been using signalling theory to explain the effects of various marketing-related signals such as price, advertising, brand name, warranty, etc. on consumer behavior and firm performance. However, majority of these studies have been limited to a single-country context (mostly a developed country), despite the fact we might expect to find substantial differences in the use of signals across countries or cultures (Dawar and Parker 1994). Specifically, consumers in different countries are highly likely evaluate the same signal for the same product, differently. This potential difference in judging product-quality signals leads to varying performance implications of the products at a global scale. Despite the theoretical importance and managerial relevance of the subject, research examining the impact of signals to evaluate product quality across various countries has been rather scarce. This study attempts to fill this gap with a multilevel growth modeling approach using data on global services around the globe.

3 - Toward the Identification of Goal Structures: A Consumer Typology for Leisure Motorized Products

Jean Boisvert, Assistant Professor of Marketing, American University of Sharjah (AACSB), 1 University City Road, Sharjah, 26666, United Arab Emirates, jboisvert@aus.edu

Despite the fact that goals are intrinsic to human behavior we've only touched the surface of how goals are structured and organized in consumers' mind (Chulef et al., 2001; Austin & Vancouver, 2001). Goal structures may also vary by culture (Fornerino et al., 2010). The topic of goals structure has been addressed in the literature although mainly from a theoretical point of view with very few industry-wide applications exist. In this study, the initial list of goals was identified through focus groups conducted with a wide range of consumers as well as industry experts in order to include the broadest range possible. The final list of goals used for the quantitative phase totaled fifty-three. A mail survey was conducted with owners of leisure motorized products in the US and Canada. The selection of target respondents was based on government license registrations allowing high external validity to the process. Completed surveys were 5544 US), 6198 (English Canada) and 5000 (French Canada). Based on SEM, a typology of eight factors emerged for US and English Canada after a series of several iterations (R2= 63%, GFI= 91%, RMSEA= 0.05). For French Canada, nine factors were identified with seven factors identical to the other markets and two distinct ones that emerged. These findings revealed that consumer goals structure is complex in the practice of leisure motorized sports fundamental regional differences exist in terms of specific goals that are pursuit when. The role of goals in theory development and specific marketing applications is discussed.

4 - Value-based Multi-level Latent Classes: New Insights into Cross-cultural Differences

Hester van Herk, Professor, VU University Amsterdam, De Boelelaan 1105, Amsterdam, 1081 HV, Netherlands, h.van.herk@vu.nl, Julie Anne Lee, Geoff Soutar

Cross-cultural value research often focuses on a comparison of average value scores across geographic boundaries, most commonly using nation as a unit of analysis. These 'cultural or average value scores show a great deal of similarity across country samples. However, the reason for the high level of similarity is not clear. Since we know that people differ in the importance they place on values within countries, are these differences simply averaged out at the country level, reducing between country variance? In line with recent findings on value-groups, we hypothesize that a relatively small set of value-based groups exists across societies and that these value-based groups should be consistent with Schwartz's value theory, in that each group will place a greater relative importance on a set of neighboring values and relatively less importance on the opposing values. We test these hypotheses using multilevel latent class modeling to disentangle group-level from individual-level effects, for three different large scale values data sets. For all three data sets, the largest reduction in fit was associated with four latent classes at the individual level and a smaller, but significant, reduction associated with two distinct country level classes, indicating considerable between-country variation. In all three data sets, the parameters for the four individual level latent classes (LCs) showed very similar patterns. Further, there was significant between-country variation at the group level. Individuals differ in values more than countries differ; however, countries differ in the proportion of individuals in each latent class. Our results are promising for predicting behavior at the country level. Implications for marketing are discussed.

■ FC05

05- Essex Center

Panel: Funding and Support for Marketing Scientists: An Overview of Relevant Organizations and Centers

Cluster: Special Invited Sessions

Invited Session

Chair: Ross Rizley, Research Director, Marketing Science Institute, Wellesley, MA, United States of America, rizley@msi.org

1 - Funding and Support for Marketing Scientists: An Overview of Relevant Organizations and Centers

Moderator: Ross Rizley, Research Director, Marketing Science Institute, Wellesley, MA, United States of America, rizley@msi.org, Panelists: John Deighton, Elea McDonnell Feit, Gary Lilien, Roland Rust, Jan-Benedict Steenkamp, Michael Wiles

This session is designed to familiarize faculty and doctoral students with several organizations that support the work of marketing scientists. Representatives from AiMark, the Center for Excellence in Service, the Center for Service Leadership, the Institute for the Study of Business Markets, the Marketing Science Institute, and the Wharton Customer Analytics Initiative will be present to discuss the missions of, and opportunities available from their respective organizations.

■ FC06

06- St. George B

Pricing: Bundling

Contributed Session

Chair: 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, rvenkat@katz.pitt.edu

1 - Dynamic Sequential Bundling Choices

Hwang Kim, PhD Student, Cornell University, 201 Sage Hall Cornell University, Ithaca, NY, 14853, United States of America, hk356@cornell.edu, Vithala R. Rao

Bundling is one of the most effective marketing strategies in areas such as promotion, co-branding and non-linear pricing. While previous literature assumed that consumers choose a bundle of multiple products in a simultaneous manner, in fact in many cases they implicitly construct a bundle as they acquire items especially for durable goods: this is a sequential bundling. This paper proposes a general framework to explain consumers' sequential bundling items in multiple related categories. To achieve this goal, we develop a dynamic model in which forward-looking consumers choose a bundle in a sequential manner. In this model, we decompose the sources of the dynamics for bundling choices into three components: the learning effect, the balance effect and serial correlation. To estimate the model, we conduct a conjoint experiment in which consumers are allowed to select and implicitly organize a bundle of a smartphone and a tablet pc in a dynamic way. Our study makes two contributions to existing literature on bundling. First, our general framework enables us to understand and empirically evaluate which factors induce consumers to choose a bundle implicitly and sequentially. Second, it reveals how consumers' choices evolve dynamically from one category to another. Our proposed model fits data better and explains how sequential bundling choices differ from simultaneous bundling. This has valuable implications on design and price strategies of a bundle of related products.

2 - Bundling and Price Transparency

Khalil Rohani, Doctoral Student, University of Guelph, Department of Marketing and, Consumer Studies, Guelph, ON, N1G2W1, Canada, rohanik@uoguelph.ca, Vinay Kanetkar

Many reasons are suggested about consumer evaluation of bundles. Loss aversion, aggregation of gains and losses and mental accounting are some of important reasons suggested in the literature. In the present paper, it is proposed that price transparency could influence price sensitivity which in turn could influence evaluation of bundles. In the experimental study, we examine choice of breakfast bundles (egg and coffee or muffin and coffee) and find that consumer are more price sensitive when bundle prices are presented compared to unbundled prices. In the second experiment, price is treated as missing attribute for dry cleaning service. In such situation, presence of price results in better differentiation of choice attributes. Based on both studies, we conclude that price transparency influences price sensitivity and attribute evaluation.

3 - Designing the Bundle: Choose Your Weapon!

Rahul Sett, Assistant Professor, Indian Institute of Management Kozhikode, Faculty Block 2, Room 4, Calicut, 673570, India, rahul@iimk.ac.in

Role of price partitioning in driving consumer attention towards the benefits associated with seemingly unrelated bundle components had been recently investigated along with effects of discount framing. None of the studies, however, investigates the joint effects of price partitioning and component relatedness. In this research, the effect of different price partitions for economically equivalent bundles consisting of a focal component and an ancillary is studied across various degrees of component relatedness. Based on psychological theories of judgment and information processing product bundles comprising of seemingly unrelated components is expected to fare more favourably in consumer evaluation as compared to economically equivalent bundles comprising of highly related or unrelated components. Secondly the effect of overpricing the ancillary for the seemingly unrelated component combination is investigated. The combined effect of overpricing and seemingly unrelated nature of components is expected to result in higher overall evaluation of the bundle as compared to the other bundles. Further, robustness is built around the above results by considering individual differences in Need for Cognitive Closure as a moderator. Another supporting study is conducted to investigate how the results change in the presence of an indicating stimulus like a price discount which diverts consumers' attention from product features to prices. This research contributes to the scarce process oriented research in bundling by throwing light on the psychological mechanism of bundle evaluation. Lastly the study has implications for the choice of pricing mechanisms for product bundles.

4 - Reserved Mixed Bundle Offerings with Forward Looking and Myopic Customers

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, rvenkat@katz.pitt.edu, Ashutosh Prasad, Vijay Mahajan

We examine inter-temporal bundling strategies for selling products, including reserved mixed bundling (RMB). With RMB, as in mixed bundling, the firm offers individual products for sale, together with a discount for purchasing the bundle. However, unlike mixed bundling, these offers are not simultaneously available to customers. Instead, the discount for the bundle is reserved for those customers who bought one product at the regular price. Examples of RMB occur in cross-selling and cross-promotions. When customers are myopic about the availability of the discount, we find that RMB is more profitable than pure components, pure bundling and mixed bundling at all parameter values. However, when consumers are forward looking about the discount, mixed bundling is more profitable than RMB. With both myopic and forward looking customers, the proportion of the former for RMB to be optimal is obtained. This proportion decreases as the marginal costs increase. Implications for sellers are discussed.

■ FC07

07- St. George C

Customer Relationship Management - Loyalty

Contributed Session

Chair: Xueni Li, Zhongnan University of Economics and Law, Nanhu Street No.1, Hongshan Distinct, Wuhan, China, shirleylee0130@gmail.com

1 - Impact of Loyalty Program Enrollment on Consumer Purchasing Behavior

Martin Boehm, IE Business School, Serrano 105, Madrid, 28006, Spain, martin.boehm@ie.edu, Alberto Maydeu

Although evidence about the effect of loyalty programs on a consumer's purchasing behavior has begun to accumulate, the empirical research provides mixed results. This ambiguity may relate at least partly to data limitations which hinder the proper assessment of the effects of loyalty programs. A potential problem is that consumers who are already loyal may have a higher likelihood to enroll into a loyalty program. Simply comparing the behavior of loyalty program members with that of nonmembers thus cannot establish a conclusive causal relationship due to the so-called self-selection bias. Studying loyalty programs over time is one way how to alleviate this self-selection bias. So far, relatively few empirical studies have examined the longitudinal effects of loyalty programs. A recent study by Liu (2007) has advanced this area by examining dynamic post-enrollment effects on consumer behavior. The current research extends this work by studying the impact of loyalty program enrollment by comparing a consumer's before and after purchasing behavior. To determine whether the loyalty program enrollment affects a consumer's purchase behavior, we analyze variations in repeated data measurements. We formulate a piecewise regression model with random coefficients for a sample of 2036 consumers enrolling in the loyalty program of a major retailer. Our results indicate a strong positive impact on share of wallet during the month of enrollment. However, a sharp decrease one month after enrollment and a consecutive non-linear positive trend in the evolution of share of wallet after enrollment can be detected.

2 - A Structural Analysis of Three-tier Customer Loyalty Reward Schemes

Amir Gandomi, PhD Candidate, Ryerson University, 350 Victoria Street, Toronto, ON, M5B 2K3, Canada, agandomi@ryerson.ca, Saeed Zolfaghari

The reward structure, as one of the main components in a loyalty programs' design, is a key to the program's success. In this paper, we study the multitier reward scheme, a reward structure based on which more loyal customers earn disproportionately higher benefits. Despite their ubiquity, multitier reward schemes have remained under-explored in the OR/marking literature. A stochastic model is developed to analyse the profitability of a three-tier reward scheme. The design elements are reward values and breakpoints of the tiers. We model a duopoly market where one firm offers a lower price and the other firm adopts a loyalty program. Customers' choice behavior is modeled using the binary-logit model. Their utility is a function of the price, the reward and the distance to the reward. Based on choice probabilities, we formulate the revenue function of the firm offering loyalty reward. The formulation yields a constrained nonlinear programming. The revenue function is optimized in terms of the design elements. Using a computationally intensive sensitivity analysis, we evaluate the effects of each utility component on the optimal design of the reward program. This structural analysis sheds light on the effectiveness of multitier reward schemes.

3 - A Study of the Influence of Relationship Benefits on Repurchase Intention

Shihyu Chou, Professor, National Taiwan Normal University, 162, Heping East Road Section 1, Taipei, 106, Taiwan - ROC, sychou@ntnu.edu.tw, Chien-Ping Lin

In the Commitment-Trust theory developed by Morgan and Hunt (1994), relationship benefits can affect buyer's repurchase intention indirectly via the elements of relationship quality, such as trust, commitment and satisfaction. Palmatier et al. (2006) conducted a thorough meta-analysis on previous relationship marketing literature. They found that relationship investment indeed has direct effect on seller's performance and this direct effect is even more severe than the indirect effect through mediating variables, such as commitment and trust. In this study, we incorporate feelings of gratitude as a new mediating variable between relationship benefit and repurchase intention and use a sample data to test against the proposed model. We anticipate the extended model will be more powerful on the explanation of repurchase intention.

4 - Incentive Strategies for User Community and Two-sided Market Uncertainties in C2C E-platform

Xueni Li, Zhongnan University of Economics and Law, Nanhu Street No.1, Hongshan Distinct, Wuhan, China, shirleylee0130@gmail.com, Nian Liu, Zhihao Chen

User community is critically important for the growing C2C electronic platform. User community is a place for platform users to solve problems, share personal experiences, and make some friends. Despite the fact that previous managerial scholars have noticed the social interactions among users can enhance the users' loyalty, we should further explore corresponding managerial strategies, or incentive strategies these platforms should be applied. Our study tries to explore how the incentive strategies, especially material and spiritual incentives, affect users' loyalty. Considering the fact that C2C electronic transactional platform is a typical two sided market – it has to attract more sellers and buyers, we distinguish market uncertainties as sellers' uncertainty or buyers' uncertainty. With the empirical analysis of 811 samples from a user community of a famous C2C e-platform market, the results show that: (1) both material and spiritual incentive strategies can significantly enhance users' loyalty, while material incentive strategy play a better effect in general; (2) On the platform with high seller uncertainty, material and spiritual incentive strategies can equally influence the loyalty of user; (3) On the platform with high buyer uncertainty, spiritual incentive is much more useful. Our results indicate that market makers should adjust their strategies when faced with different kinds of market uncertainties.

■ FC08

08- Adams

Structural Models: General

Contributed Session

Chair: Brett Gordon, Columbia University, 3022 Broadway, Uris 511, New York, NY, 10027, United States of America, brg2114@columbia.edu

1 - Evaluating Brand Performance in Emerging Markets: How to Account for Product Availability?

Yi Zhao, Georgia State University, 35 Broad Street, Atlanta, GA, United States of America, yizhao@gsu.edu, Shah Denish, V. Kumar

When firms sell through intermediaries in emerging markets, a critical factor governing brand performance is the extent to which the intermediaries make the firms' brand available for purchase vis à vis the competing firms' brands. The authors propose a methodology that enables managers to simulate consumer-level choice and retailer-level stocking behavior on the basis of easy to obtain aggregate market-level data that also ensures full market coverage. One of the key contributions is the ability of the methodology to recover the joint probability of products stocked in the retail stores (i.e., by intermediaries) and quantify its impact on consumer choice despite the absence of any intermediary or consumer level information.

2 - Push-me Pull-you: Comparative Advertising in the OTC Analgesics Industry

Jura Liaukonyte, Applied Economics and Management, Cornell University, Ithaca, NY, 14850, jurate@cornell.edu, Regis Renault, Simon P. Anderson, Federico Ciliberto

We model comparative advertising as firms simultaneously pushing up own brand perception and pulling down brand image of targeted rivals. We watched all TV advertisements for US OTC analgesics 2001-2005 to code ad content and construct an attack matrix of how much each brand spent targeting each rival. We use this data to estimate our structural model. The attack matrix identifies diversion ratios used to find damage measures of comparative advertising. We find that outgoing comparative advertising attacks are half as powerful as self-promotion in raising own perceived quality and cause more damage to the targeted rival than benefit to the advertiser. Comparative advertising causes most damage through the pull-down effect and has substantial spillovers to other rivals.

3 - Linking Macro-economic Changes to Consumer Choice

Andre Bonfrer, Australian National University, LF Crisp Building 26C, Acton, 2600, Australia, andre.bonfrer@anu.edu.au, Anirban Mukherjee

Macro-economic shocks affect the way consumers' allocate expenditure, both within and across categories. We study the impact of income changes on a households' category expenditure in white goods, and its purchase decisions within the category (specifically for washing machines), in Australia. We estimate a structural model of purchase decisions, to investigate how households value energy efficiency and loading capacity, as a function of category expenditure. Our analysis quantifies the impact of a a recession (operationalized as a contraction in disposable income), and/or a subsequent policy response of the Australian government, on brand share and revenue.

4 - Political Advertising and the Electoral College

Brett Gordon, Columbia University, 3022 Broadway, Uris 511, New York, NY, 10027, United States of America, brg2114@columbia.edu, Wesley Hartmann

We present a structural model of political advertising competition in equilibrium. Two presidential candidates choose advertising levels simultaneously across many media markets to maximize the probability of winning the national election. The voter model takes the form of an aggregate random coefficients discrete choice model in which advertising affects a voter's incentive to vote for either candidate or not to vote at all. We estimate the model using detailed advertising and voting data from the 2000 and 2004 presidential elections. We use the model to conduct a counterfactual that substitutes a direct national vote for the Electoral College. Such a change significantly alters candidates' marginal incentives to advertise in a given market, leading to a new equilibrium allocation of advertising and votes.

■ FC09

09- Helicon

Models for Heterogeneity

Contributed Session

Chair: Hernan Bruno, INSEAD, Boulevard de Constance, Fontainebleau, France, hernan.bruno@insead.edu

1 - The Relationship Between Income, Preferences, and Consumer Motivation

Rafael Becerril Arreola, University of California-Los Angeles, Anderson School of Management, 110 Westwood Plaza B401, Los Angeles, CA, 90095, United States of America, rafael.becerril.2013@anderson.ucla.edu

While income has unquestionably an important role on consumer behavior, the details of such role are not completely understood. Most studies assume that income affects behavior through a budget constraint only. However, income may also affect consumer decisions through more complex psychological mechanisms that have not been explored nor incorporated into standard economic models. These models are therefore unable to explain commonly observed substitution patterns. For example, the standard homothetic utility models used in the empirical literature predict that income increases lead a consumer to replace a mainstream car by multiple units of the same car rather than by a luxury alternative. We propose that income determines the saliency of human motives, thus moderating the relationship between these motives and revealed preferences. In particular, we postulate that income levels determine the saliency of such motives and thus income influences preferences for brands according to whether these brands satisfy only basic motives or both basic and higher-level motives. Such formulation translates into a non-homothetic utility specification. To provide empirical support to this theoretical model, we propose an econometric model of consumer brand choice that lets preferences be salient or not conditional on consumer income. The econometric model is estimated with automobile choice data because high-end cars cater higher-level needs of social status and self expression. We use this application to discuss how manufacturers should price and design their product lines to account for current trends in the distribution of consumer income.

2 - Differential Impacts of Reference Prices on Purchase Behaviors Across Four Types of Consumer Groups

Jeonggyu Lee, Grauduate Student, Tufts University, 419 Boston Avenue, Medford, MA, 02148, United States of America, Jeong.Lee@tufts.edu, Kanghyun Yoon

Researchers in marketing have devoted considerable attention to accounting for heterogeneity in consumers' price perceptions using various types of reference price models. For instance, they investigate differential asymmetric responses to price between loyal and switching consumers (Krishnamurthi, et al. 1992), identify two distinct segments of using either internal or external reference price (Mazumdar and Papatla 2000), account for consumer heterogeneity in price thresholds (Terui and Dahana 2006), identify two types of consumer groups using either memory-based or stimulus-based reference price (Moon et al. 2006), and identify a sizeable group of price range shoppers who are distinct from traditional reference price shoppers using either internal or external reference price (Moon and Voss 2009). Recently, Yoon and Tran (2011) find that there are four types of consumer groups in the market of frequently purchase packaged

goods – i.e., exhibiting value-conscious loyal, deal-prone loyal, deal-prone switching, and variety seeking tendencies for their purchases. Given this finding, this study attempts to fill the gap in the literature of reference price by investigating heterogeneous impacts of reference prices on purchase behaviors across four types of consumer groups. Specifically, this study investigate major type of reference price model – among internal reference price, external reference price, and price range model – used by each of four types of consumer groups, using a latent class model applied to purchase histories from several product categories of consumer packaged goods. We find strong evidence of consumer heterogeneity in the use of reference price across four types of consumer groups. We also discuss managerial implications of these results.

3 - Explaining Heterogeneity in Donation Timing and Amount Through Community Characteristics

Shameek Sinha, Assistant Professor, IE Business School, IE Universidad, Maria de Molina 12, 5th Floor, Madrid, 28006, Spain, shameek.sinha@ie.edu, Vijay Mahajan, Frenkel ter Hofstede

Direct marketing is resource intensive, especially in the non-profit sector where the prerogative is to use funds efficiently and resources are scarce. So understanding the response behavior of donors to direct marketing initiatives is a per-requisite for non-profit organizations. Only then the appropriate targeting strategies can be implemented to reach current and future donors and facilitate contributions. In this context, not only do past donations and solicitations matter in shaping donation patterns, but also donor characteristics do play a significant role. While individual donor characteristics might be important in understanding donation behavior in general, external influences in a community environment are expected to be more important in a social activity like philanthropic giving. In this research, the authors use an interval-censored proportional hazard model to analyze the donation timing behavior, a censored normal model to analyze donation amount and then propose a scheme for donor classification which facilitates efficient future targeting. Our results show that past donations (both the incidence and volume) and the history of solicitations for alternative causes by non-profits matter in donor responses. In addition, the heterogeneity in donation behavior, which is prevalent in non-profit fundraising and leads to dispersions in contribution patterns, can be explained by community-level donor characteristics. Finally, we provide an approach to target new donors by using a classification scheme for donors in terms of the frequency and amount of donations and characterize each donor portfolio with their corresponding community characteristics.

4 - Investigating Within-household Heterogeneity in Grocery Purchases

Hernan Bruno, INSEAD, Boulevard de Constance, Fontainebleau, France, hernan.bruno@insead.edu, Jose Javier Cebollada Calvo, Pradeep Chintagunta

The existing literature studying consumer preferences using data from fast-moving consumer goods has taken the household as the most disaggregated form of purchase data (as opposed to "aggregate" data models where purchases are consolidated at the store or geographic region level). However, modeling household preferences as if they arise from a monolithic unit ignores the potential preference heterogeneity within the household. If the individuals within a household have different preferences, inferences from observation of the aggregate behavior may lead to sub-optimal managerial policies. In this paper, we explore the preferences and purchase patterns of individuals within a household. In particular, we compare the inferences made using individual-level data to household-level data. Notably, we look at state-dependence of demand. Our findings suggest that often the inferences about the state dependence of a household differs markedly from that of the individuals. We also discuss the role of within-household heterogeneity on inferences regarding price and promotion sensitivity and its consequent managerial implications.

■ FC10

10- St. George D

New Products Strategy

Contributed Session

Chair: Alexander Himme, University of Cologne, Albertus-Magnus-Platz, Cologne, Germany, himme@wiso.uni-koeln.de

1 - First Mover Advantage in Product Attribute Level Competition in High-tech Market

Wonjoon Kim, Associate Professor, Department of Management Science, KAIST, Guseong-dong, Yuseong-gu, Daejeon, Korea, Republic of, wonjoon.kim@kaist.edu

First-mover advantage has been extensively explored in previous literature. However, there has been some unresolved argument in the previous studies related with product hierarchy and market boundaries. In addition, no attempt has been made to look into the first-mover advantage on product attribute level innovation competition, although, in high-tech product market, innovation and competition happens more on product attribute level than on product class level. We examine the first mover advantage on product attribute level in U.S. mobile phone market. We found late mover advantage rather than first mover on product attribute level. However, the effect is different depending on the firm size. Radical first movers by small firms have first mover advantage, but incremental first movers by large firms have some advantage. Our findings suggest some insight on first mover advantage in product attribute level, which has not been answered before.

2 - Market Entry Spillover Behavior: In Search for Peers Across International Borders

Bart Devoldere, PhD Candidate, Vlerick Leuven Gent Management School, Reep 1, Gent, Belgium, Bart.Devoldere@vlerick.com, Ruud Frambach, Marion Debruyne

New market niches across many industries ranging from brokerage over telecommunications to newspapers increasingly threaten existing markets and conventional wisdom. For example, traditional newspapers saw the emergence of instant, free and interactive online news, online classified ads, and free commuter newspapers. Incumbents need to decide whether, when and how to enter these new market niches. But such high-stake market entry decisions are complex and uncertain. Therefore, firms often look at competitors how to act, leading to a contagion effect. Previous research only considers competitive imitation tied directly to the new market of interest. Often however, new market niches have already developed in other geographical markets, and entry in these markets provides information signals as well. We investigate the within-market and cross-market spillover effects that influence market entry decisions. We study the drivers of market entry spillover behavior in the context of free commuter newspapers. Drawing on competitive strategy and international diffusion literature, we build hypotheses on what firm and country characteristics influence spillover of competitive actions across countries. We develop models to describe spillover of strategic decisions such as whether, when and how to enter a new market. We test our hypotheses on panel data for the period 1995-2010 covering 30 countries through Europe and Canada, and information on more than 150 market entries. Our results offer interesting findings for researchers and practitioners dealing with new market entry decisions.

3 - In Search of Critical Launching Factors Influencing New Product Success- A Case Study from the Reseller's Perspective

Wei Guan, Linköping University, Department of Management and Engineering, Linköping, 58183, Sweden, wei.guan@liu.se, Jakob Rehme, Tomas Nord

Purpose: It has been proven that proficient product launch is one of the specific priorities that best separate the success from the failure product innovations. However, a majority of existing product launch research takes the supplier's perspective and focuses on the aspects managed by suppliers, and the role of resellers has been largely overlooked. To contribute to this research gap, the purpose of this study is to develop and test a model of critical launch factors influencing new product success from the reseller's perspective. Two research questions were examined in order to increase understandings of resellers' role in new product launch: (1) What are the critical reseller functions in new product launch? (2) What are the reseller requirements on suppliers in new product launch? Method: One leading building material reseller in Sweden was chosen as the case company. Data was collected through open-end interviews with managers at the central level and survey with managers at the branch level. Findings: The importance of launch factors has been underestimated compared to the factors relating to product quality and uniqueness. Depending on the ownership of the new product, the reseller's investment in new product launch could vary. Reseller's marketing functions regarding pricing, promotion and merchandising are extremely important for selling new products. Resellers' requirements on suppliers can be in grouped into three categories: logistics, commercial and technology. Originality/Value: First, the influential factors in focus make a departure from product related factors. Second, dislike many previous studies this study takes the reseller's perspective.

4 - Being Second and Still Being First: A Multiple-market Approach to the Order of Entry-research

Alexander Himme, University of Cologne, Albertus-Magnus-Platz, Cologne, Germany, himme@wiso.uni-koeln.de, Christian Barrot

A key question in innovation research is order of entry and (dis-)advantages associated with being the first company entering a new market. While empirical results concerning the different benefits of pioneers and followers may vary, existing empirical studies share a common characteristic: They assume a single-market setting, where any innovator must chose to act as either pioneer or follower. However, in a globalized world, we can frequently observe that such a single-market framework falls short in reflecting real-life innovation processes. In many cases companies act both as innovators as well as followers at the same time: This strategic option is caused by an asymmetry in diffusion of information on innovative products and – particularly – services and actual regional availability of these innovative products and services themselves. That is why we first propose a new model for research on order of entry and extend the prior limitation on a time dimension through the inclusion of a spatial dimension, i.e., a multiple markets framework instead of a single market framework. Second, most of the existing studies consider traditional physical goods. However, service industries as well as digital innovations have changed the market environment for firms as well as customers significantly. Therefore, we determine whether and to what extent considerations in the traditional research of first-mover advantages can be transferred to these new market conditions. Finally, based on a sample of 108 service innovations and imitations we analyse what strategy led to better success in this multiple-market setting and which factors influence this success.

■ FC11

11- Empire

Panel: Research Opportunities at the Marketing/Operations Interface

Cluster: Special Invited Sessions

Invited Session

Chair: Morris Cohen, University of Pennsylvania, Wharton School, Philadelphia, PA, United States of America, cohen@wharton.upenn.edu

Co-Chair: Chakravarthi Narasimhan, Washington University at St Louis, John M Olin School of Business, St. Louis, MO, United States of America, narasimhan@wustl.edu

1 - Panel: Research Opportunities at the Marketing/Operations Interface

Moderator: Gerard Cachon, University of Pennsylvania, The Wharton School, Philadelphia, PA, United States of America, cachon@wharton.upenn.edu, Panelists: Dave Montgomery, Uday Karmarkar, John Hauser

A resurgence of interest in the marketing-operations interface within the Manufacturing and Service Management Society (MSOM) and the INFORMS Society on Marketing Science (ISMS) has led MSOM and ISMS to encourage exploration of a joint initiative between the two societies. Toward this end, this panel is the first session of a three-session track at the Marketing Science Conference devoted to the marketing-operations interface (a similar track is planned for the MSOM conference, also in June 2012). The panel will describe research opportunities at the interface of Marketing and Operations and discuss why such interdisciplinary research is relevant today. In particular, new technologies make possible greater integration of marketing and operations to increasingly use focused strategies for adding value both upstream (working together with the supply chain) and downstream (e.g., collaborating with large strategic customers, engaging in revenue management, or customizing for individuals). Often an operations competency provides the marketing edge. This applies for product-dominant businesses, but perhaps even more so for service-dominant businesses – which are increasingly characterized by cogeneration of value with customers. The panel will also consider different research orientations, methodologies, and terminologies used in the two areas.

■ FC12

12- Parliament

Bayesian Methods III

Contributed Session

Chair: Ty Henderson, Assistant Professor, University of Texas at Austin, 1 University Station B6700, Austin, TX, 78712, United States of America, ty.henderson@mccombs.utexas.edu

1 - Compromise or Polarize – When Do Groups Make Better Decisions?

Lin Boldt, University of Wisconsin-Madison, 975 University Avenue, Madison, WI, 53562, United States of America, bao1@wisc.edu, Neeraj Arora

The compromise effect assumes that individuals are more likely to choose an option when it is an intermediate option versus an extreme option. When more than one person makes decisions together, groups may have a higher tendency of choosing intermediate options if the members negotiate and settle on a middling option. However, extant research on group polarization suggests that groups are more likely to choose the extreme options. Importantly, decision quality implications of joint compromise vs. polarization remain unknown. In this study, I investigate the following three questions. (i) Do groups exhibit joint compromise effect or polarization? (ii) What is the welfare implication of the joint compromise and polarization in terms of decision optimality? (iii) What are the factors that would cause groups to display joint compromise vs. polarization? This research is the first to formally model both joint compromise and polarization in group choices. Heterogeneity is captured using Bayesian methods. My initial results demonstrate that dyads exhibited strong joint compromise effects in certain choice situations and on certain attributes. However, some dyads displayed extreme seeking when the relative attribute importance across members is asymmetric. In another study involving family financial decisions, I will examine the consequences and drivers of the joint compromise effect vs. polarization. In addition, strategies to help families make better decisions will be proposed. The findings have implications for product design, group welfare and group decision quality. The proposed modeling framework and strategy could be extended to groups with more than two members.

2 - When Harry Bet With Sally: An Empirical Analysis of Peer Effects in Casino Gambling Behavior

Hee Mok Park, University of Michigan, 701 Tappan, Ann Arbor, MI, United States of America, heemok@umich.edu, Puneet Manchanda

In many consumption settings (e.g. restaurants, casinos), people consume products alone or with their peers. In this paper, we extend the previous literature on consumption in such settings by accounting for exogenous factors that could change the peer's behavior (the exogenous peer effect) and whether the peer is present at the time of consumption (the peer presence effect) in addition to the usually modeled endogenous peer effect (how one's behavior is directly influenced by the peer's behavior). We set up a simultaneous equation structural model and estimate it under a Hierarchical Bayesian framework. Our data comprise detailed gambling activity at the individual level for a single casino over a two-year period. We find evidence for all three types of peer effects – the exogenous peer effect, the endogenous peer effect and the peer presence effect – as well asymmetries across peers in the size of these effects. We discuss the implications of our results for managers and policy makers.

3 - An Investigation of Consumer, Store, and Spatial Determinants of Consumer Ratings of Retail Outlets

Ruijiao Guo, PhD Candidate, University of Wisconsin - Milwaukee, 1800 E Capitol Dr., 3D, Milwaukee, WI, 53211, United States of America, freeland6696@gmail.com, Purushottam Papatla

Consumer ratings and reviews have attracted much attention from marketing scholars and practitioners recently. The findings to date indicate that ratings do affect consumers' purchase decisions and, hence, sales, in categories like books and movies. Reports from practitioners – for instance, from services such as bazaarvoice.com and yelp.com – suggest that consumer ratings also affect the choice of retailers by consumers. Retailers, therefore, need to understand the supply side of consumer ratings of stores. Specifically, questions such as why some consumers decide to rate an outlet, what determines the ratings given by consumers, and how many consumers of a store are likely to rate, need to be investigated so that retailers can better manage ratings and increase the likelihood that they would have a positive effect on store sales. These are the questions that we investigate in this research using consumer ratings data for the outlets of a national retail chain of consumer electronics. The chain has a total of 1063 outlets and our sample includes 6661 ratings of these outlets. Some of the outlets have very few or no ratings while some have more than 10 ratings. Our research also investigates this variation in the rating activity across the stores. Specifically, since each store is located in a unique zip code area, we consider both store and population characteristics at the zip-code level to account for spatial variation in rating activity. Our empirical analysis is based on a Multivariate Poisson Lognormal model calibrated in a Bayesian framework. Findings from our analysis and their research and practice implications are discussed.

4 - Format Changes and Radio Listening Behavior: A Natural Experiment

Ty Henderson, Assistant Professor, University of Texas at Austin, 1 University Station B6700, Austin, TX, 78712, United States of America, ty.henderson@mccombs.utexas.edu

Each week over 93% of Americans listen to broadcast radio, with the average listener tuning in for an average of 15 hours (Arbitron 2010). Despite recent growth in interactive media consumer touch points, marketers continue to make significant outlays in radio advertising ($17.3B in 2010, Radio Advertising Bureau). Considering radio's prevalence and continued importance as a marketing medium, little is known about radio consumption behavior. This paper describes radio listening as two-stage choice decision and builds a model to capture the primary and secondary demand effects of radio consumption. Using a unique dataset of radio exposure data collected using passive behavior monitoring technology, this paper connects listener tastes and choices to demographic and lifestyle characteristics using a flexible characterization of preference heterogeneity. When a major player in the media market temporarily changes its format to holiday music, this breakpoint allows the model to examine shifts in radio incidence and preference – providing insight into both radio consumption and the effects of the format change on listening demand.

■ FC13

13- North Star

Entertainment Marketing: Movies I

Contributed Session

Chair: Jason Ho, Simon Fraser University, Beedie School of Business, 8888 University Drive, Burnaby, BC, V5A 1S6, Canada, jason_ho_3@sfu.ca

1 - Who Sets Movie Trends: The Consumer or the Producer?

Thomas Schollmeyer, Research Assistant, University of Cologne, Chair for Marketing and Market Research, Albertus-Magnus-Platz, Cologne, 50923, Germany, schollmeyer@wiso.uni-koeln.de, Marc Fischer, Michel Clement

The motion picture industry has high economic relevance and is a good representative for media products. One characteristic of media products is the classification into different genres, which can help to lower the risk perceived by a consumer prior to consumption. Customers differ in their preferences for genres and studios produce movies of different genres to spread their risks. Since genre preferences are changing over time and may follow fashion trends and herding behaviour the following question arises: Who sets genre trends, the movie producer or the consumer? This will help to explain trends and optimize investment decisions by studios. Therefore, we model the interlinked consumption and production decisions for movies belonging to specific genres. Specifically, based on data of U.S. box office revenues for eight complete years including 1,277 movies we estimate a dynamic hierarchical model of aggregate consumer genre choice while simultaneously controlling for the budget allocation decision by studios. We find significant trends in consumer taste for genres, and that studios anticipate the genre preferences in the movie production process. In the time span of our data the action genre is the biggest loser with an average percentage growth rate of genre share of -20.7 per cent per year. By decomposing the genre sales trend we find that 83 per cent of the change is driven by changes in consumers' preferences and only 17 per cent is based on changes in the supply of movies. The size of demand-and supply-induced influences on genre shares differ strongly between genres and can even be oppositional. This implies that studios could improve their investment decision through better reflecting trends in consumers' preferences.

2 - Green-lighting Movie Scripts: A Nearest Neighbor Regression Approach

Sam K. Hui, New York University, 40 West 4th Street, Tisch 910, New York, NY, United States of America, khui@stern.nyu.edu, Jehoshua Eliashberg, Z. John Zhang

Studios often have to select or "green-light" scripts to produce into movies. To forecast the revenue potential of a movie based on its script alone, studios typically use a "comps-based" approach: 5-10 movies that are similar to the focal script are identified, and their box office performances are used to forecast the revenue potential of the focal script. The selection of comps, however, can be highly subjective: different selections of the set of comps can easily lead to very different assessments of a script's box office potential. Building upon research on text mining and machine learning, we develop a methodology that objectively identifies the comps of a new script based on its content and textual features, and use that to forecast its box office performance. Specifically, we extract three levels of textual information (genre/content, bag-of-words, and semantics) from movie scripts. These textual variables are then used as features to calibrate a nearest neighbor regression with distance and feature weighting. After calibrating our model on a database of 300 actual, full-fledge movie scripts, we find that our proposed method offers more accurate holdout prediction and better green-lighting performance compared to other competing methods. In addition, we discuss a few managerial insights stemming from our analysis.

3 - Impact of Movie Preference and Internet Piracy on Movie Distribution Channels and Purchase Timing

Backhun Lee, PhD Candidate, Kaist Business School, 85 Hoegiro Dongdaemoon-Gu, Seoul, 130-722, Korea, Republic of, normalsf@business.kaist.ac.kr, Minhi Hahn

The movie distribution channels are differentiated by the timing of release, the price, and the source. Most movies are released in theaters first. After specified holdback periods, they are allowed to be distributed through other distribution channels. The practitioners believe that the existence of holdback periods alleviate the cannibalization among distribution channels. Yet, the previous literature suggests that the simultaneous release of movies in theaters and other distribution channels maximizes the profits. The objective of our research is to resolve this discrepancy by modeling the impact of movie preference and internet piracy. Movie preference and internet piracy are crucial to investigate the optimal strategy for movie distribution channels. First, the utility of movie consumption differs due to the interaction of movie preferences and channels. Consumers prefer to watch the popular movies in theaters rather than other channels compare to unpopular movies. Consumers also become more sensitive to purchase timing for popular movies. Second, the timing of distribution of illegal downloads may be dependent on the distribution strategies. The timing of piracy releases depends on legal releases. Depending on the source of piracy, the optimal distribution strategy should be modified. Third, the consumers pay notable costs to download a movie illegally. The costs depend on consumer expertise with illegal downloading. We developed a model of movie channel choice. We collected 1141 online participants for analysis. The results show that the impact of illegal downloads is larger on sub-channels than theaters. The damage from illegal downloads was larger for unpopular movies than popular movies. The optimal strategy of movie distribution is investigated.

4 - Uniform and Differential Pricing in the Movie Industry: An Empirical Analysis

Jason Ho, Simon Fraser University, Beedie School of Business, 8888 University Drive, Burnaby, BC, V5A 1S6, Canada, jason_ho_3@sfu.ca, Jing Yan, Charles B. Weinberg

In North America, movie theatres typically charge the same price for all movies showing at the same time. This uniform pricing strategy is an economic puzzle for at least two reasons: (1) there is a large variation in demand elasticity of movies, which implies the possibility of a profitable differential pricing strategy, and (2) the "wholesale price" at which theatres rent movies from studios varies considerably by appeal of the movie and time since release. Both industry executives and academic researchers (e.g., Einav and Orbach, 2007) have questioned the wisdom of this approach. For instance, Edgar Bronfman, then CEO of Universal Pictures, famously suggested that differentiating admission prices of movies based on factors like production budget and star power would be a profitable strategy. Uniform pricing is not unique to the movie industry. For example, different flavors of products like yogurt, frozen dinners and ice cream are sold at the same price; many online music stores sell all songs for the same price. In this paper, we carry out an empirical analysis of the effect of a non-uniform pricing strategy on movie demand in a non-North American, urban market. To do so, we assemble a rich and unique dataset in which (at least some) exhibitors engage in variable pricing based on movie titles and show times. Using this dataset, we estimate a demand model and use the estimation results to simulate the economic revenues that theatres would have earned by following a uniform pricing strategy and evaluate whether cinemas would lose or gain by following uniform pricing strategies.

■ FC14

14- Defender

Marketing Strategy I

Contributed Session

Chair: Alexa B. Burmester, University of Hamburg, Welckerstr. 8, Hamburg, 20354, Germany, alexa.burmester@uni-hamburg.de

1 - Reconsidering the Structure of Profit Impacts on Market-share

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

The PIMS project is a well-known project done between 1970 and 1983 with a large scale survey, currently managed by PIMS Associates in London. Needless to say, investigating on market-strategies is crucial. In setting up strategic objectives, managers frequently use market-shares. However, some companies calculate the market-shares in terms of sales, other companies in terms of volumes (i.e., gallons, number of cars sold, boxes), and other companies may in terms of profits. Since the strategic objectives are likely to influence on their business achievements, we conjecture that the way of specifying the market-share would affect on their business performances. In this study, we attempt to identify the latent structural relationships underlying the specification-types of market-shares and their business performances. Based upon the interviews with marketing directors and managers of various Japanese industries and business unites, such as cars, beverages, soy sauce, pharmaceutical drugs, we clarify the measures of market-shares that the directors and managers are based upon in specifying their market-shares in the mid-range strategic planning. Next, we apply the hierarchical VAR models to the several types of market-share and business performance data of various industries and business units so as to derive the latent structural relationships underlying the specification-types of market-shares and their business performances, based upon Granger causality, where we use the industrial characteristics (i.e., concentration ratio) and business units' characteristics (i.e., frequency of new product introduction) in hyper parameters. We show the details of the analytical results in presentation.

2 - Product Aesthetics as the Competitive Strategy: An Approach of Dynamic Conjoint Analysis

Jesheng Huang, Tamkang University, 151, Yingzhuan Rd., Danshui Dist., New Taipei City, Taiwan - ROC, iamjesheng@gmail.com, Wei-Jhih Yang

To date, the aesthetic performance of a product has been strongly influenced the firm's competitive advantage. This research used a simulation via dynamic conjoint analysis to analyze a sequence of competitive moves and countermoves among competitors which take product aesthetics as competitive strategies. Through the process of input differential product aesthetic attribute's levels by competitors (in turn) and fixing certain product functional attributes and their levels simultaneously, this approach can get each competitor's optimal profile of product design and its associated market share (measured by respondent's willingness to buy) at any stage in the sequence. The authors firstly constructed the dimensions of product aesthetic attributes from both of the literature review and the viewpoints of professional product designers, and then conducted an empirical study on the cellular phone in Taiwan market. The purpose is not only

to examine the optimal product aesthetics from consumer's eye, but also to look at potential reactions of competitors. Each product brand is assumed to encounter a competitive strategy of how to change its product aesthetic attribute's dimensions or levels to get the desirable market share, and to anticipate how the other competitors will respond. The findings are expected to reveal strategic implications on how to exploit the product aesthetics as a competitive strategy especially when there is no significant difference of product functional attributes among competitors.

3 - Advertising and Sales under Dynamics of the Student Work Control Problem and Regularity

Aharon Hibshoosh, Professor, San Jose State University and Lincoln University, 401 15th Street Oakland CA 94612, One Washington Square, San Jose, CA, 95192, United States of America, rhibshoosh@gmail.com

Consider a firm promoting a product in the growth stage of the product's life cycle. Employing advertising as its single promotion tool, the firm's objective is minimizing the overall cost of advertising necessary for attaining certain target sales by the end of a given planning period. We follow Buratto and Viscolani (1994) in adopting the Student Work Control problem, (SWC), (Ragget, Hempson and Jukes (1981), Klamkin (1985)), for modeling this marketing context. We enquire how regularity conditions on the advertising path affect the sales path and vice versa, under SWC dynamics. We consider the optimal advertising budget path solution of the SWC, as a manifestation of the classic Objective and Task advertising budgeting principle. We compare its corresponding optimal sales path with the sales paths obtained by the following alternative "regular" advertising budget schemes: a) constant advertising budget, b) Linear budget, c) and d) the classical fixed percent-age of sales budget (of preceding and present period). Similarly, we compare the optimal advertising path, with advertising paths obtained under alternative "regularity" requirements on the sales path. The alternative sales paths are either a) linear or b) proportional sales paths. In this comparison, we assume that every sales path is effective in the sense of attaining the target sales level on time. Yet, the non-optimal sales paths are regular, but not cost efficient. In contrast with alternative sales paths, the optimal sales path is highly convex to the point that the firm may deliberately accept decreasing sales at the earliest periods. Nonetheless, the optimal solution requires the firm to advertise in every period and to continue accelerating its advertising outlays.

4 - The Impact of Public Relations on Sales for Hedonic Goods

Alexa B. Burmester, University of Hamburg, Welckerstr. 8, Hamburg, 20354, Germany, alexa.burmester@uni-hamburg.de, Michel Clement, Jan U. Becker

In times of diminishing advertising efficiency, companies increasingly seek for alternative ways to convey product information that customers deem trustworthy. Hence, companies use public relations (PR) to reach editorial coverage for their products and service as customers perceive editorial content to be more credible. However, little is known about the efficiency of PR – especially its impact on sales in comparison to advertising for hedonic goods. Therefore, this study empirically analyzes the effect of product PR and advertising on sales using data on 1,932 video games over a period of six years. Having information on the number of pages a video game is mentioned in an editorial context (covering the entire market of special interest magazines for video games) and on the advertising spendings for the respective game, we analyzes how PR and advertising affect sales. The results show not only that PR has a positive effect on overall sales. Moreover, the effect size of PR is higher than the effect size of print advertising spending. The findings indicate that companies marketing hedonic products should consider PR more often in the allocation their marketing budgets.

■ FC15

15- Great Republic

Marketing Strategy: Firm Performance

Contributed Session

Chair: Sourindra Banerjee, Assistant Professor in Marketing, University of Warwick, Warwick Business School, Scarman Road, Coventry, United Kingdom, sourindra.banerjee@wbs.ac.uk

1 - Outsourcing Value Creation to Customers: When Should Firms Stimulate Customer Engagement Behaviors?

Sander F.M. Beckers, University of Groningen, P.O. Box 800, Groningen, NL-9700 AV, Netherlands, s.f.m.beckers@rug.nl, Jenny van Doorn, Peter C. Verhoef

The rise of customer engagement behaviors (i.e. non-transactional customer behaviors) challenges the 'classic' marketing productivity chain in which customers are exogenous to companies (i.e. outside the value creation domain). Customer engagement behaviors make that customers take an active role in value creation for companies and hence customers become endogenous to companies (Leeflang 2011). Through non-transactional customer activities as recommending, giving feedback, and providing product suggestions, customers participate in the company's value chain. Since this participation is not unequivocally positive for companies, companies attempt to gain more control over customer engagement behaviors by initiating and steering such behaviors themselves (Verhoef, Reinartz, and Krafft 2010). Yet, the effectiveness of such initiatives is unclear. By means of the event study methodology we investigate the shareholder evaluation of companies' public announcements regarding their initiatives to stimulate customer engagement behaviors. Further, drawing similarities between stimulating customer engagement behaviors and outsourcing of company activities, we employ a transaction cost perspective on customer engagement behaviors. We relate relationship-specific investments (in particular, market position and corporate reputation), frequency, and uncertainty (in particular, demand changeability) to the returns for companies on stimulating customer engagement behaviors. Results show that, on average, companies' customer engagement initiatives are evaluated negatively. However, under the right circumstances (i.e. in initial stages, when having a low reputation, or when facing low demand uncertainty) pro-actively managing customer engagement behaviors can be a value-adding strategy.

2 - How to Manage Through an Economic Crisis: Learning Orientation and International Dependence Effects

Peren Ozturan, Koç University, Graduate School of Business, Rumelifeneri Yolu Sariyer, Istanbul, 34450, Turkey, pozturan@ku.edu.tr, Stefan Wuyts, Aysegul Ozsomer

The last couple of years, firms have struggled to sustain revenues in the face of a worldwide economic crisis. Oftentimes, however, economic crises have a more local character. In particular, emerging countries face such local crises in their growth trajectory. The extant marketing literature on economic crises offers little to draw on to explain why some firms in emerging countries are more affected than other firms by a local crisis – the focus of this research study. The authors pursue two main contributions. First, they draw on learning and resource dependence theory to identify learning orientation and various dimensions of international dependence as key explanatory variables of firm performance during a local crisis. Second, they develop a contingency framework and show that the effects of these key explanatory variables are contingent on industry characteristics such as demand uncertainty and competitive intensity. Combining survey data and objective performance data, the authors examine variation across firms in terms of their sales growth during the 2001 economic crisis in Turkey and provide empirical support for the developed theory. They also run parallel analyses to establish how the same variables affect sales growth after crisis (in the recovery year following the crisis as well as in later time). On the basis of these combined analyses, the authors specify what sets local crisis times apart from non-crisis times.

3 - The International Growth of Emerging Market Firms: Theory and Evidence From a Natural Experiment

Sourindra Banerjee, Assistant Professor in Marketing, University of Warwick, Warwick Business School, Scarman Road, Coventry, United Kingdom, sourindra.banerjee@wbs.ac.uk, Jaideep Prabhu, Rajesh Chandy

The recent international growth of some firms from emerging markets has attracted the attention of academics and managers alike. How do such emerging market firms achieve growth in international markets despite lacking foreign market knowledge and international competitiveness, and despite facing weak institutions in their home countries? The authors address this question by introducing a new concept - global market capital- which consists of three elements: leadership capital (at the individual level), cross-border asset capital (at the firm level) and network capital (at the inter-firm level). The authors argue that, taken together, these elements enable emerging market firms to overcome their weaknesses in foreign market knowledge, international competitiveness and home institutions. The authors test their thesis using uniquely compiled data on Indian firms from the Bombay Stock Exchange 500 index. They use the Indian context to set up a natural experiment by measuring the independent variables of interest (leadership capital; cross-border asset capital and network capital) prior to a major regulatory change in outward investment policy and the dependent variable (international growth) after this policy change. The authors find broad support for their thesis and discuss its implications for research and practice.

■ FC16

16- St. George A

Game Theory Strategy II

Contributed Session

Chair: David Soberman, Professor, University of Toronto, Rotman School, 105 St. George Street, Toronto, ON, M5S 3E6, Canada, david.soberman@rotman.utoronto.ca

1 - Is All State Dependence Equal? A Comparison of the Effects of Switching Costs and Inertia

Marielle Non, Assistant Professor, University of Groningen, P.O. Box 800, Groningen, 9700AV, Netherlands, m.c.non@rug.nl

State dependence in consumer choice can have multiple sources. Two sources previously identified in the literature are switching costs and inertia. Switching costs occur when a consumer incurs a cost when switching to another brand or supplier. A consumer is inert when she does not at all consider switching and

automatically rebuys her current brand. This study uses a game-theoretic model to investigate the differences between those two different sources of state dependence. First, the analysis shows that both sources of state dependence can both lead to an increase and a decrease in optimal prices. An increase in switching costs however tends to decrease prices and only rarely leads to a price increase. An increase in the probability of a consumer being inert shows the reverse pattern. An increase in inertia usually increases prices, and only rarely leads to a price decrease. Second, an increase in switching costs always decreases the amount of switching in the market, but an increase in inertia might increase the switching levels. Finally, while usually entry in a market leads to lower prices, in markets with switching costs prices might increase when competitors enter the market. This effect is even stronger in markets with inertia. These results together imply that inertia is more valuable to firms than switching costs. In addition, entry of an additional competitor on the market is not as detrimental to profits as standard models show.

2 - Competing Through Cooperatives

Sudheer Gupta, Associate Professor, Beedie School of Business, Simon Fraser University, 8888 University Drive, Burnaby, V5A 1S6, Canada, sudheerg@sfu.ca, Omkar Palsule-Desai

In many developing economies, small producers can lack access to markets and resources because of 'institutional voids'. A commonly used strategy in such markets is to form a cooperative that allows small producers to pool resources and achieve scale economies required to effectively compete. We analyze a model where several small producers form a cooperative and delegate distribution and pricing decisions to a marketing agent, in order to compete with a dominant producer. The agent offers a contract to small producers, secures production quantities, sets prices in a differentiated products market and distributes the product. The network realizes scale economies in distribution as total quantity increases, but sees scale diseconomies as number of producers gets large. We show how different network contracts (including wholesale price and revenue sharing) affect the size of the network, its cost structure, and pricing decisions. Equilibrium outcomes balance the size of the network to achieve scale economies with the strategic incentive to keep prices high enough to benefit all producers. While formation of the cooperative provides a way for small producers to effectively compete in the market, it may also benefit the dominant producer. We discuss several extensions to this model, and provide guidelines and conditions under which competing through cooperatives in presence of institutional voids is effective.

3 - Quality and Pricing Decisions in a Market with Consumer Information Sharing

Baojun Jiang, Assistant Professor of Marketing, Olin Business School, Washington University in St. Louis, St. Louis, MO, 63130, United States of America, baojunjiang@wustl.edu, Bicheng Yang

We provide a dynamic, game-theoretic model to examine a firm's quality and pricing decisions in a market in which early consumers do not observe product quality prior to purchase but after purchase they can share product information online and hence reveal the true product quality to later consumers. The firm has private information about its cost efficiency and makes an endogenous quality decision whereas consumers are uncertain about both the firm's cost efficiency and its chosen product quality. Our analysis shows that the firm's early-period price can serve as a credible signal for its cost efficiency and its chosen product quality. We find that a more cost-efficient firm always chooses a higher quality and makes more profits than a less efficient firm. One might intuit that, if consumers can observe firm's cost efficiency, the more efficient firm will have more incentives to invest in quality and should increase its quality because the less efficient firm can no longer mimic the more efficient firm. Surprisingly, the opposite may be true – when a firm's high efficiency is publicly known, it may reduce its product quality rather than increase it.

4 - Profit-increasing Consumer Exit

David Soberman, Professor, University of Toronto, Rotman School, 105 St. George Street, Toronto, ON, M5S 3E6, Canada, david.soberman@rotman.utoronto.ca, Amit Pazgal, Raphael Thomadsen

This work examines the phenomenon of profit-increasing consumer exit, and the related phenomenon of profit-decreasing consumer entry. We demonstrate that firms can be better off in shrinking markets, and worse off in growing markets, even in the absence of entry or exit by competitors. While this not always the case, there is certainly evidence that in growing markets, the people most who enter the market late are the peopleoften people who are 'least committed to the category. Conversely, in shrinking markets, the people who most likely to exit the market first are people who are "least committed" to the category. Incumbent firms may benefit if a segment of consumers who are relatively indifferent between the offers of competing firms leave a market. This can relax, relaxing the competitive pressure between firms and lead to increased profitability.

Friday, 3:30pm - 5:00pm

■ FD01

01- Essex Ballroom South

Online Advertising & Promotion

Cluster: Internet and Interactive Marketing

Invited Session

Chair: Nazrul I. Shaikh, Assistant Professor, University of Miami, Coral Gables FL 33131, United States of America, n.shaikh@miami.edu

1 - Why Consumers Pay Groupon Coupon Online but Get More Regret Offline?

Yiping Song, Fudan University, Department of Marketing, Room 605, Siyuan Building, Shanghai, China, ypsong@fudan.edu.cn

In recent years, online daily Groupon deals are more and more popular among consumers. In this paper, we explore the redemption of Groupon coupons. We first introduce the basic models with Ward and Davis (1978) and Inman and McAlister (1994). Then, we extend the models by including the new features of online Groupon coupons such as coupon price and real-time popularity. We test the models on a dataset from a group buying website in China. Both in-sample and out-of-sample fit indices as well as bootstrapping results show that the extended model can explain the redemption rates 50% more than the basic models. Furthermore, the empirical analyses show that deal popularity of group-buying leads to steeper decay and stronger regret effects among consumers.

2 - Coupon Redemption Timing and its Consequences in Mobile and Offline Markets

Joseph Pancras, University of Connecticut, Marketing Department, School of Business, 2100 Hillside Road, U1041, Storrs, CT, 06269, United States of America, Joseph.Pancras@business.uconn.edu

External deadlines are a call to action, and comprise a potentially powerful strategic tool for firms. In this paper we study one common external deadline imposed by firms on consumers, i.e., coupon validity periods. The use of online and mobile media, for delivering and redeeming coupons, has led firms to utilize a larger variety and range of coupon deadlines than with 'offline coupons'. These digital coupons are often 'short fuse' that could last only a few hours or a few days. We contrast mobile and offline coupon redemption behavior in the context of variation in validity periods. The study's primary research objectives include: 1. How does the distribution medium (mobile and direct mail) and deadlines (long and short) affect coupon redemption behavior? 2. What is the effect of different coupon deadlines on the dynamics of coupon redemption during the validity period, and the post redemption behavior of customers? 3. Do shorter deadlines attract different segments of customers or do the same customers simply change their redemption behavior to deal with coupon deadlines? Of particular importance in our study is the 'deadline effect', which is defined as the spike (increase) in redemptions during the last period of the coupon validity period. We use two separate datasets that each captures coupon distribution, and redemption through direct mail and mobile phones respectively. Both the datasets also capture consumer pre and post coupon redemption spending behavior. Our analysis indicates that the deadline effects of coupons exist in both (targeted) offline coupons and mobile coupons in a variety of categories. Interestingly, we also find that the deadline effect exists in the mobile context only when the deadline is explicitly mentioned in mobile coupon offers. Finally we investigate implications for retailers and manufacturers of the coupon deadline effect.

3 - Preference Structure of Social Network Services: Moderating Role of Self Construal

Cecil Cho, Assistant Professor, University of California-Riverside, Riverside, CA, United States of America, cecile.cho@ucr.edu, Sangman Han

What drives the popularity of social network services like Facebook and MySpace? While participating in such social sites likely holds perceived 'social capital value, the underlying motives that drive the perceived attractiveness of SNS remains largely unexamined (Sheldon, Abad and Hinsch 2011). Our research asks whether perceived social capital and subsequent attractiveness of an SNS is moderated by differences in how people construe themselves with respect to others. We draw on self construal theory to explore whether and how attitude towards SNS and participation in SNS is moderated by chronic and situational differences in interdependent and independent mindsets (Markus and Kitayama 1991; Sigelis 1994). We focus on two main aspects of SNS—network size and self expression (feedback feature)—to test our proposition that SNS users have different preferences for SNS features depending on their concept of self. Three studies indicate differential preference structure of users who differ in their self construal, both chronically and situationally. In particular, we find that the preference for a large network size, generally perceived to provide greater social capital, is moderated by whether individuals are under interdependent or independent mindsets. We also find evidence that perceived attractiveness of an SNS is driven by the availability of feedback features.

4 - Is Pre-roll Advertising the Next Big Thing?

Nazrul I. Shaikh, Assistant Professor, University of Miami, Coral Gables FL 33131, United States of America, n.shaikh@miami.edu, Mahima Hada, Niva Shrestha

Pre-roll advertisements, the 15-30 second online ads that you have to sit through before you can watch what you really want to see, are, in general, perceived as being intrusive. Yet, we seem to be getting more of those, rather than seeing the end of them. Here, we look at why this form of online media is the new favorite of marketers, and what the marketers need to do so as to optimize it's usage and drive up its effectiveness and efficiency. Using detailed weekly transactional data combined with information on all the multi-media (both online and offline) communications used by a firm over a period of time, we develop a systematic method to estimate the efficacy of pre-roll advertisements in driving customer traffic. We then compare this effectiveness to similar campaigns aired on television, and same messaging provided through static online banner ads. We observe that the effectiveness of the pre-roll advertisements and their retention are higher than both the television and statics version of the message; we also find that Pre-roll advertisements are synergistic with online search. However, saturation in pre-roll advertisements is reached earlier than other forms. For a marketer, the implications of our findings are two folds; first, the high retention rate and early saturation demands customized flighting plans which are distinctly different from static banner ads; second, the message conveyed through pre-roll advertisements, when supported by appropriate key word selections (for paid search) has additional synergistic effects. As such, our findings can help marketers to identify the optimal levels of execution/flighting and mix of pre-roll advertising within their overall online advertising and thereby improve online effectiveness and ROI.

■ FD02

02- Essex North Center

Customer Responses to Online Strategies - II

Cluster: Internet and Interactive Marketing

Invited Session

Chair: Jian Ni, Johns Hopkins University, 100 International Dr, Baltimore MD 21202, United States of America, jni@jhu.edu

1 - A Value and Risk Model of Consumers' Mobile Marketing Acceptance

Tao (Tony) Gao, Northeastern University, 360 Huntington Ave., Boston, MA, 02115, United States of America, t.gao@neu.edu, Andrew Rohm, Fareena Sultan, Jiao Wang

Mobile Marketing is a set of practices that enables organizations to communicate and engage with their audience in an interactive and relevant manner through any mobile device or network (Mobile Marketing Association, 2009). For many consumers, mobile marketing represents a marketing innovation that presents both benefits and costs and its adoption may involve risks as well. This study builds on diffusion of innovation theory and incorporates constructs of perceived value and perceived risk to explain consumers' adoption of mobile marketing. We propose that perceived risk is a consumers' assessment of potential negative consequences should the mobile marketing adoption go wrong and is comprised of monetary, performance, psychological, social, time and privacy dimensions in the mobile marketing context. We also propose that perceived value is an overall assessment of the worthiness of mobile marketing adoption. While value and risk are both relevant considerations related to mobile marketing acceptance, they are conceptually distinct and few studies have examined the impact of both in mobile marketing acceptance research. Our conceptual framework links perceived value and perceived risk constructs to Mobile Marketing acceptance by consumers and we propose that perceived value and perceived risk mediate the effects of innovation characteristics (such as location-based benefits and compatibility) on mobile marketing adoption. Given the highly personal nature of consumers' mobile marketing involvement with various companies, we also study the role of trust in influencing consumers' mobile marketing acceptance. We use data collected from 400 youth consumers in China to empirically test the model. Research and managerial implications of this study will also be discussed.

2 - The Impact of Mobile Device Usage on Search Costs: A Choice-based Conjoint Analysis

Dominik Molitor, LMU Munich, Geschwister-Scholl-Platz 1, Munich, 80539, Germany, molitor@bwl.lmu.de, Stephan Daurer, Martin Spann

The increased adoption of smartphones enables more and more consumers to use the mobile internet. Smartphones deliver additional location-dependent information to consumers (e.g., geographic distances to stores, alternative offers or detailed product information). We expect that during the search process, information about prices or geographic distances, that are relevant for the purchase, are of importance. The goal of this study is to analyze the impact of mobile search and location-dependent information on consumers' purchase behavior by estimating search costs in a mobile internet context. Search costs are estimated by using a choice-based conjoint analysis for a large representative online sample. Our empirical results show that mobile search has a significant impact on consumers' purchase behavior. We quantify search costs in monetary units on the individual level by using geographic distance as a trade-off for price.

3 - Online Doctor Participation

Jian Ni, Johns Hopkins University, 100 International Dr, Baltimore, MD, 21202, United States of America, jni@jhu.edu, Baohong Sun

The popularity of online community allows users to research their medical conditions and treatments, and encourages physicians share their knowledge and communicate with their patients online. Consequently, how to motivate doctors provide expertise information to help consumers achieve more judicious decisions is of fundamental importance for online healthcare platforms. To study doctors' participation and assess how they could learn and compete with peers, we develop and estimate a dynamic equilibrium model of the online healthcare community. Applying the model to a unique dataset obtained from one large online healthcare platform, we estimate the viewership demand, and analyze the factors and efficiency of doctor's participation decisions and their implications. Estimates of the structural parameters explain observed heterogeneity in doctor participation choice, frequency and intensity, and understand how participation in the online platform drive the change of doctor ranking/-reputation/productivity and the observed doctor network structure; while simulations allow us to evaluate various policy intervention and quantify the aggregate benefit for the health care providers.

■ FD03

03- Essex North West

Social Media and Product Development

Cluster: Internet and Interactive Marketing

Invited Session

Chair: Ya You, PhD Candidate, University of Central Florida, 4000 Central Florida Blvd., P.O. Box 161991, Orlando, FL, 32816, United States of America, yyou@bus.ucf.edu

1 - The Impact of Social Media Campaigns on Consumer Behavior

Daniela Baum, LMU Munich, Geschwister-Scholl-Platz 1, Munich, 80539, Germany, baum@bwl.lmu.de, Johann Füller, Martin Spann, Carina Thürridl

The importance and use of social media for marketing purposes has increased substantially in past years. Since firms have recognized the importance of online word-of-mouth and social interaction for consumers, social media marketing builds upon the firm-initiated exchange of information between Internet users. Previous research has already analyzed the impact of online word-of-mouth communication and peer influence on consumer behavior. The goal of this study is to analyze the antecedents and moderators of social media campaign effectiveness. We analyze behavioral data of an online community related to a social media campaign of a manufacturer of high-end binoculars. The goal of this campaign is to promote and support the launch of a new product targeted at a completely new set of potential customers. We combine this behavioral data with survey-based data of the community members as well as with sociometric data of the communities' social network. We find that consumers' attitudes toward the new product and their purchase intention is not only influenced by the member's activity within the community and the member's psychographics, but also by their peers. Furthermore, we are able to explain online recommendation behavior by the activity of the members within the community as well as by their psychographic traits.

2 - Consumers' Social Embeddedness as Driver of New Products' Adoption Timing of Scarce Products

Christian Pescher, LMU Munich, Geschwister-Scholl-Platz 1, Munich, 80539, Germany, pescher@bwl.lmu.de, Oliver Hinz, Martin Spann

Consumers do not take consumption decisions independently. Instead, they are influenced by their friends and family, e.g., by their social network. This is especially the case for new products, because consumers cannot fully assess the utility and usability of these new products. The effect of consumers' social embeddedness on their adoption decision is an important research question. The effect of social embeddedness can diverge between different types of products. Therefore, this study investigates the effects of consumers' social embeddedness on new products' adoption timing in a large-scale empirical study using the social network and purchase data from an online community. The results of a hazard model indicate that the consumers' social embeddedness can significantly help to explain consumers' time to adoption for products of a new product line. Whereas the number of peers who adopt before decreases time to adoption for regular products, it increases time to adoption for scarce product. This indicates that scarcity can turn regular products into status product.

3 - Cocreating Value with Other Customers and Firm in Social Media: From a Social Network Perspective

Jianjun Zhu, University of Hong Kong, School of Business, Hong Kong, Hong Kong - PRC, johnzhu1@hku.hk, Stella Yiyan Li, Kimmy Wa Chan

In an increasingly dynamic business environment, firms are realizing the importance of collaboration for creating competitive advantage. According to the service-dominant view of marketing, "value can only be created with and determined by the user". Among the different types of values that could be cocreated with customers (e.g., economic and relational values), knowledge is one of the essential types that is particularly important for the ideation stage of product/service development, but received relatively less attention from the literature. Using a three-year data on each user's online daily activities collected from a unique crowdsourcing site, the Dell's IdeaStorm, we investigate how a user's level of online participation, types of social network (with peers [P2P] and firm [P2F]), network characteristics (inward versus outward direction, size, and tie strength) affect their idea generation (a form of knowledge cocreation) in the community. Our results confirm the significant impacts of users' participation and P2P and P2F networks on their future idea generation. Interestingly, we found that inward (received comments from others) and outward (post comments to others) P2P network size affects one's future idea generation in opposite ways. Moreover, a larger and stronger P2P network weakens the positive impacts of a user's past participation on her future idea generation whereas a stronger P2F network strengthens the effects. These differential effects of social networks capture the complex process of cocreation and fill an important gap in current literature. Supplementary studies are also conducted to explore the differential social network effect on idea generation when users' level of online reputation (e.g., their ratings in the community) is considered.

4 - Crowdsourcing New Product Ideas under Consumer Learning

Param Vir Singh, Carnegie Mellon University, Pittsburgh, PA, United States of America, psidhu@cmu.edu, Yan Huang, Kannan Srinivasan

Crowdsourcing initiatives are becoming a popular tool for new idea generation for firms. Although such initiatives are widely adopted in many different industries, the number of ideas generated often decline over time, and the implementation rates (percentage of posted ideas that are implemented by the firm) are quite low. Critics of crowdsourcing attribute these observations to three key factors: 1. individuals? limited view about firms? products, leading to the contributions of mainly niche ideas; 2. consumers? limited knowledge about firms? cost structure, leading to the proposals of mostly infeasible ideas; and 3. firms? lack of response to customers? ideas, leading to customer dissatisfaction. To investigate these criticisms in detail and to devise policies for firms to alleviate these concerns, we propose a structural model to capture individual idea contribution dynamics. We estimate the model using a rich dataset obtained from IdeaStorm.com, which is a crowdsourcing website affiliated with Dell. On this website, individuals can contribute ideas and vote on other's ideas. The firm then decides which ideas to implement. Using the peer voting score, we are able to infer the true potential of ideas, whereas the cost to the firm for implementing the idea is indirectly imputed from the idea implementation data. We find that individuals tend to significantly underestimate the costs to the firm for implementing their ideas but overestimate the potential of their ideas in the initial stages of the crowdsourcing process. Therefore, the "idea market" is initially overcrowded with ideas that are less likely to be implemented. However, individuals learn about both their abilities to come up with high potential ideas as well as the cost structure of the firm from peer voting on their ideas and the firm response to contributed ideas. We find that the individuals learn rather quickly about their abilities to come up with high potential ideas, but the learning regarding the firm's cost structure is quite slow.

5 - The Impact of Social Media on New Product Sales, and Customer Acquisition and Retention

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While the impact of social media and its interaction with traditional media is an oft researched topic in recent times, there has been no study that investigates the impact of this media over the life cycle of a product. On the other hand, several studies demonstrate that traditional media advertising has varying effectiveness for new and established products. Thus, the purpose of this study is to address the following questions: (1) what is the effectiveness of advertising in social media relative to that of traditional media on new product sales?, (2) for established products, how does the impact of social media and traditional media advertising differ for customer acquisition and customer retention?, and (3) are there any interaction effects between social and traditional media on new product sales and customer acquisition/retention for established products? We form hypotheses and test them using secondary data from the automobile industry.

■ FD04

04- Courier

Decision Making I

Contributed Session

Chair: Arnaud De Bruyn, Professor of Marketing, ESSEC Business School, Avenue Bernard Hirsch, Cergy, 95000, France, debruyn@essec.edu

1 - Individual Differences in Risk and Time Preferences

Alina Ferecatu, PhD Candidate, ESSEC Business School, Avenue Bernard Hirsch, Cergy, 95000, France, b00181212@essec.edu, Ayse Onculer

In many situations, consumers have to make tradeoffs between a smaller-sooner reward and a larger-later one (e.g. saving vs. spending money, investment decisions, dieting, addiction). In this paper, we assess the impact of personality traits on intertemporal choices and risk attitudes by linking consumers' preferences between smaller-sooner and larger-later rewards to their psychographics. Following Andersen et al's (2008) methodology, we elicit risk and time preferences experimentally and relate these preferences to individual differences via a hierarchical Bayes specification. Our preliminary results show that self control impacts intertemporal choices, as predicted by the dual self theory (Fudenberg and Levine, 2006). More specifically, consumers with high self control demand lower discount rates and are more risk averse than consumers revealing low self control. High impulsiveness increases the preference for the smaller-sooner reward, as well as risk taking behavior. Overconfident consumers are more risk taking and require lower discount rates to postpone the consumption. More risk seeking consumers with an intuitive decision-making style reveal discount rates closer to market levels. The paper shows that consumers with different psychological profiles have different saving-spending patterns, which implies that communication about financial products should be adapted to customer profiles. One important managerial implication of our study is in financial services where the presentation of different investment alternatives can be adapted to the personality traits of the clients.

2 - Should I Take This Call? Theory and Evidence on the Optimality of Cell-Phone Use by Consumers

Robert Meyer, Professor, University of Pennsylvania, The Wharton School, Dept. of Marketing, Philadelphia, PA, 19104, United States of America, meyerr@wharton.upenn.edu, Raghuram Iyengar, Arun Gopalakrishnan

Consumers routinely face sequential time-budgeting problems in a variety of contexts, such as when managing wireless phone calls within a month. We examine how consumers plan for such decisions by considering a sequential decision problem in which a consumer is attempting to maximize the net utility gained from taking wireless phone calls over the course of a series of months. Incoming calls follow a stationary stochastic arrival rate, and their cost is subject to one of two fixed fee structures: pay-per-use (PPU) or three-part tariff (TPT). Upon the arrival of each incoming call, the consumer observes its value which is a random draw from a known distribution, and then decides to take it or pass. Calls last for a fixed known duration during which other calls cannot be taken. The consumer's goal is to formulate an accept-or-reject policy over time that maximizes the total net utility of calling over the course of a given month. We first show that this problem is analogous to a recurrent optional stopping task whose optimal policy is a reservation-utility rule, where a call should be taken at time t if its observed utility is above a critical threshold v*. This value is a function of the number of days left in the month and the probability distributions governing arrival rates and utility. We then report the results of a series of controlled laboratory experiments that measure how closely actual call behavior follows this optimal policy. The results suggest that consumers are not optimally forward looking, accepting too many low-value calls relative to the optimal policy, particularly given TPT plans. Implications of the findings for new FCC regulations requiring firms to provide consumers with more complete disclosures on time usage is explored.

3 - When Empathic Managers Misunderstand Their Customers: Evidence for a Self-Referential Bias

Johannes Hattula, University of St. Gallen, Dufourstr. 40a, St. Gallen, 9000, Switzerland, johannes.hattula@unisg.ch, Darren W. Dahl, Sven Reinecke, Walter Herzog

A core managerial task is forming accurate predictions about customer preferences. This investigation adds to the scarce research on this topic in two ways. First, our results suggest that managers use their own preferences as a cue for their customers' preferences. We label this tendency self-referential 'bias' because managers' individual tastes are questionable predictors of customer preferences. Second, we examine how cognitive empathy, that is, the mental process of putting oneself into the shoes of customers to understand their needs, influences the bias. Although common wisdom suggests that empathy is associated with an increased customer focus and a decreased emphasis on one's own perspective, our results indicate the contrary, that is, the self-referential bias increases with the amount of empathy. This finding is in line with recent social psychological work according to which (a) empathy increases the perceived social closeness between observers (i.e., managers) and targets (i.e., customers) and (b) observers tend to assume that close others share their own preferences. In an initial experiment, marketing managers completed a case study on a product

development process in the automotive industry. They were asked to steer the product development process by assigning importance weights to six product features (e.g., engine power) which were then correlated with their personal importance ratings of the features when buying a new car (as a consumer). For all product features, we find that (a) there is a positive correlation between managers' personal importance ratings and the importance weights in the management task and (b) the correlation significantly increases as managers exhibit greater cognitive empathy. Further results and implications are discussed.

4 - Maximizing vs. Satisficing: Understanding Managers' Tradeoffs Between Exploration and Exploitation

Arnaud De Bruyn, Professor of Marketing, ESSEC Business School, Avenue Bernard Hirsch, Cergy, 95000, France, debruyn@essec.edu, Alina Ferecatu

This paper investigates how individual differences and decision biases influence managers' learning patterns —the tradeoffs they make between exploration and exploitation strategies— and relates these tradeoffs to specific psychological traits. In a lab experiment that involved a 70-round, three-armed bandit game, subjects were asked to optimally balance exploration and exploitation behavior, thus maximizing overall payoffs. To obtain individual-level estimates of learning and decision biases, and link them to individual difference variables, we add a hierarchical Bayes structure to the Quantal Response Equilibrium specification used to model the learning process. Results show that risk averse, maximizing-oriented managers, prone to counterfactual thinking, delay moving from exploration to exploitation as they like to revisit choices previously abandoned to confirm they did not misjudged the abandoned alternatives' profitability. Satisficing-oriented managers run the risk of focusing too quickly on an (possibly suboptimal) alternative. Our results also indicate that personality traits have significant effects on decision biases such as loss aversion bias (tendency to focus on lower payoffs), recency bias (focus on recent payoffs), and exploitation bias (tendency to stop considering payoffs during the exploitation phase). While maximizing-oriented managers are prone to loss aversion and exploitation bias, satisficing-oriented managers are susceptible to exploitation biases. We show how these preliminary findings pave the way for future research in the domain of managerial information presentation, and the adaptation of such presentation to managers' personality traits.

■ FD05

05- Essex Center

ISMS Doctoral Dissertation

Cluster: Special Invited Sessions

Invited Session

Chair: Bart Bronnenberg, Tilburg University, Warandelaan 2, Tilburg, 5037AB, Netherlands, Bart.Bronnenberg@uvt.nl

1 - Do Bonuses Enhance Sales Productivity? A Dynamic Structural Analysis of Bonus-based Compensation Plans

Doug Chung, Yale University, New Haven, CT, United States of America, doug.chung@yale.edu, K. Sudhir

We estimate a dynamic structural model of sales force response to a bonus based compensation plan. The paper has two main methodological innovations: First, we implement empirically the method proposed by Arcidiacono and Miller (2010) to accommodate unobserved latent class heterogeneity with a computationally light two-step estimator. Second, we estimate discount factors in a dynamic structural model using field data. The key to identification of discount factors is that bonuses affect only future payoff in non-bonus periods providing exclusion restrictions on current payoffs. Further, we exploit differences in predicted effort (and thus sales) over time from the exponential and hyperbolic discounting models to identify present bias in a hyperbolic discounting model. Substantively, the paper sheds insights on how different elements of the compensation plan enhance productivity. We find evidence that: (1) bonuses enhance productivity across all segments; (2) overachievement commissions help sustain the high productivity of the best performers even after attaining quotas; and (3) quarterly bonuses help improve performance of the weak performers by serving as pacers to keep the sales force on track to achieve their annual sales quotas. We also find clear evidence of hyperbolic discounting by salespeople.

2 - Hyper Media Search and Consumption

Jason M. T. Roos, PhD Candidate, Duke University, Fuqua School of Business, 100 Fuqua Drive, Durham, NC, United States of America, jmr36@duke.edu, Carl F. Mela, Roni Shacher

In the past five years, Americans using the Internet as their main source of news doubled to more than 40%, while those choosing newspapers first dropped to just over 30%. This trend signals a profound societal shift in the consumption of information away from paper toward electronic hyper-media wherein informational sites commonly excerpt and link. Yet research regarding how consumers acquire news and information in online environments has not proceeded apace. Therefore, we develop a model of forward-looking consumers who gain knowledge and utility through the search and consumption of hyper-media and explore its implications for consumer welfare and site policy. We fit the model using a novel data set from comScore that captures two years of browsing by a large number of panelists at more than 3,000 blogs. These data are supplemented with links and text scraped from the sites. We estimate the model by coupling Imai, Jain, and Ching's (2009) with an adaptive sampling method. These advances enable researchers to estimate dynamic models with many more variables and states than previously considered. Preliminary results from five celebrity news and gossip sites indicate consumers are heterogeneous in their preferences for certain types of sites (e.g., men prefer more salacious sites while females favor news content). Results also indicate that links to other sites are highly informative about the target site's potential quality. After observing 2 links consumers uncertainty regarding the linked site quality is about 35% of its initial value. Counterfactual analyses indicate that females suffer greater welfare loss from the "Net Neutrality" regulations under consideration in the United States. Fair use copyright laws, also under consideration in the United States, are shown to make links less informative but enhance consumer welfare via a tendency towards increased browsing. We further explore the implications of paywalls for site traffic at the considered sites.

3 - Effect of Temporal Spacing between Advertising Exposures: Evidence From an Online Field Experiment

Navdeep Sahni, University of Chicago, Booth Business School, Chicago, IL, United States of America, nsahni@chicagobooth.edu

This paper aims to understand the impact of temporal spacing between ad exposures on a consumer's decision of whether to purchase the advertised product. I create an individual-level dataset with exogenous variation in the spacing and intensity of ads by running online field experiments. The data show that at a purchase occasion, the likelihood of a product's purchase increases if its past ads are spread apart rather than bunched together, even if spreading apart of ads involves shifting some ads away from the purchase occasion. Because the traditional models of advertising do not allow for this effect, I build a new memory-based model of learning through ad exposure. Using a nested test, I reject a goodwill stock model based on the Nerlove and Arrow [1962] approach, in favor of the more general memory-based model. Counterfactual simulations using parameter estimates show that not accounting for the spacing effect of ads might lead to significantly lower profits for the advertisers.

■ FD06

06- St. George B

Pricing II

Contributed Session

Chair: Kissan Joseph, Associate Professor, University of Kansas, 1300 Sunnyside Avenuce, Lawrence, KS, United States of America, kjoseph@ku.edu

1 - Dynamic Pricing in Las Vegas: Uncertain Demand in a Mature Market

Yang Wang, PhD Student, Rice University, 4100 Southwest Fwy, Apt. 573, Houston, TX, 77027, United States of America, yang.wang@rice.edu

Dynamic models assuming a priori demand processes have dominated research in revenue management and dynamic pricing. Demand functions and distributions are often chosen to be analytically tractable. While these models have provided us with insights on how dynamic pricing can be best applied in theory, the a priori nature of their assumptions regarding the demand generating process make the success of their implementation dubious in the eyes of practitioners. Assuming the conditional stationarity of demand schedules in a mature market, we take a non-parametric approach to identifying the distribution of demand conditioned on own price, competitive prices, and booking window length for a single room type at a large resort in the competitive Las Vegas market. Using the empirical conditional distribution of demand, we form the probability transition matrix of the dynamic program that characterizes the revenue management problem. We optimize the MDP and show a xx.x% increase in revenues above heuristic approaches taken by managers. The prescribed method allows us to directly implement real world demand schedules, eliminating the need for assuming arbitrary demand functions and distributional forms. We find that managers are consistently conservative in their pricing schemes and could yield higher revenues by charging higher prices early in the booking window. Furthermore, we show significant gains in revenue when considering competitive rates and marginal losses in revenues when constraining the frequency of rate changes.

2 - Contingent Preannounced Pricing Policies with Strategic Consumers

Ricardo Montoya, Assistant Professor, University of Chile, Republica 701, Santiago, 8370439, Chile, rmontoya@dii.uchile.cl, Jose Correa, Charles Thraves

Determining an optimal pricing policy when selling to strategic consumers is a growing area that is posing challenging research questions with relevant practical implications. Previous research has investigated the expected performance of different pricing and allocation schemes, which are sensitive to the precise underlying concept of equilibrium among the seller and the buyers. Despite the growing attention of the area, most of the studies do not analyze the properties of such solutions. In this paper, we analyze a general class of pricing policies and derive the equilibrium properties when designing a pricing policy for a good with a finite inventory and strategic consumers. Specifically, we show existence of

equilibrium and uniqueness when only one unit is on sale. However if multiple units are offered, we show that multiple equilibria may arise, and therefore the seller's capability of optimizing its pricing policy is rather limited. We also conduct a thorough computational study of different pricing schemes which lead to the conclusion that the best possible seller's strategy is the proposed contingent preannounced policy. Indeed, our study suggests that this policy may outperform alternative ones by up to 30%.

3 - Effectiveness of Information Sharing in Price Negotiations: A Comparison of Chinese and Americans

Abhik Roy, Professor, Quinnipiac University, Marketing & Advtg, School of Business, 275 Mt. Carmel Ave., Hamden, CT, 06410, United States of America, Abhik.Roy@quinnipiac.edu, Michael Menasco

This is a study involving two experiments simulating buyer-seller negotiations over two periods. One experiment is conducted in Hong Kong using Chinese negotiators and the other in the US with American participants. A bargaining asymmetry is introduced, an external threat price or alternative bid from another supplier. We study the effect on outcomes and on the bargaining process of the sharing of private information about the value of outcomes, as a strategy used by the seller. We attempt to reconcile conflicting propositions about the effect that information sharing has on outcomes when buyers and sellers negotiate a single issue (a contract price), particularly in the face of a buyer's credible threat to switch to another supplier. Cultural differences are used to explain differences in the effectiveness of an information sharing strategy. We find, as hypothesized, that information sharing works to improve seller outcomes (higher prices) between American negotiators, but only when the seller is facing a buyer's threat price. When there is no threat, there is no effect of information sharing in an American context. On the other hand, with Chinese bargainers there is no effect of informamtion sharing, regardless of whether the seller faces a threat or not. The bargaining frontier in our experiments consists of discrete price points, corresponding to solutions that can be described as equitable in a formal sense, but based on heuristic rules, rather than axiomatic theories. One of these solutions, which we refer to as Equal Earning of utility, is found to occur, as hypothesized, with disproportionately high frequency under the condition of threat combined with information sharing. This phenomenon occurs among both American and Chinese negotiators.

4 - On the Design of Consumption Hassle

Kissan Joseph, Associate Professor, University of Kansas, 1300 Sunnyside Avenuce, Lawrence, KS, United States of America, kjoseph@ku.edu, Zelin Zhang

Many products are designed with features that degrade the consumption experience through the explicit introduction of "consumption hassle". For example, the New York Times allows free access to its content only through search links that necessitates additional reader effort to locate the content. Specifically, readers have to manually type the exact article title into a search engine box in order to view the relevant content. Similarly, Southwest Airlines offers reservations that do not include assigned seating. Instead, passengers are assigned boarding numbers 24 hours before departure on a first-come, first-served basis. Consequently, passengers desiring an attractive boarding number have to check-in as soon as assignment opens because these numbers are rapidly appropriated by eager fellow-passengers. Finally, many websites offer free access to movies but divided into shorter time-segments that have to be downloaded one at a time and launched anew as each segment plays out. Notice that in all of these examples, the consumption experience has been degraded on account of the introduction of some type of consumption hassle. Furthermore, we believe that consumption hassle will increasingly emerge as a basis for segmentation in the digital economy of the future. Given these marketplace phenomena, academic research has also examined the practice of offering degraded products (Moorthy and Png (1992; Deneckere and McAfee (1996)). We build on this literature and ask: 1. When is it optimal for sellers to introduce consumption hassle?" 2. When optimal, what factors influence the design of consumption hassle? Do higher costs for the degraded product still allow its introduction? 3. What is the impact of consumption hassle on pricing?

■ FD07

07- St. George C

Online Word-of-mouth Advertising and Market Outcomes

Cluster: Special Invited Sessions

Invited Session

Chair: Mitchell J. Lovett, Assistant Professor, University of Rochester, Rochester, NY, United States of America, mitch.lovett@simon.rochester.edu

1 - Talk Bursts – Word-of-Mouth Spikes and Their Role in Forecasting Box Office Sales for Movies

Sarah Gelper, Erasmus University, Rotterdam, 3000, Netherlands, sgelper@rsm.nl, Jehoshua Eliashberg, Renana Peres

New films generate plenty of buzz prior to their launch, through various social media channels. A typical pre-release word of mouth pattern for a film is characterized by an increasing trend towards launch as well as unexpected sudden spikes. We present a dynamic model for this spiky signal and, applying it to 158 films launched in Hollywood during 2010-2011, we show that (i) spikes are not noise, but are rather an integral part of the message - smoothing them leads to poor forecasts and (ii) the spikes themselves can be used to improve forecast accuracy in the movie industry. Moreover, we show that the sentiment of the spikes is of importance - spikes that occur simultaneously in positive and negative word-of-mouth are an indicator of movie success. This result can be explained by the fact that simultaneous negative and positive information indicates controversy about a movie, which generates interest. Using text mining analysis, we explore the nature of the controversy talk.

2 - Social Media and Politcal Campaigns

Paulo Albuquerque, University of Rochester, 4-345 Carol G. Simon Hall, Rochester, NY, 14627, United States of America, paulo.albuquerque@simon.rochester.edu, Mitchell J. Lovett, Michael Peress

This study examines the role of social media data in political campaigns. We examine the predictive and theoretical role of social media and consider the 2010 Senate and Governor races as well as the 2012 Republican Presidential Primary race. We present a model that incorporates the complex interaction between actions of candidates, voter choices, social media, and advertising. With this model, we examine whether social media has the potential to explain future polls and whether it adds to the explanation that a contemporaneous poll can deliver. We find that neither social media buzz nor social media sentiment capture the full information value of social media.

3 - A Business by Any Other Name: Firm Name Choice as a Signal of Firm Quality

Ryan McDevitt, University of Rochester, 18 Pepperwood Ct, Pittsford, NY, 14534, United States of America, ryan.mcdevitt@simon.rochester.edu

This paper considers when a firm's freely chosen name can signal meaningful information about its quality, and examines a setting in which it does. Plumbing firms with names beginning with an "A" or a number receive five times more service complaints, on average. In addition, firms use names beginning with an "A" or a number more often in larger markets, and those that do have higher prices. These results reflect consumers' search decisions and extend to online position auctions: plumbing firms that advertise on Google receive more complaints, which contradicts prior theoretical predictions but fits the setting considered here.

4 - Social and Engagement Utility in Entertainment Brands

Mitchell J. Lovett, Assistant Professor, University of Rochester, Rochester, NY, United States of America, mitch.lovett@simon.rochester.edu, William Boulding, Richard Staelin

This study examines the role of learning, memory, and social utility in decisions to engage in an entertainment brand. The authors tease these roles apart using field data that includes both choices and stated expectations. The analysis includes both non-structural and structural components, with the structural components implementing a particle MCMC methodology to incorporate learning and the additional stated expectation data. The authors find a significant role for memory and social utility in engagement decisions, above and beyond the typically studied learning or word-of-mouth as information transmission (or persuasion) effects.

■ FD08

08- Adams

Empirical Projects From Young Marketing Researchers

Cluster: Special Invited Sessions

Invited Session

Chair: Pradeep Chintagunta, University of Chicago, Chicago, IL, United States of America, pradeep.chintagunta@ChicagoBooth.edu

1 - Entry and Investment Decisions in the Pharmaceutical Industry

Anita Rao, Stanford University, Stanford, CA, 94305, United States of America, anitarao@stanford.edu

The pharmaceutical industry is different from most industries where entry has been studied as it involves a time intensive research process with most of the interesting dynamics and firm interactions occurring pre-launch. The profits are realized only upon launch of the product, so drugs which fail part way through the research process generate no revenues to offset the substantial costs accumulated over the development process. I study this industry to answer questions from the perspectives of firms' development activities and social welfare. To this end, I estimate a dynamic entry model while accounting for firm interactions and market heterogeneity. I use a panel dataset on firm entry and exit decisions at the research phase level in various markets. The estimates indicate that firms are strategic in their behavior taking into account the actions of their competitors. I conduct a counterfactual that reduces FDA approval rates to understand the impact of increased regulatory scrutiny, a potential outcome of

increased emphasis on comparative effectiveness research. I also evaluate the impact of targeted research grants that decrease research costs for incumbents.

2 - The Impact of Search Costs on Consumer Behavior: A Dynamic Approach

Stephan Seiler, Stanford University, Stanford, CA, 94305, United States of America, sseiler@stanford.edu

Prices for grocery items differ across stores and time because of promotion periods. Consumers therefore have an incentive to search for the lowest price. However, when a product is purchased infrequently, the effort of checking the price on every shopping trip might outweigh the benefit of spending less. I propose a structural model for storable goods that takes inventory holdings and search into account. The model is estimated using data on laundry detergent purchases. I find that search costs play a large role in explaining purchase behavior, with consumers not being aware of the price of detergent on 70 percent of their shopping trips. Therefore, from the retailer's point of view it is important to raise awareness of a promotion through advertising, displays, etc. I also find that a promotion for a particular product increases the consumer's incentives to search. This creates a positive spill-over for other products in the same category, which is a desirable side-effect of the promotion from the store manager's perspective.

3 - Managing Capacity Utilization Through Targeted Marketing of Peak-pricing Technologies

Bryan Bollinger, New York University, Stern School of Business, New York, NY, 10012, United States of America, bbolling@stern.nyu.edu

As energy demand continues to rise at an alarming pace, utility providers are actually trying to curb consumption of this good, especially in periods of peak demand. This can possibly be accomplished by i) increasing price in these periods, ii) enabling consumers to better monitor their electricity usage, and iii) providing smart home, peak-pricing technologies which can automatically reduce consumption by turning of electrical devices. Using extremely disaggregate data on household electricity consumption and prices for two cities, we non-parametrically estimate both the effect of price and peak-pricing technologies on electricity consumption. In our data, households are randomly assigned a price schedule and a peak-pricing technology. We leverage our experimental data to identify individual-level effects which will be used in targeting consumers in the statewide rollout of these devices to maximize usage reductions in periods of peak demand subject to cost restrictions.

4 - Reputation and Learning in Two-sided Markets

Chris Nosko, University of Chicago, Booth School of Business, Chicago, IL, United States of America, cnosko@gmail.com

In many two-sided markets, buyers have imperfect information about the quality of the sellers that participate in the market. In these cases, buyers may learn about the overall distribution of seller types from the quality of their initial transactions. Bad transactions early in a buyers' tenure on the platform may cause them to not return. Because the probability of an individual buyer transacting with an individual seller again in the future is small, sellers exert externalities on each other that they don't internalize. By shirking on quality, an individual seller gains in the short run but the whole platform bears the cost of a buyer that doesn't return. Using data from a large online platform, we present evidence that buyers actively learn about the distribution of seller types. Furthermore, using a controlled experiment we show that a platform can increase profits by using unobservable (to the buyer) information about seller quality to manipulate the choice set of the buyer.

■ FD09

09- Helicon

Choice Models II

Contributed Session

Chair: Xiaoqian Yu, University of Southern California, 3660 Trousdale Parkway, ACC 306E, Los Angeles, CA, 90089-0443, United States of America

1 - A Cigarette, a Six Pack or Porn: Are Vices Substitutes or Compliments

Rachel Shacham, Assistant Professor, University of Minnesota, Carlson School of Management, 321 19th Avenue South, 3-150, Minneapolis, MN, 55401, United States of America, rshacham@umn.edu, Tulin Erdem, Peter Golder

Using statistical copulas, we develop an empirical model that allows us to study the levels of complimentarity or substitution between different vices while accounting for self-selection. The method developed in this study is particularly well suited to the issues that occur while studying vice (in contrast to other types of goods). In particular, we allow the level of complimentarity/substitution to differ between addicts and other users. We use a unique dataset that contains detailed individuals-level Internet browsing habits over a long period.

2 - Generalized Additivity and the Multinomial Logit Model

David Curry, Professor, University of Cincinnati, 427 Carl H. Lindner Hall, 2925 Campus Green Drive, Cincinanti, OH, 45221-0145, United States of America, david.curry@uc.edu, Xin Wang, A.A.J. Marley

We explore multiple solutions to a functional equation proposed by Aczél (1966). Solutions define an abstract binary operator that sums partworths non-additively in the multinomial logit model (MNL). The operator includes as special cases the p-additive representations of Ng, Luce, and Marley (2009) and relativistic addition (Luce and Marley 1969, Luce and Narens 1976). Focusing on relativistic addition, we forge a link between statistical estimates from discrete-choice experiments and key findings from behavioral economics and cognitive psychology; including loss aversion, co-existence of Fechnerian (parallel-linear) and non-Fechnerian (non-parallel radial) iso-utility contours, limited compensatory information processing, and a topology consistent with non-complementary attribute weights; e.g., differential framing as per the Shafir effect (Shafir 1993). At a more abstract level, the functional equation opens the door to statistical estimation of non-linear utility models guaranteeing that estimates exhibit the foregoing properties (e.g., loss aversion) when modeling choice data. Contributions include: (1) Finding specific monotone functions – and their inverses – that solve Aczél's equation for (p)olynomial-additive and relativistically additive utility representations. (2) Showing that these solutions satisfy associativity, commutativity, and other key properties desired in a binary operator. (3) Showing that non-negative relativistic addition is a sufficient condition for loss aversion, diminished sensitivity (failed extensive reasoning), generalized sub-additivity, and non-complementarity. (4) Demonstrating how solutions to Aczél's equation support efficient statistical estimation via maximum likelihood and MCMC techniques for non-additive MNL models.

3 - Modeling Cross-Category Dependencies in Households' Purchase Incidence Outcomes

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This research attempts to advance the literature on multi-category demand models by modeling cross-category dependencies in households' purchase incidence outcomes. Such dependencies are of enormous practical interest to retailers in managing co-promotion decisions across categories. Marketing researchers have employed econometric techniques, which can simultaneously model the impact of marketing variables and unobserved heterogeneity across households, for the same purpose. Two such econometric models are the Multivariate Probit model (Chib and Greenberg 1998, Chib, Seetharaman and Strijnev 2002) and the Multivariate Logit model (Russell and Peterson 2000, Niraj, Padmanabhan and Seetharaman 2008). One limitation of these econometric models is that they incorporate cross-category dependencies only at the pair-wise level, resulting in biased deterministic utility of the individual categories. We propose an extended version of the Multivariate Logit model of Russell and Peterson (2000) that enables the estimation of higher order cross-category dependencies which capture the global utility of all possible cross-category dependencies in the market basket (ie. a full model of consumer behavior), reducing category estimation bias. We investigate the relative magnitudes of such higher order added utility effects relative to the second-order effects, as well as the methodological and substantive consequences of ignoring such higher-order effects in the model. In addition to complementarity found in previous literature, our model captures substitution demand relationships in the added utility covariates. Key words: Multivariate logit, multi-category demand, cross-category dependencies

4 - Emotion States and Multi-tasking: Horizontal and Temporal State Dependence on Consumer Media Choice

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An exploding number of communication media and gadgets have been vying for consumers' attention, but consumers do have a fixed amount of time or resource. A natural strategy for consumers to cope with this new environment is to multi-task, i.e. simultaneously use various media forms. This study aims at building an in-depth understanding about the mechanisms driving the media multi-tasking. Our basic premise is that media multi-tasking is driven by consumer state dependence among media varieties on both horizontal and temporal dimension. We present an empirical-modeling framework to quantify the effect of each of the two types of state-dependence behavior on simultaneous media consumption, and explore how positive and negative emotion states explain an individual's preference for variety-seeking. We decompose the medium-specific utility into the intrinsic and the extrinsic component. The intrinsic utility captures the temporal state-dependence effect for switching away/into the medium from the previous choice. The extrinsic utility captures the horizontal state dependence with another medium if jointly consumed. We apply our model to a unique consumer panel dataset, and obtain several important findings: (i)Both temporal and horizontal state dependence play an important role in explaining consumer media choice, and the temporal dimension has a stronger explaining power than the horizontal one; (ii)Positive emotions tend to increase an individuals' horizontal state dependence compared with the baseline (the neutral state), whereas negative emotions can increase or decrease such tendency; (iii)There is a mixed finding on the relationship between emotion states and temporal state dependence. Our findings lead to important managerial implications to multi-channel advertisers.

■ FD10

10- St. George D

Innovation II

Contributed Session

Chair: Eric Schmidbauer, Indiana University, Kelley School of Business, 1309 E. Tenth Street, BU 736, #16, Bloomington, IN, 47405-1701, United States of America, eschmidb@indiana.edu

1 - Core versus Peripheral Innovations: The Effect of Innovation Locus on Consumer Adoption Intentions

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Innovation locus refers to the place in the product system – namely, the core versus the peripheral - where innovations occur. Extant literature has focused primarily on core innovations and there is scant research on peripheral innovations. We report two experimental studies that investigate the effect of innovation locus on consumer adoption intentions. Specifically, we examine the effect of placing an innovation (e.g., battery power generated by motion / kinetic energy) in the core of the product (e.g., changing the built-in power system of a smartphone to being kinetically powered) versus placing it in the peripheral of the product (e.g., developing a portable charger that generates power from kinetic energy). In Study 1 we show that when the innovation is radically new, placing the innovation in the peripheral component results in a higher purchase intention as compared to placing it in the core. In contrast, when the innovation is incrementally new, purchase intention is not influenced by innovation locus. We propose that this preference for placing a radical innovation in the peripheral is due to risk localization (i.e., consumers perceive a lower functional risk in the peripheral as compared to the core component of the product). In Study 2 we test this risk localization effect by manipulating the indispensability of the radical new innovation to the product system. Specifically, we show that when the innovation is perceived as indispensable (i.e., functional risk is made salient), the preference for placing the radical innovation in the peripheral (vs. the core) is nullified.

2 - Social Capital and the Evolution of Successful Inter-organisational Networks

Regina McNally, Senior Lecturer, University of Limerick, Kemmy Business School, KB3-36, Limerick, Ireland, regina.mcnally@ul.ie, Michele O'Dwyer, Brian Healy, Raffaele Filieri, Lisa O'Malley

This research clarifies the multi-level (individual and organisational) role of social capital (structural, relational and cognitive) in the evolution of horizontal inter-organisational networks. Networks are, at their core, about social relationships (Inkpen and Tsang, 2005). Social capital refers to the actual and potential resources that individuals or groups gain through formal or informal interactions in a social network (Nahapiet and Ghoshal, 1998). However, even though social capital can have alternative meanings, antecedents, and consequences at different levels of analysis, little research explicitly models social capital at multiple levels (Adler and Kwon, 2002) and prior research has ignored the impact of multi-level social capital in inter-organisational networks. The research context is that of an inter-organisational network in Ireland involving ten pharmaceutical firms and five universities focusing on innovation development and implementation. This context is unique in that competitors in the pharmaceutical industry simply do not collaborate, yet this formal collaboration has been in existence for four years. This study examines the formation and maintenance of this network via the theoretical lens of social capital and focuses on elucidating the key social capital developments that unfolded in the migration from non-collaboration to formal collaboration. The findings of this study relate to the changing perspective from individual firm units to inter-organisational networks. When perspectives are changed or added there is not only a need for new thinking but also a need to exit an earlier paradigm.

3 - Better Patent Data, Better Innovation Research

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The late Zvi Griliches (1990) had a vision to make patent data publicly available for academic researchers to utilize. He and his colleagues have made attempts to provide patent data in a useful form (Hall et al. 2001). Although well-intentioned, academic practitioners are looking for much more from patent data than what these current "one-off" datasets can offer; i.e., they are not comprehensive nor contiguous. Last year we presented an idea of a unified data center; this year we will show you the proof-of-concept in action to better address innovation research in marketing.

4 - New and Improved?

Eric Schmidbauer, Indiana University, Kelley School of Business, 1309 E. Tenth Street, BU 736, #16, Bloomington, IN, 47405-1701, United States of America, eschmidb@indiana.edu

Are new versions of products necessarily better? I present a model of product innovation in which a firm observes the uncertain outcome of research and development designed to improve an existing product. If the firm adopts the innovation its modified product appears to consumers as new and improved, but consumers do not know whether or how much the product is better. After product trial, consumers learn about the valuation and decide whether to make a repeat purchase. My main result is that while the average quality of a modified product is higher in equilibrium, the firm sometimes willfully makes trivial and even harmful modifications. I show that, perhaps surprisingly, the firm does not necessarily prefer to ex-ante commit to adding only positive innovations. I also identify conditions when the inability to commit reduces investment in research and development below the socially optimal level.

■ FD11

11- Empire

Competition

Contributed Session

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

1 - A Churn Theory for Predicting and Explaining Market Growth

Steven Shugan, McKethan-Matherly Professor, University of Florida, 2030 nw 24th avenue, Gainesville, FL, 32605, United States of America, steven.shugan@warrington.ufl.edu, Deb Mitra

Market growth is one of the fundamental forces in marketing. Market growth rates influence advertising, competitive strategy, timing new product introductions, marketing strategies, pricing, and most other marketing decisions. However, with the exception of trend analysis that attempts to statistically capture growth, very few papers have tried to explain and predict real market growth that can consist of temporary rises, temporary declines and temporary stagnation. Consistent with Darwinian natural selection, this paper shows that growth is a function of the mutation or change in the market. Markets fail to grow when firms retain their relative ranking. However, when relative rankings (of firms, divisions, product categories, etc.) change, markets grow. This paper measures this change or mutation with an easy to compute and scalable metric called churn. Empirical analysis reveals that the churn metric provides statistically significant predictions of absolute growth, relative growth and future growth. This analysis suggests that the churn metric captures the essential prerequisite for growth. This paper also defines the concept of evolutionary time. Evolutionary time accelerates during periods when churn is high and decelerates during periods when churn is low. This idea that duration is required for evolution is an important implication of Darwinian Theory that has not been previously exploited. Finally, a dramatic implication that waits future research is whether common improvement across members of the population ever accounts for growth. Change seems required for growth and that change involves more than common improvement by all members of the population (e.g., firms, divisions, product categories).

2 - Bundling of Complementary Goods in Competition

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Existing literature in bundling and competition established analytically the competitive advantage of bundling: that economies of aggregation can be used to discourage or foreclose entry. In our application, we conduct an empirical study to verify these theoretical competitive implications. We study transactions at two online vendors who both provide various bundling options to sell the same popular electronic device: the device alone, as well as bundled with other complementary goods of minor value, both informational and physical. We model purchases at both vendors during a common period, in particular we study the dynamic strategies, in terms of price discounts offered by the vendor with lower sales volume and traffic in a strategic attempt to increase his market share. Based on our conclusions we propose optimal bundling prices and discount timing for the new entrant.

3 - The Strategic Significance of Negative Externalities

Matthew Nagler, Associate Professor of Economics and Business, City College of New York, 160 Convent Avenue, NAC 4/121, New York, NY, 10031, United States of America, mnagler@ccny.cuny.edu

Negative externalities can have competitive relevance in a market when they have selective impacts – as, for example, when a product in use imposes greater costs on consumers of rival products than on other people. Because managers have discretion over aspects of product design that affect external costs, the

externality in such cases may be viewed as a strategic variable. This paper presents evidence of the existence of competitively-relevant negative externalities. I introduce a metric for the externality's competitive effect, the external cost elasticity of demand, which I estimate econometrically using data from the motor vehicle industry. Managerial implications are considered.

4 - Strategic Quality and Quality Claims: The Impact of Competition and the Cost of Overstating Quality

Praveen Kopalle, Professor of Marketing, Dartmouth College, Tuck School of Business, 100 Tuck Hall, Hanover, NH, 03755, United States of America, kopalle@dartmouth.edu, Don Lehmann

This paper examines the impact of strategic competition and the cost of overstating quality on optimal quality and quality claims. We consider two firms simultaneously introducing a new product and making one-time decisions about the product quality, price, and advertised quality. Using a two period model which allows for larger weight on future period sales. We find competition leads to overstating quality unless constrained by high legal costs. Most interesting, when competitors are constrained to be truthful in their advertising due to legal or other costs, optimal product quality, and hence potentially consumer welfare, is lower. To evaluate the extent to which managers would behave in line with model prescriptions in different competitive and legal cost contexts, we conducted a conjoint style study with future managers. In the main, managerial intuition is directionally consistent with the model results. We also find the model assumptions and results are consistent with data from the U.S. Federal Trade Commission (FTC) on deceptive advertising cases decided between August 1996 and December 2002.

■ FD12

12- Parliament

Bayesian Applications - CRM

Contributed Session

Chair: Thomas Otter, Professor, Goethe University Frankfurt, Grueneburgplatz 1, Frankfurt, 60323, Germany, otter@marketing.uni-frankfurt.de

1 - Quantifying Satisfaction Spillovers Across Categories

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The concept of one-stop shopping has been embraced in the service sector especially in areas such as financial services and telecommunications. The literature in marketing largely highlights the benefits to firms of providing a suite of services to their customers. At the same time, there could be a potential "dark side" to one-stop shopping where subscription to a service that a customer is satisfied with might be imperiled if that consumer faces poor service in a different service offered by that provider. Using satisfaction survey data of seven companies providing both banking and credit card services, we empirically quantify the spillover effects of customer satisfaction and dissatisfaction in one category on purchase and recommendation intentions of the provider in other categories. A multidimensional Ordered Probit model is estimated using Hierarchical Bayesian methods. As our data are across multiple categories, we are able to account for consumer heterogeneity; and as consumers can use different firms for the two categories, our spillover measures are incremental beyond those that would exist when consumers use different firms for the two categories. A key methodological challenge we face is that consumers select into whether they have single vs. multiple providers across categories so we need to account for this selection in the estimation. We find that both positive and negative spillover effects exist, and that these effects are asymmetric across categories. Using our estimation results, we find that a one-level improvement on the satisfaction scale could lead to 1.1-5.9% increase in average customer lifetime value. To assess the generalizability of our findings we provide results using data from a pair of telecommunication services – television and internet.

2 - Latent Redemption Thresholds in Linear Loyalty Programs

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This article proposes a novel explanation for a behavioral phenomenon that drives the operating costs of loyalty programs. A framework derived from mental accounting explains how consumers accumulate and redeem points in a specific type of loyalty program. In 'linear' reward programs, customers are motivated to stockpile on their own despite the absence of explicit stockpiling incentives from the retailer. Our framework predicts that consumers follow a threshold rule when deciding whether to stockpile or redeem points. We apply the mental accounting framework to generate hypotheses on how the thresholds vary as a function of spend and inter-purchase time. The hypotheses are tested with a Bayesian hierarchical model of how each customer's redeemable points affect redemption choice. The findings suggest that customers do seem to stockpile and redeem according to thresholds that evolve in a manner consistent with the proposed hypotheses. The proposed framework can help researchers and managers to devise strategies that influence redemptions by separately framing the gains and losses of cash and reward currencies.

3 - The Myth of Increasing Loyalty

Joseph Davies-Gavin, Harvard Business School, 178 Morgan Hall, Soldiers Field, Boston, Ma, 02163, United States of America, jdaviesgavin@hbs.edu, Bruce Hardie, Yuzhou Liu, Tom Steenburgh, Peter Fader

We estimate a Bayesian dynamic generalized linear model to predict customer churn in a B2B cloud computing setting. We make three substantive contributions to the customer churn literature. First, we find that customers have increasing propensity to churn over time. This is counter to conventional wisdom that customers become more loyal over time or assumptions made by some models that customer propensity to churn is time-invariant. Customer baseline churn rate starts out low when customers signs up for service, rises over a grace period as customers evaluate the service, then stabilizes after. Second, we find that usage is predictive of churn throughout the customer lifecycle, whereas results (what customers get from the service) are only predictive of churn after the grace period. Lastly, we find evidence of customer-level dynamics even after controlling for heterogeneity and time-varying covariates.

4 - The Dimensionality of Customer Satisfaction Survey Reponses and Implications for Driver Analysis

Thomas Otter, Professor, Goethe University Frankfurt, Grueneburgplatz 1, Frankfurt, 60323, Germany, otter@marketing.uni-frankfurt.de, Greg Allenby, Joachim Büschken

Customer satisfaction surveys ask for global satisfaction with a product or service and for evaluations of distinct components or attributes of the same product or service. As the standard approach, regression models are used to quantify the relationship between global satisfaction and evaluations of distinct components or attributes. However, there is no a priori guarantee that a regression model is appropriate or meaningful. Empirical evidence against the meaningfulness of a regression model is the possibility to represent the covariance between all items in the satisfaction survey data on a subspace of much lower dimensionality than the number of items on the survey, such as in a factor model. Potential reasons for low dimensional responses are responses that are haloed from overall satisfaction, a lack of interest in the individual items, an unintended lack of specificity of items, or some combination of these. To date, the empirical decision between a regression model and a factor model has to be made based on face validity. Another complication is that different segments of respondents may react differently to the same satisfaction survey. We develop a Bayesian mixture model that facilitates the empirical distinction between regression models and relatively much lower dimensional factor models. The model uses the dimensionality of the covariance among items in a survey as the primary classification criterion while accounting for heterogeneous usage of rating scales. We apply the model to four different customer satisfaction surveys evaluating hospitals, an academic program, smart-phones, and theme parks respectively. We find that correctly assessing the (potentially) heterogeneous dimensionality of responses is critical for meaningful inferences.

■ FD13

13- North Star

Entertainment Marketing: Movies II

Contributed Session

Chair: Ashish Sinha, Professor, University of New South Wales, Quadrangle Bldg, Sydney, Australia, a.sinha@unsw.edu.au

1 - Impact of Pre-release Information Disclosure on New Product Sales Dynamics: The Case of Motion Picture

Guiyang Xiong, University of Georgia, 123 Brooks Hall, Terry College of Business, Athens, GA, 30606, United States of America, gyxiong@uga.edu, Adina Robinson, Ernie Cadotte

Drawing on the disconfirmation paradigm, we investigate the role of movie trailers in driving the pattern of box office revenue over time. We argue that while the amount and type of movie disclosure in a trailer sets consumers' expectations, it is the realized overlap between trailers and movies that determines the level of word of mouth activity and the ascending or descending pattern of box office revenue over time. We examine not only the immediate effect of trailers on a movie's box office revenue, but also a longer-term effect on the movie producer and movie director. We discuss the endogeneity of trailers, i.e., that trailers are strategically designed to maximize box office revenue over the lifetime of the movie, and control for it in the empirical model. We make several contributions: we empirically investigate movie trailers as an antecedent to the evolution pattern of box office revenue and increase the forecast ability of current movie sales models; we investigate disconfirmation as a three-dimension concept (movie-confirmed trailer content, movie-disconfirmed trailer content, and new movie content or surprises); and we evaluate the effectiveness of movie trailer strategies. The study generates novel implications about the strategic signaling with pre-release information to enhance new product performance.

2 - Network Power

Grant Packard, PhD Candidate, University of Michigan, 701 Tappan Street, Ann Arbor, MI, 48109, United States of America, gpackard@umich.edu, Anocha Aribarg, Jehoshua Eliashberg, Natasha Zhang Foutz

Product development personnel are crucial to new product success across industries including entertainment, fashion, and technology. It is thus imperative to understand the scope, sources, and evolution of the contributions of product development team personnel. This research proposes a new concept, network power, to conceptualize these individuals' contributions as arising from their collaboration experience in a broad industrial network. It then constructs three metrics, team cohesion, positional embeddedness, and junctional embeddedness, to capture network power from unique perspectives. Analysis of two decades of collaborations and product releases in the motion picture industry shows that network power is strongly linked to product success; more so, for example, than the commonly-used star power metric. In particular, team cohesion exhibits an inverted-U shaped relationship with box office revenue, suggesting the presence of an optimal volume of prior collaborations among team members. It also reveals that different aspects of network power carry unique significance across functional roles, pointing to the assembly of a "dream team" including a cast well-connected to prominent industry insiders, a technical crew with diverse experience, and a producer tightly knit to both core and peripheral industry sub-communities. Finally, this research identifies potential antecedents driving the evolution of network power, shedding light on how to steward a professional career and promote long-term success of the industry overall.

3 - Resource Base, Strategies and Performance in the Motion Picture Industry

Dmitri Markovitch, Rensselaer Polytechnic Institute, 110 8th Street, Troy, NY, 12180, United States of America, markod@rpi.edu, Dongling Huang, Andrei Strijnev

The authors propose a holistic resource base-strategy-tactics-performance framework that explores linkages between a business venture's resources and performance outcomes using the notions of feasible strategies, "best" strategies and congruent tactics, given venture resources and the competitive environment. They apply the framework to the analysis of marketing strategies, tactics and performance among motion pictures with different resource endowments. They draw on rich data assembled specifically for this research to test their hypotheses and generate new insights, including the strategies' profit impact and overall film profitability, when all major revenue sources are considered. The obtained findings challenge some of Hollywood's long-standing beliefs about high risk and low average profitability in the movie industry. The authors conclude by discussing the framework's possible applications, key empirical findings and opportunities for future research.

4 - Is Advertising a Reliable Signal of Quality? Evidence from the Motion Picture Industry

Reo Song, Kansas State University, Marketing Department, 201B Calvin Hall, Manhattan, KS, 66506, United States of America, strada@ksu.edu, George Cai

The existing literature on the role of advertising provides two competing views. Advocates of persuasive role of advertising argue that advertising is used to create product differentiation and brand loyalty by altering customers' tastes mainly through repeated exposure. This view suggests that advertising has anti-competitive effects by raising entry barriers. On the other hand, the informative view of advertising argues that advertising provides consumers with important information either directly (e.g., price or size of an HDTV) or indirectly (e.g., the amount of advertising can act as a signal for product quality). This study contributes to the debate on the nature of advertising by examining the role of advertising for experience goods. Specifically, we focus on the different roles of prelaunch and postlaunch advertising. Our analysis conducted on 300 movies released during 2007 - 2008 shows that prelaunch advertising is characterized as persuasive while postlaunch advertising is characterized as informative (i.e., a signal of quality). While prelaunch advertising is positively associated with consumer choices (revenues), prelaunch advertising is not related to an objective quality measure. On the other hand, postlaunch advertising is positively associated with both consumer choices and product quality.

5 - Stars as Signal: The Impact of Star Power Across International Markets in the Motion Picture Industry

Ashish Sinha, Professor, University of New South Wales, Quadrangle Bldg, Sydney, Australia, a.sinha@unsw.edu.au, Nico Neumann, Aaron Gazley

The motion picture industry has a high economic importance for the world, has been growing over the last decades, and plays a key role as one of the most relevant export markets for the US. In this work, we adopt the "brands as signal"- framework (Erdem and Swait 1998) and apply it to the motion picture business. The "brands as signal"- framework develops an information economics perspective on the value of brands, or, in our case, stars. In other words, consumers who are uncertain about a movie may use the cast of a movie as a signal for quality or the product positioning. We examine a comprehensive data set comprising 340 movies that were released in six countries (Japan, USA, UK, Australia, Germany, and France) in 2005. Using a multilevel approach, we model how star power impacts movie performance in primary (box office sales) and auxiliary channels (DVD sales). We show how star power varies across different cultures and interacts with relevant movie success drivers (e.g., word of mouth), while controlling for other significant variables, such as the genre of the movie, or whether the movie was a sequel or remake. We conclude with a discussion of managerial implications for global sales and communication strategies of entertainment products that can leverage star power.

■ FD14

14- Defender

Advertising Response

Contributed Session

Chair: Berk Ataman, Erasmus University, Burgemeester Oudlaan 50, Rotterdam, 3062 PA, Netherlands, bataman@rsm.nl

1 - Effective Customer-Initiated versus Firm-Initiated Touchpoints

Evert de Haan, Doctoral Student, Rijksuniversiteit Groningen, P.O. Box 800, Groningen, 9700AV, Netherlands, evert.de.haan@rug.nl, Thorsten Wiesel, Koen Pauwels

Over the years, marketing research has generated quite substantial knowledge about the effectiveness of offline advertising. However, while online advertising budgets are growing steadily at the expense of offline advertising expenditures, not much is known about the effectiveness of online advertising. Accordingly, several calls for research on the effectiveness of online marketing have been made. In this research, we empirically investigate the effectiveness of a wide range of offline and online firm-initiated marketing activities such as television-, radio- and printed forms of advertising and customer-initiated marketing activities such as search engine advertising, search engine optimization, retargeting, portals and price comparison websites. Using data of five different product categories from a large European online retailer, we employ a VAR-model approach with restricted Impulse Response Functions to investigate the differential effects across activities, purchase funnel stages, and product categories. Our research has multiple academic as well managerial implications.

2 - Multimedia Advertising Effectiveness

Peter Danaher, Professor, Monash University, P.O. Box 197, Caulfield East, Victoria, 3145, Australia, Peter.Danaher@monash.edu

Despite the widespread uptake of many new media as advertising channels, prior studies have compared the relative advertising effectiveness of only a handful of media, often just two. In this study we compile a single-source database of individual-level exposure to 10 media (television, radio, newspaper, magazines, online display ads, sponsored search, social media, catalogs, direct mail and email) as well as the sales and profits for these same individuals during a retailer's promotional sale. We find that 7 of the 10 media have a significant positive impact on purchase outcomes. The most effective media, ranked in terms of advertising elasticity, are catalogs, TV, direct mail, radio, email, newspaper and sponsored search. Although online display advertising and social media have no direct impact on purchase outcomes they do drive significantly more traffic to the retailer's website. We additionally look for potential media synergy effects and find that a model without synergy effects performs better than when pairwise media interactions are included. However, it is still worthwhile to advertise in multiple media rather than a single medium.

3 - Going for Gold. Investigating the (Non)sense of Increased Advertising During Major Sports Events

Maarten Gijsenberg, Assistant Professor of Marketing, University of Groningen, Department of Marketing, P.O. Box 800, Groningen, 9700 AV, Netherlands, m.j.gijsenberg@rug.nl

Major sports events like e.g. the Super Bowl, the Olympics and the Soccer World Championships draw an unsurpassed media-attention. Given the large audience that can be reached in a short time, companies are observed to increase their advertising investments during these events. For instance, the Super Bowl was able to generate $1,620 million in advertising spending in the first decade of this century, with last year's budgets amounting to over $200 million (Kantar Media, 2011). Question, however, is whether such advertising surge is actually as beneficial to the companies as it is often supposed to be given the larger audiences. Previous research found positive effects of Super Bowl advertising on e.g. brand familiarity and likeability (Russell et al., 2005) and movie advertisement effectiveness (Yelkur et al., 2004). However, to the best of our knowledge, no study has addressed the question whether it is actually a good idea to concentrate advertising efforts during such events in order to increase sales. In fact, it might even be better to avoid advertising in these periods. That is, advertising rates are also much higher (Kantar, 2011), as are the negative effects of competitive interference (e.g. Danaher et al., 2005). Using a longitudinal design, this study investigates whether a dollar spent on advertising during such events is really more effective in increasing sales of fmcg products than a dollar spent outside these periods. It disentangles short- and long-run effects, thus addressing the question whether effects gradually dissipate or persist over time. In all, this study provides deeper understanding of advertising effectiveness during major sports events.

4 - The Long-term Effect of Advertising on Price Elasticity

Berk Ataman, Erasmus University, Burgemeester Oudlaan 50, Rotterdam, 3062 PA, Netherlands, bataman@rsm.nl, Koen Pauwels, Shuba Srinivasan, Marc Vanhuele

In as much as consumer sensitivity to price changes reflects the firm's ability to charge higher prices and enjoy greater margins, understanding the effect of advertising on price elasticity is of critical importance to firms. The handful of studies that have tackled this issue report mixed findings begging the question whether and how advertising increases a firm's ability to raise prices in the long run? Accordingly, our goal is to offer deeper insights into the long-term relationship between advertising and price elasticity by shedding light on the mechanism underlying this effect. To this end, we calibrate a Multivariate Dynamic Linear Model on a novel dataset that includes an exhaustive set of consumer mindset metrics in addition to sales, advertising, and other marketing mix instruments. The findings in this study will help managers and researchers understand the multi-faceted relationship between advertising and price elasticity and use the insights to effectively guide marketing resource allocation.

■ FD15

15- Great Republic

Marketing and Firm Performance II

Contributed Session

Chair: Gautham Vadakkepatt, Assistant Professor, University of Central Florida, Department of Marketing,, P.O. Box 161400, Orlando, FL, 32816, United States of America, gvadakkepatt@bus.ucf.edu

1 - Marketing Alliances as a Channel to Access Customer Assets of Other Firms

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Customers with a high level of satisfaction are valuable resources that drive a firm's competitive advantage in the market. Even though firms are engaged in marketing alliances to access customers of other firms, we know relatively little about their implications for firm performance. In particular, gaining customer assets through marketing alliances entails a unique challenge in that the customers as assets are less controllable in transferring between alliance partners, compared to other types of resources, such as technological or marketing resources (e.g., sales, promotion, or distribution channels). In essence, the realization of benefits of alliance partner's customer assets are influenced by complex circumstances in which customers adjust their own decisions. As an effort to reveal such circumstances, we investigate how the partner's similarity, alliance scope and market concentration moderate the effect of alliance partner's customer satisfaction on the focal firm's financial performance. Our analysis of large-scale secondary data from multiple sources including SDC platinum, Compustat, and ACSI databases identifies factors that drive the effect of alliance partner's customer satisfaction on the focal firm's financial performance. This study extends our knowledge about marketing alliances as a channel to access customer assets of other firms.

2 - Demystifying the Impact of CEO Tenure on Firm Value Creation: Mediating Roles of Relational Capital

Michelle Andrews, University of Texas at Arlington, Box 19469, Arlington, United States of America, andrews@uta.edu, Xueming Luo, Vamsi Kanuri

While the direct influence of CEO tenure on firm value has been examined in the strategy literature, the underlying channels and routes of influence have remained largely unexplored. This paper draws upon firm-employee and firm-customer relationships and examines their roles in accounting for the performance outcomes of CEO career stages. Results from a large dataset reveal that (1) CEO tenure has a positive and linear impact on firm-employee relationship strength but an inverted-U shaped impact on firm-customer relationship strength, (2) these impacts are contingent upon industry uncertainty, (3) the effects of CEO tenure on firm value creation are mediated by firm-employee and firm-customer relationship strength, and (4) the interaction between firm-employee and firm-customer relations is positively associated with firm value creation, operationalized as performance magnitude and volatility. The authors discuss the implications of these findings for research and practice.

3 - The Impact of Corporate Lobbying on Customer Satisfaction

Gautham Vadakkepatt, Assistant Professor, University of Central Florida, Department of Marketing,, P.O. Box 161400, Orlando, FL, 32816, United States of America, gvadakkepatt@bus.ucf.edu

Corporate lobbying is defined as any communication on behalf of a corporation to a legislature. Many firms spend millions of dollars on lobbying. Despite the prevalence and magnitude of lobbying, there is, to the best of my knowledge, no study that examines the impact of lobbying on customer mindset metrics, especially customer satisfaction. This research addresses this void by empirically examining the following questions: 1) Does lobbying impact customer satisfaction?, 2) Does brand equity and the visibility of a firm's lobbying effort moderate the relationship between lobbying and customer satisfaction?, and 3) What are the mechanisms through which lobbying impacts customer satisfaction? I use a uniquely combined dataset of public firms to shed light on the first two questions while I use primary data to identify the underlying mechanisms through which lobbying impacts customer satisfaction.

■ FD16

16- St. George A

Game Theory: Applications

Contributed Session

Chair: Rick Harbaugh, Kelley School of Business, Indiana University, 1309 E. Tenth Street, Bloomington, IN, 47405, United States of America, riharbau@indiana.edu

1 - The Value of Clickstream Tracking: Advance Demand Information, Product and Price Personalization

Tingliang Huang, Assistant Professor, University College London, Department of Management Sci.&Innovation, Gower Street, London, WC1E 6BT, United Kingdom, t.huang@ucl.ac.uk

Motivated by the fast growing practice of web analytics generated by the Internet clickstream tracking technology, I study the value of using this technology to collect advance demand information (ADI) and advance preference information (API). API can be used for product personalization and price personalization. I show that collecting ADI and conducting product personalization simultaneously typically generates significant complementarity effects. However, when consumers are strategic in markdown pricing settings, such complementarity benefit can be weakened by strategic consumer behavior and they may become substitutes. These findings provide managerial guidelines regarding how different firms (e.g., Amazon.com and Burberry) should use clickstream tracking in collecting ADI and API. I also show that ADI and price personalization may be complements: consumers are willing to reveal more accurate preference information in the presence of endogenous availability. Moreover, such endogenous availability may make price discrimination based on click behavior profitable. My results unearth the value of collaboration between Operations and Marketing in the context of clickstream tracking.

2 - The Impact of Customer Boredom on the Efficacy of a Rewards Program

Minoo Talebi Ashoori, PhD Student, University of Central Florida, 4000 Central Florida Blvd., BA2, 308K, Orlando, Fl, 32816-1400, United States of America, mtalebi@bus.ucf.edu, Axel Stock

Although many businesses maintain reward programs to increase customer loyalty, the academic literature in Marketing has neglected to consider some consumer behaviors that potentially impact the profitability of such programs. In this paper, we study, utilizing a game theoretic model, how customer boredom resulting from purchasing a previously consumed brand may affect a firm's rewards strategy and profits. We analyze a two period model where two firms compete for a market of forward looking consumers by selling a horizontally differentiated product. In the first period, firms commit to a reward that is paid to consumers upon repeat purchase. Therefore, when making their decision to stay loyal or to switch brands in the second period, consumers trade off the utility loss from boredom with the possibility of obtaining the reward. Our analysis shows that interestingly, firms benefit from customer boredom under some conditions, because it allows them to price discriminate between loyal and switching segments that endogenously arise in our model. More specifically, we find that if consumers' discount factor is high, firm profits first decrease and then increase with customer boredom. Furthermore, if consumers' discount factor is low then profits strictly increase with customer boredom. We also consider the case when brands differ in quality and show that, counterintuitively, the low quality brand offers a greater reward than the high quality brand. Overall, our results demonstrate the defensive rather than offensive nature of reward programs.

3 - Persuasive Puffery

Rick Harbaugh, Kelley School of Business, Indiana University, 1309 E. Tenth Street, Bloomington, IN, 47405, United States of America, riharbau@indiana.edu, Archishman Chakraborty

Should sellers be allowed to exaggerate the quality of their products? We show that "puffery" of product attributes through pure cheap talk is credible and helps buyers make a better decision. Puffing one attribute of a product raises buyer impressions of that attribute, but at the implicit cost of lowering buyer impressions of other attributes, so overall some buyers like the product more and some like it less. In a standard discrete choice model we find that puffery benefits a seller with low market share by pulling in more buyers than it pushes away, but hurts a seller with high market share by pushing away more buyers than it pulls in. Extending the model to negative advertising and to comparative advertising, such strategies benefit a seller only if its market share is sufficiently smaller than its competitor's. The legal distinction that permits puffery about subjective claims, but precludes puffery about objective facts, is shown to be consistent with the differences between cheap talk and persuasion models of communication.

Saturday, 8:30am - 10:00am

■ SA01

01- Essex Ballroom South

Designing Interfaces for Dynamic Consumer Behavior

Cluster: Internet and Interactive Marketing

Invited Session

Chair: Daniel Baier, Professor, Brandenburg University of Technology Cottbus, Erich-Weinert-Str. 1 Building 10, Cottbus, 03046, Germany, daniel.baier@tu-cottbus.de

1 - Analyzing Internet Search for Multi-featured Products: The Case of Automobiles

Sina Damangir, PhD Student, University of Houston, 4800 Calhoun Rd., Department of Marketing & Entr. 375M, Houston, 77204, United States of America, sdamangir@uh.edu, Rex Du, Ye Hu

Extant empirical research using Internet search volume data almost exclusively focuses on keywords that describe the focal product holistically (e.g., "Toyota Prius"). However, marketing research of multi-featured products such as conjoint analysis has long established that consumer preferences for a product can be captured as a combination of their preferences for its features. Consistent with this notion, we have found that when searching for product information online, consumers often search for not only the product or brand name, but also keywords related to prominent features of the product in question (e.g., searching for "Fuel Economy" along with "Toyota Prius"). An interesting empirical question arises: What can we learn about the level of consumer interest in a product from their search for product features, above and beyond what we can learn from consumer search for the product name itself? Using automobile search and sales data in the United States between 2004 and 2011, we find that the amount of consumer "Googling" for product features, such as fuel efficiency, acceleration, price, reliability, and vehicle body type, can explain a large portion (47%) of market share variation over time. What is more striking is that consumer searches for these features have far more explanatory power than consumer searches for vehicle model names (47% vs. 21%). Furthermore, we show that, by using the amount of online search for a particular feature as a tracking index for consumer interest in that feature, marketers can 1) better understand the relative importance of various features in driving product sales, and 2) adjust their marketing plan dynamically in real time as consumer interest in different features evolves over time.

2 - Seeing Your Ads Through the Eyes of Consumers: Information Search on Search Engine Websites

Savannah Wei Shi, Assistant Professor of Marketing, Santa Clara University, 500 El Camino Real, Santa Clara, CA, 95053, United States of America, wshi@scu.edu, Michael Trusov

This study investigates the dynamic information search process on the search engine result page (SERP), taking entire screen as competitive landscape from consumers' perspective. We are especially interested in the impact exerted by both high level stimuli (semantic environment), besides the low level stimuli (section intrinsic property and ranking) on the listing inspection decisions. Eye tracking data is collected while consumers are making decisions on the SERP, and a computational cognitive model with static utilities and dynamic utilities is applied to capture this preference formation process during decision making. We find that both the content of the target listing, as well as textual information of previously viewed listings, exert a significant impact of information search process. Section intrinsic property and listing ranking also affect inspection likelihood of the target listings, and the impact of the latter varies across different screen compositions. Understanding determinants of consumers' information search behavior on the SERP is an invaluable asset for managers. It offers insights in designing content of listings, optimizing websites for search engines indexing, and selecting position on a results page with respect to location and content of search results from competitors.

3 - Dynamic and Adaptive Customer Acquisition on the Web

Yiting Deng, Duke University, 100 Fuqua Drive, Box 90120, Duke University, Fuqua School, Durham, NC, 27708, United States of America, yiting.deng@duke.edu, Jaroslaw Jankowski, Wagner Kamakura

One of the biggest challenges facing online companies today is customer acquisition. As different designs of websites result in substantially different customer acquisition rate, webpage optimization based on customer characteristics has been gaining more and more attention among practitioners and researchers. Most commonly applied approaches include multi-armed bandit and adaptive one-factor-at-a-time. However, both of them assume stationary parameters, whereas the web and the behavior of consumers on the web are by no means stationary. Our goal is to anticipate how consumers will respond in the next period based on the trends observed in the recent past, so that the website can the optimally designed for the expected responses in the future, rather than the weighted responses observed in the past. For this purpose, we extend the binary Kalman filter to deal with the problem of non-stationary response parameters and to produce step-ahead predictions for the response parameters. To deal with the tradeoff between exploration and exploitation more efficiently, we improve the commonly applied heuristic strategies by developing a two-step sampling approach. In the first step, we choose the size of the testing sample based on our current knowledge of the expected benefits and opportunity costs associated with testing, assigning the remaining visitors to the current optimal website. In the second step, we allocate the testing sample among the testing pages with the objective of learning about the various response parameters at approximately the same rate. Based on a series of simulations, we demonstrate test and confirm the efficiency of our approach, relative to extant web optimization models.

4 - Improving Online Shop Landing Pages Using Eye Tracking Experiments

Daniel Baier, Professor, Brandenburg University of Technology Cottbus, Erich-Weinert-Str. 1 Building 10, Cottbus, 03046, Germany, daniel.baier@tu-cottbus.de, Eva Stueber, Leon Zurawicki

Landing pages are single pages of a web site that appear when a user clicks an advertisement for this web site. They extend advertisements, recommendations to buy and the clicking circumstances in a natural way and play a major role for the success of an advertisement or a recommendation (see, e.g., Baier, Stueber 2010). For optimizing landing pages, i.e. for maximizing their conversion rates, various approaches have been proposed, e.g. through experimental designs where sample web pages are developed and rated by users (see, e.g., Gofman et al. 2009). Recently, also eye tracking approaches have been proposed for this purpose (see Stueber 2011). The paper explores these different approaches against the background from neuromarketing (see, e.g., Zurawicki 2010) and applies these new approaches to the landing pages of a popular German clothing online shop in combination with a traditional experimental design and a user survey. The results suggest the optimal positionings of the key page components and indicate how to improve its layout and organization. In conclusion, we offer generalizations applicable to a broader range of landing page designs. References: Baier, D., Stueber, E. (2010): Acceptance of Recommendations to Buy in Online Retailing, Journal of Retailing and Consumer Services, 17, 3, 173-180. Gofman, A., Moskowitz, H.R., Mets, T. (2009): Integrating Science into Web Design: Consumer Driven Website Optimization, The Journal of Consumer Marketing, 26, 4, 286-298. Stueber, E. (2011): Personalisierung im Internethandel - Die Akzeptanz von Kaufempfehlungen in der Bekleidungsbranche, Dissertation, BTU Cottbus, Wiesbaden: Gabler. Zurawicki, L. (2010): Neuromarketing: Exploring the Brain of the Consumer, Berlin: Springer.

■ SA02

02- Essex North Center

Effects of Online WOM

Contributed Session

Chair: Lisa Schuler, Goethe University Frankfurt, Grueneburgplatz 1, Frankfurt, 60629, Germany, lschoeler@wiwi.uni-frankfurt.de

1 - When Could Viral Marketing Hurt You? Role of Consumer Product Expertise on Viral Marketing Effective

Inyoung Chae, INSEAD, 138676, Singapore, inyoung.chae@insead.edu, Yakov Bart, Andrew Stephen, Dai Yao

Recent research studies demonstrated the overall effectiveness of viral marketing in increasing firms' sales and improving consumers' product evaluations. However, our understanding of how the brand-and product-related consumer expertise of transmitters' and receivers' influences such effectiveness is still quite limited. In this research, we empirically investigate the impact of viral marketing events (VME; specifically, solicited reviews in Korean online cosmetic communities) on the spread of organic WOM among consumers with different levels of product and brand knowledge and experience. We focus not only on the effectiveness of VME for a certain product, but also investigate the spillover effect of a VME on other products in the same category and under the same brand. We find that consumers with a high level of experience with cosmetic products immediately react to a VME by generating organic WOM related to the advertised product, but their high level of familiarity prevents them from being affected by VMEs for other cosmetic products within the same category. In contrast, consumers with a low level of experience with cosmetic products demonstrate a significant positive spillover effect within the same category. Our results indicate that even though advertising a product through viral marketing generates buzz among consumers with a high level of product expertise, the resulting spillovers of such advertising could also create conversations about other (competing) products in the same category among consumers with low level of product expertise, therefore potentially hurting the firm.

2 - Consumer Expressions of Opinions: Relationships Between Frequency, Valence, Product Attributes

Jie Feng, Assistant Professor of Marketing, SUNY-Oneonta, 375 Main street, APT 3, Oneonta, NY, 13820, United States of America, fengj@oneonta.edu, Purushottam Papatla

Recent findings in the literature suggest that opinions expressed by other consumers play a significant role in consumer purchase decisions. The effects are likely to be particularly strong in the case of more complex and expensive decisions like the purchase of automobiles. Manufacturers in this industry, therefore, need to understand which consumers are likely to express their opinions and what their opinions are likely to be, i.e., whether they will be positive about their brands or negative. Additionally, they also need to understand which consumers are likely to be more vocal in the sense of expressing their opinions multiple times rather than just once or occasionally and the reasons why such vocal consumers are likely to be positive or negative about their products. These are the issues that we investigate in this research. Specifically, we investigate the questions of (a) the frequency with which consumers state their opinions (b) the valence of the opinions and (c) how frequency and valence are affected by each other as well as by product attributes and usage behavior of the consumers. We use a joint model of frequency – in a Poisson framework – and valence – in an ordinal framework – and a dataset that includes more than 20000 individual reviews of over 1000 models of automobiles over a period of four years, for our analysis. We discuss the findings from this investigation, the managerial implications of our findings, and directions for future research based on our results.

3 - Modeling Consumer Choice of Photography Device

Tony Bao, Assistant Professor, Long Island University, 720 Northern Blvd., Brookville, NY, 11548, United States of America, tong.bao@liu.edu, David Crandall

The growth of social media presents an opportunity for manufacturers of cameras and smart phones. While traditional consumers take photos primarily for themselves and a limited number of family members and friends, online consumers share their photos with a larger number of content consumers. The authors employ a novel dataset to provide insights to the impact of content-sharing activity on content production technology choices. The research shows that interacting with other consumers such as gaining acknowledgement and friendship provides utilities. In addition to the selfish motivations, consumers are driven by altruistic purposes of enhancing their communities. The authors show that these social behaviors have implications on photography device choices. Finally, the research provides insights for the competition between cameras and smart phones.

4 - Sharing Mechanisms in Consumer-to-Consumer Communication

Lisa Schuler, Goethe University Frankfurt, Grueneburgplatz 1, Frankfurt, 60629, Germany, lschoeler@wiwi.uni-frankfurt.de, Christian Schulze, Bernd Skiera

Marketing managers designing consumer-to-consumer (C2C) communication campaigns face a difficult task: Once a campaign has gone live, control by the marketing manager is limited, and changes to the campaign are very costly. Thus, careful planning is key to a successful campaign, but well-grounded advice on how to design such campaigns is scarce. Extant research on C2C communication focuses on message content and seeding strategies, without sufficiently addressing the mechanisms that aid consumers in sharing the message. This article analyzes the effect of nine characteristics of sharing mechanisms on three success measures of C2C communication campaigns: reach, repeat usage, and early growth. An analysis of more than 850 Facebook applications from 22 different categories reveals clear, sustainable guidance for managers who design C2C communication campaigns. The analyses show that such sound advice is needed: The best, compared with the worst, sharing mechanism changes early growth rates by a factor of 3, repeat usage by a factor of 12, and total reach by a factor of 72.

■ SA03

03- Essex North West

Churn and Customer Management

Contributed Session

Chair: Kristof Coussement, IESEG School of Management, 3 Rue de la Digue, Lille, 59000, France, k.coussement@ieseg.fr

1 - For New Customers Only: A Study on the Effect of Acquisition Campaigns on Existing Customers

Sietske Lhoest-Snoeck, University of Groningen & Nuon, P.O. Box 72, Groningen, 9700 AB, Netherlands, smjsnoeck@hotmail.com, Peter C. Verhoef, Erjen van Nierop

This study examines the effect of attractively priced acquisition campaigns on currently existing customers that are not targeted in those campaigns. Even though acquisition campaigns are not aimed at existing customers, these customers may be aware of the existence of acquisition campaigns and their behavior may be influenced by this. We investigate which, and to what extent, customer lifetime value (CLV) components of existing customers are influenced by the introduction of attractive acquisition campaigns. The introduction of an acquisition campaign may influence each of the CLV components, i.e. retention, revenues, costs. However, we hypothesize that the extent to which customers are influenced depends on two main factors: awareness and complaining behavior. In our study we distinguish customers that are aware of the existence of attractive acquisition campaigns from customers that are not aware. Furthermore, we make a split between the aware customers contacting the company to complain about the acquisition campaign and those who are aware and not complaining. In addition, we identify those existing customers, and their characteristics, that are most likely to be influenced by acquisition campaigns. Finally, we offer a solution for dealing with the existing customers that are most likely to be influenced by attractive acquisition campaigns. We empirically test our model in the Dutch energy market.

2 - The RFM of Redemption Behavior and Customer Value Analysis

Dae Yun Park, Korea University, Anam-dong 2Ga, Sungbuk-Gu, Seoul, Korea, Republic of, daeyun@korea.ac.kr, Shijin Yoo

The main objective of this research is to investigate whether the RFM (recency-frequency-monetary value) information of a customer's redemption behavior of loyalty points can improve the prediction of future value of the customer. The conventional measurement of customer value has been primarily based on purchase transactions behavior although a customer's future behavior can be also influenced by other interactions between the customer and the firm such as redemption of rewards in a loyalty program. We theorize why a customer's redemption behavior can influence her future purchases and thereby the customer's total value based on operant learning theory, goal gradient hypothesis, and lock-in effect. Using a dataset from a major book store in Korea spanning three years between 2008 and 2010, we analyze both purchase transactions and redemption records of over 45,000 customers. The results show that the redemption-based RFM information does improve the prediction accuracy of the customer's future purchases. Based on this result, we also propose an improved estimate of customer lifetime value (CLV) by combining purchase transactions and loyalty points redemption data. Managerial implications will be also discussed for firms managing loyalty programs to maximize the total value customers.

3 - Developing a Customer Defection Model for Non-contractual Business

Dong-Yup Shin, Master Degree Student, Hansung University, Hansung University, Engineering School #509, Seongbuk-gu, Samsun-dong-2ga,, Seoul, 136-792, Korea, Republic of, storm0819@hanmail.net, Hyung-Su Kim

This paper suggests the two different algebraic models to decide customer defection by using individual buying pattern, and suggested a systematic model for defining and predicting customer defection for non-contractual businesses. The first model is based on comparing two indexes: individual average purchasing interval (API) and last-purchasing lapse (LPL) The other one uses maximum purchasing interval (MPI) instead of API of the first model. To validate those performances, we analyzed a data set spanned from June 1, 2008 through May 31, 2010 of the biggest retailer in Korea. The results show the MPI-based model has the highest accuracy (65.65%) but the lowest power (coverage) of prediction. Therefore, companies should choose a model by considering their marketing costs and expected profits for the anticipated churned customers. Based on this model, we developed an early-warning system framework for customer defection, which can signal the level of risk to churn by stages.

4 - Ensemble Selection for Churn Prediction in the Telecommunication Industry

Kristof Coussement, IESEG School of Management, 3 Rue de la Digue, Lille, 59000, France, k.coussement@ieseg.fr, Koen W. De Bock, Stefan Lessmann

Churn management is a key instrument in marketers' toolbox to cope with fierce competition in saturated consumer markets and to sustain profitable customer relationships. The heart of every churn management system consists of a prediction model that estimates customers' attrition risk on the basis of available customer information. While several forecasting methods have been reviewed in the marketing literature, the hunt for the most accurate churn model has missed one of the latest advancements in predictive modeling: a goal-oriented selection and combination of multiple models from a large pool of candidates. We examine the adequacy of this ensemble selection (ES) framework for churn prediction in a large-scale benchmarking experiment. Our results show that ES predicts churn significantly more accurate than any competitor considered in the study. We also show that its success results directly from the particular way in which ES choses ensemble members in a utility-driven manner and, thereby, accounts for actual business requirements in an early stage of the model building process.

■ SA04

04- Courier

Emotions

Contributed Session

Chair: Moran Cerf, PhD, New York University, 1 Washington Square Village, Apartment 12G, New York, 10012, United States of America, msc@morancerf.com

1 - Investigating the Role of Emotional and Cognitive Process on Post Product Recall Purchase

Kyung-Ah Byun, Graduate Student, Texas Tech University, Rawls College of Business, Marketing Department, #27, Lubbock, TX, 79424, United States of America, kyung-ah.byun@ttu.edu, Mayukh Dass

With recent proliferation in product recall cases, there is renewed interest among researchers to investigate the effects of drivers on future purchase intent of consumers. Although the extant literature has enhanced our understanding on how brand equity, communication strategy, reputation impacts consumers' future purchase intention, there are limited research on examining the role of emotional and cognitive process on purchase intent. In this paper, we present a comprehensive framework to determine these effects, and extend it to examine the role of trust and commitment in the context. We consider two characteristics of product recall including voluntary and involuntary, and major and minor causes, and use two experiments to explore the above issue. The paper concludes with implications for product and brand managers.

2 - The Impact of Country-related Emotions on Performance-based Country-of-origin Effect

Cathy Yi Chen, Assistant Professor, Singapore Management University, 50 Stamford Rd., Lee Kong Chian School of Business, Singapore, MD, 17889, Singapore, cathychen@smu.edu.sg, Durairaj Maheswaran

Previous research has suggested that country of origin effects can have both product-related dimensions and emotion-related dimensions. The emotions could be unrelated to the products and are generated from cultural, historic or political events. Very little research has addressed how such country-related emotions would influence consumer decision-making along with product-related country perceptions. In four studies, this research demonstrates that country-related emotions influence the impact of the country's product-related stereotype. If a country enjoys favorable product-related stereotype, consumers' positive emotions towards the country enhance product evaluations, relative to products from other country of origin. Interestingly, if a country has unfavorable product-related stereotype, positive emotions may boomerang and decrease product evaluations. The underlying mechanism indicates that positive country-related emotions activate a high construal processing that strengthens the product-related stereotypical country of origin image. The marketing implications for promoting country of origin as well the implications for emotion literature are discussed.

3 - Single-neuron Correlates of Emotion Regulation in Humans

Moran Cerf, PhD, New York University, 1 Washington Square Village, Apartment 12G, New York, 10012, United States of America, msc@morancerf.com, Eric Greenleaf, Tom Meyvis, Vicki Morwitz

This research examines whether systematic patterns in the activity of individual neurons are associated with emotions, and emotion regulation, in prefrontal areas of the human brain. Neuronal activity was monitored with implanted electrodes, using patients undergoing brain surgery to treat epilepsy. During monitoring, participants viewed videos with relatively high emotional content, including public service and political advertisements, as well as control videos with neutral content. Participants were instructed to either naturally view the content or to regulate their emotions. We find evidence that both emotions, and emotional regulation, are reflected by systematic patterns in single neuron activity.

■ SA05

05- Essex Center

Packaging Strategy

Contributed Session

Chair: Rita Vale, Assistant Professor, Catholic University of Portugal, Palma de Cima, Lisbon, 1649-023, Portugal, ritavale@ucp.pt

1 - Single Package as a Signal of Quality

Chun (Martin) Qiu, Assistant Professor of Marketing, McGill University, 1001 Sherbrooke Street W, Montreal, QC, Canada, chun.qiu@mcgill.ca, Sameer Mathur

We propose a theory of quality signaling based on the number and magnitude of package size(s) produced by a firm of consumer-packaged goods. A high-quality type firm can signal its superior quality to quality-sensitive consumers by reducing the magnitude of its single package size. By doing so the firm forgoes the profit from second-degree price discrimination inherent in selling two package sizes with a quantity discount. Yet, this practice also increases the opportunity costs of mimicry by the low-quality type firm, and hence, results in a separating equilibrium. In addition, a single, small package size alone signals quality when there are relatively few quality-sensitive consumers. We present experimental evidence that reducing the number and magnitude of package size(s) raises consumers' perception of product quality.

2 - Price Up or Size Down: A Research on How Consumers Respond to Two Pricing Strategies

Xuan Zhang, PhD Candidate, Peking University, Room 460, No. 3 Building, Beijing, 100871, China, zhangxuan816@gmail.com, Xin Cheng, Ji Liu

Almost all industries have been hit by sharp inflation and cost pressures in recent years. Firms are forced to make a difficult decision: charge more money per unit for what they offer to consumers. However, different companies employ distinct pricing strategies. Some simply increase the price per se while holding their offers invariable (we term this "price up strategy"), whereas others reduce something from their offers to cover the cost while holding prices constant (we term this 'size down strategy). The reduction could be product size, quantity and items or procedure related to product/service. The current research discusses two interesting questions from consumers' perspective. First, which strategy is more likely to make consumers accept the offers? And second, which strategy would lead to higher post-purchase satisfaction. We suggest that the answers depend on several factors: what you purchase (product/service), why you purchase (hedonic/utilitarian consumption goal), from whom you purchase (brand loyalty), where you purchase (online/offline shopping), and your mindset status when you purchase (high/low construal level). Results of five experiments show that consumers respond distinctively to price up/size down strategy under different circumstances. As theoretical contributions, we enrich the pricing literature in terms of distinguishing the effectiveness of different strategies under different circumstances. Our research also provides insights and implications for marketing practice, indicating that it is important for marketers to apply different pricing strategies based on the differences in specific purchasing situations. If firms have to make a choice between price up and size down, they should take several factors into consideration.

3 - Changing Prices and Package Sizes Due to Cost Shocks

Alexei Alexandrov, University of Rochester, Carol Simon 3-110P; U of R, Box 270100, Rochester, NY, 14627-0100, United States of America, alexei.alexandrov@simon.rochester.edu

I use an analytical model to examine pass-through rate implications for products such that the firm can change the size of the product package in response to cost shocks. I show that with menu pricing and endogenous product size, while the pass-through rate per unit of the product is positive like one would expect, the pass-through rate overall is negative. In other words, if the marginal costs increase, the firm makes all of their products smaller, and while the per-unit price increases, the total price that each consumer pays decreases.

4 - Is it Worth Copying the Leader? Impact of Copycat Packaging Strategies on Private Label's Adoption

Rita Vale, Assistant Professor, Catholic University of Portugal, Palma de Cima, Lisbon, 1649-023, Portugal, ritavale@ucp.pt, Pedro Matos

This research analyzes the impact of copycat packaging strategies on consumers' product quality perception and decision-making process, assessing to what extent the adoption of this packaging strategy increases likelihood of purchase of Private Labels. From an initial focus on price, private labels have moved to a quality positioning, and more recently, to a status orientation positioning, extracting benefits from the retailers' own-brand image (Steenkamp et al., 2009). Anecdotal evidence suggests that the stiff competition between national brands and private labels has led many retailers to adopt packaging strategies very similar to the ones developed and used by national brands, eventually hoping to benefit from positive associations held by consumers regarding these brands. Since packaging can affect consumers' perceptions of products and increase consumers' perceptions of quality (Butkevičienė et al., 2008), it is of great relevance to understand the impact of these packaging strategies-often named as copycat strategies- on consumers' behavior. We examined our predictions in three studies. In study 1 we conducted a field-study in which we assessed the level of penetration of copycat strategies to analyze if there was evidence in the market for this kind of phenomenon. Study 2 analyzed to what extent copycat packaging strategies can influence consumers perceptions regarding product quality, production origin and purchase confusion. Study 3 assessed the influence of PL copycat packaging strategies on consumers' likelihood of purchase, in a simulated brick and mortar supermarket. Results indicate that copycat packaging strategies can be determinant for private label adoption, especially for product categories with low-product involvement and low brand loyalty.

■ SA06

06- St. George B

Health Marketing

Contributed Session

Chair: Andrea Godfrey, Assistant Professor, University of California, Riverside, 900 University Avenue, Riverside, CA, 92521, United States of America, andrea.godfrey@ucr.edu

1 - Medical Adherence and Healthful Self-management

Rahul Govind, Australian School of Business, 3012 Quadrangle Building (Marketing), University of New South Wales, Sydney, 2052, Australia, r.govind@unsw.edu.au, Nitika Garg, Charles Ingene

Two facets of health behaviors are adherence to medical advice (taking medications, having regular checkups) and healthful self-management (balanced meals, exercising, maintaining an appropriate BMI, moderate drinking, not smoking). Yet many people with chronic medical conditions (CMC), incompletely follow medical advice and healthful self-management. Since poor health behaviors can increase risk of CMCs, knowing who is at risk of such behaviors is important for physicians who deal with patients and for social marketers who encourage health behavior in the population. While the medical literature has identified determinants of compliance with medical advice, factors associated with healthful self-management are less understood. Towards this end, we conduct two studies to gauge the adherence behavior of patients who are afflicted with high cholesterol, a CMC that is a precursor to cardiovascular disease and myocardial infarctions. In the first study, a sample of 4000 respondents with high cholesterol from across the US are asked to report their behavior on the consumption of foods, exercising, drinking and smoking, and adherence to medical advice given by a doctor. Data are also collected from respondents who do not currently have high cholesterol for their adherence to healthful self-management. In a second study we utilize the data collected by Centers for Diseases Control consisting of 35000 patients with high cholesterol to ascertain variables that are associated with health behaviors. Based on the two studies, our preliminary analysis shows that some factors that influence adherence to medical advice have a complementary association with self-management, while others have a compensatory association. These results have important implications for policy makers.

2 - Regulatory Interventions and Heterogeneous Health Effects: An Empirical Analysis of Tobacco Industry

Yanwen Wang, Doctoral student, Emory University, 1300 Clifton Road, Atlanta, GA, 30322, United States of America, yanwen_wang@bus.emory.edu, Michael Lewis

There is currently a great deal of interest in efforts to use marketing activities to eliminate or reduce consumption of potentially harmful products. The importance of this topic is best illustrated by the case of tobacco as smoking results in $76 billion health care costs and 440,000 deaths annually. In terms of counter marketing efforts, federal and state regulatory agencies have employed a combination of excise taxes and anti-smoking media campaigns in recent years. In response the tobacco industry has responded with a combination of aggressive promotions and corporate image oriented advertising. In this study we examine the collective effects of these pro- and counter- tobacco marketing efforts on industry volume, brand level competition and health outcomes. Our results have implications for other controversial product classes such as alcohol and high fat/sugary foods.

3 - Leveraging Capabilities for New Product Development: How Emerging Firms Succeed in Biotech

Rakesh Niraj, Case Western Reserve University, 10900 Euclid Avenue, PBL 222, Cleveland, OH, 44106, United States of America, rkn10@case.edu, Monte Shaffer, Andrew Gallan

In order to succeed, organizations need to steer their innovation efforts through a variety of development stages. This is particularly true for emerging firms, those that arise with their first innovation effort, where the development of and access to innovation capabilities is a function of managerial decision-making. In this study, one major class of biotech innovations (Monoclonal Antibodies [MABs]) are tracked through various stages of development leading from early-stage development to drug approval and launch. Our research questions include: How do firms' capabilities (development of patent portfolios, timing and nature of acquisitions and alliances, and organizational resource characteristics) impact their ability to successfully usher an innovation through various stages of development? How might this process differ between (a) established and emerging firms, (b) US and foreign firms, and (c) public and private firms? Our large, unique dataset includes the population of all MABs developments for human drug applications, and details their journey through major milestones over an eleven year period (2000 - 2010). We applied the innovative method of network patent scoring to develop measures of intellectual property strength and tracked the synergy of intellectual efforts through category-related acquisitions and alliances. We apply sequential survival modeling to identify which factors are important in each stage of product development. Our initial results demonstrate the need for organizations to partner at critical times with organizations that can complement their R&D as well as commercialization capabilities. Furthermore, as patent portfolios develop over time, it is vital for managers to leverage intellectual properties by expanding partnering strategies.

4 - The Influence of Physician Interventions on Patient Compliance and Healthcare Service Utilization

Andrea Godfrey, Assistant Professor, University of California, Riverside, 900 University Avenue, Riverside, CA, 92521, United States of America, andrea.godfrey@ucr.edu, Leonard Berry, Kelly Haws, Kathleen Seiders

This research examines how primary care physicians can effectively intervene when patients engage in lifestyle behaviors that contribute to negative health outcomes. The ability of healthcare providers to influence patient health behaviors is a critical topic that is not well understood. While medical research reports that diet and activity behaviors are significant drivers of chronic disease, including cancer, heart disease, and Type II diabetes, physicians have been relatively unsuccessful in gaining patient compliance involving these behaviors. This study investigates factors that may explain why some physician interventions motivate patients to change poor health behaviors while other interventions do not. The authors examine variables related to the physician's (1) discussion of patient diet and activity behaviors, (2) emphasis on the risk of poor health behaviors for the patient, and (3) emphasis on the risk of poor health behaviors for others (e.g., family members). Moderating variables include patient self-efficacy in his or her ability to make positive behavioral changes, and the patient satisfaction with the physician. The study examines effects on multiple outcomes including patient compliance, health behavior intentions, and healthcare service utilization. Data were collected in partnership with a large HMO and include primary survey data and three years of medical claims data at the individual patient level. The longitudinal empirical model estimated allows for heterogeneity across patients and accounts for biases inherent to panel data. Results offer interesting insights into the drivers of intervention effectiveness. The findings aim to enhance physician intervention effects on patient behaviors and allow healthcare providers to better utilize resources.

■ SA07

07- St. George C

Customer Relationship Management - Satisfaction

Contributed Session

Chair: Nevena T. Koukova, Assistant Professor of Marketing, Lehigh University, 610 Taylor Street, Bethlehem, PA, 18015, United States of America, nkoukova@lehigh.edu

1 - The Ugly Side of Customer Management – Consumer Reactions to Firm Induced Contract Terminations

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A substantial amount of academic attention has been devoted to determining customer lifetime value (CLV) providing guidance to manage profitable customers. However, literature on the management of unprofitable customers is scarce and largely conceptual. This is surprising because unprofitable customers are a frequently occurring problem, and many firms have been dismissing this customer segment, a strategy that has been termed "demarketing". We address this research gap and empirically analyze consumer reactions to firm induced contract terminations. Our analyses encompass two controlled experimental studies and one large field experiment that assesses the consequences of contract terminations in a real-world setting, in which contracts for more than 10,000 customers were terminated. The results show that consumers disapprove of demarketing, regardless of whether they only observe it or experience it themselves, regardless of the social distance of the dismissed customers, and regardless of the responsibility for the cause of the contract termination. Remarkably, the effects are strong and visible even one year after the contracts were terminated.

2 - Modeling Determinants of the Satisfaction-loyalty Relationship

Younghan Bae, PhD Student, University of Iowa, Henry B. Tippie College of Business, 108 PBB Room S252, Iowa City, IA, 52242, United States of America, younghan-bae@uiowa.edu, Lopo L. Rego, Gary J. Russell

Customer satisfaction and loyalty are central constructs in marketing research and practice because they are important determinants of firms' current and future product-marketplace and financial performance. In this research, we develop a comprehensive theoretical framework that simultaneously incorporates heterogeneity in customer, firm and industry characteristics. We test our theoretical framework by estimating a 3-level Hierarchical Linear Model (HLM), using American Customer Satisfaction Index (ACSI) data. Our findings indicate that the true nature of the satisfaction-loyalty link is significantly influenced by competitive setting differences. Accounting for such differences allows firms and managers to significantly increase their ability to effectively convert satisfaction investments into loyalty. Additionally, we identify important trade-offs between the intercept and slope of the association between the two metrics, indicating that firms' incentives to invest in satisfaction differ dramatically across industries. Because firms can obtain a certain level of loyalty by indirectly choosing how much to invest in satisfaction, satisfaction must be treated as an endogenous variable. In a subsequent analysis, we control for both satisfaction endogeneity and competitive settings heterogeneity using a Two-Stage Least Squares (2SLS)

3-level HLM. This research provides precise, important theoretical and managerial insights, and broadens our understanding of the essential features of the satisfaction-loyalty association.

3 - Does a Portfolio of Hierarchically Related Technology Products Improve Customer Outcomes?

Nevena T. Koukova, Assistant Professor of Marketing, Lehigh University, 610 Taylor Street, Bethlehem, PA, 18015, United States of America, nkoukova@lehigh.edu, Jason Kuruzovich, Shu Han, T. Ravichandran

This research examines how the type of IT provided among hardware, software, and services – and the degree to which the IT provided is bundled into a solution – influences the levels of satisfaction and loyalty of IT buyers. We refer to the vendors' hardware, software, and services offerings jointly as the IT products-services stack, as a stack framework facilitates an understanding of how the technology components are related. We utilize over 36,000 ratings of 68 IT vendors provided by IT workers, managers, and executives between 2003 and 2006 to test our research model. The findings indicate that vendors offering products in the lower levels of the stack experience higher satisfaction and loyalty ratings (hardware > software > services). Moreover, satisfaction and loyalty ratings are highest when hardware, software, and services are provided together – i.e., provided as an IT solution. An important implication of these findings is that IT solutions benefit both vendors and buyers.

■ SA08

08- Adams

Dynamic Structural Models I

Contributed Session

Chair: Song Lin, PhD Candidate, Massachusetts Institute of Technology, Sloan School of Management, 100 Main Street, Cambridge, MA, 02139, United States of America, songlin@mit.edu

1 - An Empirical Analysis of Consumer Purchase Behavior of Base Products and Add-ons

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In the digital camera market, Sony developed the Memory Stick card, which is only compatible with Sony's camera. However, Kodak, Canon, Nikon and HP all adopted the SD (Secure Digital) memory card. This asymmetric market structure intrigued interesting research questions: how does technological compatibility affect consumer purchase decisions on base products and add-ons? Why would major camera manufacturers compete in the memory card market by creating incompatible standards? Why did Sony choose to separate but others choose to unite? In this paper, we develop a dynamic structural model in which a consumer makes periodical purchase decisions about whether to adopt/replace a base product and/or an add-on product under price and quality uncertainty. We take into account the dynamic and interactive inventory effect by allowing consumers to recognize the long-term financial implications when forward-planning whether to switch to a base product that is incompatible with the inventory of memory cards at hands. Applying the model to consumer purchase history of digital cameras and memory cards from 1998 to 2004, we demonstrate that compatibility makes consumer purchase decisions of base and add-on products inter-temporally inter-dependent. Inventory of add-ons significantly affect purchases of base products. Our model explains the sales trends of the major branded cameras and quantifies how much promotion to offer for consumers to switch standards. For example, customers are attracted by Sony's high quality cameras. Then inventory of Sony's memory cards 'locks in customers, permitting Sony to harvest higher price premium on both memory cards and cameras later on. If Sony did not create its proprietary memory card format, its market share would have dropped by 12.17%.

2 - The Timing of New Product Release and Preannouncement-enabled Learning

Liang Zhao, University of Arizona, 1130 E Helen Str, McClelland Hall 320, Tucson, AZ, 85721, United States of America, liangz@email.arizona.edu, Yubo Chen, Yong Liu

Firms in various industries make preannouncements about new product release months or years ahead of actual new product launch. Yet, the actual launch time often deviates from the planned date in the preannouncement. Are these deviations merely technical, or could they be a strategic response to what happens after the preannouncement? This paper considers the optimal new product launch timing by a forward-looking firm. The firm maximizes expected product sales in an environment where the demand is uncertain. The core element of the model is that, after the preannouncement, the firm will be able to learn in a Bayesian fashion about the anticipated demand of the preannounced product through the reactions of the competing brands' sales, and subsequently decides when to launch the new product. The optimal launch timing depends on the tradeoff among eliminating cannibalization, building up consumer commitment to new products, and deterring the impacts of competitor's destructive behaviors. We apply the model to archival data of the U.S. digital camera industry, which provides an excellent context to study learning and new product launch decisions – the preannouncement of new product is ubiquitous, planned launch time is always announced, and the sales environment is competitive. The empirical analysis sheds light on the learning process and how preannouncements can be utilized as a strategic tool to learn about new product potential. It provides managerial implications for new product launching decisions, and policy implications for regulations on preannouncement behavior.

3 - A Dynamic Equilibrium Model of Durable Goods Market: Intertemporal Pricing and Durability Extension

Joon Ro, PhD Student, University of Texas at Austin, Marketing Department CBA 7.202, Austin, TX, 78712, United States of America, joon.ro@utexas.edu, Jason Duan

This paper considers intertemporal price discrimination and the marketing strategy of extending durability for the video game industry. The price of a video game generally follows a declining trend because (i) higher valuation game buyers purchase the game in the earlier stages after its release and exit the market, leaving only lower valuation buyers in the market and causing the producer to cut the games price and (ii) the existence of used game market causes the producer to cut the price of new game copies to compete with used ones. Because game buyers can form rational expectations about the price decline, they make intertemporal purchase decisions based on the expected trajectory of the game price. We proposed a dynamic equilibrium model which incorporates intertemporal demand and pricing, expectations and competition in new and used goods market. This model provides more theoretical insights into the market structure of the durable goods. It can afford empirical analysis using data collected from online video game market and policy analysis on marketing strategies such as intertemporal price discrimination and durability extension by releasing add-on game packages.

4 - Learning From Experience, Simply

Song Lin, PhD Candidate, Massachusetts Institute of Technology, Sloan School of Management, 100 Main Street, Cambridge, MA, 02139, United States of America, songlin@mit.edu, John Hauser, Juanjuan Zhang

Considerable effort in the marketing literature is devoted to modeling and estimating learning dynamics. However, (approximately) optimal solutions to forward-looking learning problems are computationally complex, limiting their behavioral plausibility. Drawing on theories of cognitive simplicity from marketing and psychology, we propose a new solution concept – index strategies. We examine conditions under which index strategies solve the meta problem that balances thinking costs and discounted utility. Index strategies are appealing as a theory of consumer behavior. In addition, the solution concept avoids exponential growth in computational time as the size of the decision problem increases, making it easier to study learning models in more complex situations. The existence of index strategies depends upon a structural property called indexability, which is hard to establish in general. We prove the indexability of a class of consumer learning models in which both product quality and future utility shocks are uncertain. We establish invariance properties and argue that index strategies are feasible for consumers to intuit. Using synthetic data, we demonstrate conditions when an index strategy is plausible and conditions when myopic strategies serve the consumer as well as forward-looking strategies. Using an IRI dataset for a product category where we expect forward-looking learning, we find that a theory-driven index strategy fits behavior well, provides plausible parameter estimates, and predicts out-of-sample as well as or better than alternative models.

■ SA09

09- Helicon

Choice Models III

Contributed Session

Chair: Kanghyun Yoon, Assistant Professor, University of Central Oklahoma, 100 N. University Drive, Edmond, OK, 73034, United States of America, kyoon1@uco.edu

1 - Modeling Consumer Choice of Fuel Station: The Role of Spatio-temporal Constraints and Choice Set Formation Processes

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Despite its ubiquity and the size of sales volume it represents, motorists' refueling behavior is ill understood and understudied. This paper will present a discrete choice based approach to the modeling of motorists' choice of refueling station. The paper will discuss issues involved in the modeling of consumer choice when consumers face time and space varying consideration and choice sets. For consumers the refueling choice problem typically arises when they are on their way to some destination. Therefore the consideration and choice set will be time and place dependent. The modeling of choice fuel station needs to take into account the spatio-temporal limitations of the choice setting, which relate to the consumers' time budgets, their knowledge of the local area and the conditions of the local traffic network. Non-spatial characteristics of fuel station alternatives also need to be included as they can be expected to have an influence. These

characteristics include brand name of the fuel station, its perceived quality, price, and the nature of the non-fuel related product offer.The paper will present an empirically estimated model of motorists' choice of fuel station. The model is estimated from choice data collected from refueling motorists at selected fuel stations in a large metropolitan area. The study holds significance for marketing in providing an alternative framework for the modeling of a spatially distributed market. From a choice modeling point of view, the study signifies the importance of finding ways of modeling choice set endogeneity, dealing with large numbers of choice alternatives and issues concerning choice based sampling, and the incorporation of spatial characteristics in a Random Utility based modeling framework.

2 - The Effects of Decision-making Style on the Choice of Foreign Market Entry Modes: An Application of Conjoint Analysis

Wei-Jhih Yang, PhD Candidate, National Taiwan University, No.1, Sec. 4, Roosevelt Rd., Taipei City, 106, Taiwan - ROC, flieryang@gmail.com, Lichung Jen

Previous researches on the choice of foreign market entry modes have been focused on the determinants or factors impacting the choice decisions, which were mostly conducted by the condition of a given entry mode. However, according to the theory of boundary decision, it will be useful for managers that how to find out the rules of making trade-off decisions instead of taking all of these determinants or factors into account, and then it can be identified that how to chose the appropriate entry mode based on the strategic considerations. That is, the choice of entry modes varies in the combinations of the determinants or factors considered by the manager. This study took this kind of combinations as manager's decision-making styles. With the approach of conjoint analysis, we firstly examined the major factors of entry mode choice by factor analysis, and then grouped the similar decision-making styles to three clusters, namely low involvement decision-making, high involvement decision-making and sophisticated decision-making, respectively. Secondly, we predicted the choice of entry modes in terms of the decision-making styles by Logit regression model. The results have shown that (1) for low involvement decision-making style, there is just one factor significantly influencing the entry mode choice of direct foreign investment; (2) for high involvement decision-making style, there are five factors significantly influencing the entry mode choice; (3) for sophisticated decision-making style, there are four factors significantly influencing the entry mode choice. Besides, comparing with the conventional aggregate-based approach, our individual-based analysis has provided much better explanations and predictions about the choice of foreign market entry modes.

3 - The Perceived Visual Similarity of Realtors: An Exploratory Study

Larry Garber, Associate Professor, Elon University, 2075 Campus Box, Elon, NC, 27244, United States of America, lgarber@elon.edu, Earl Honeycutt, Michael Dotson

Subjects rated the (dis)similarity of pair-wise combinations of female and male salesperson realtors. The selected realtors represent the range of appearance features, in terms of physical traits, grooming, and adornment. Subject responses were analyzed using multidimensional scaling (MDS) to generate male and female perceptual maps, with 19 female and 19 male realtors shown as points in their respective appearance spaces. Their relative positions are interpreted to determine which aspects of appearance most differentiate between them. Those aspects that most differentiate between women realtors are hair length, mode of dress, apparent age, and hair color, in that order. Those aspects that most differentiate between male realtors are apparent age, hair color, and mode of dress. Other visual elements playing lesser differentiating roles are eyeglasses and, for men, facial hair. Theoretical and managerial implications are discussed.

4 - Interpreting the Effects of Interaction Terms in Various Types of Linear and Non-Linear Models

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Researchers in marketing have intensively utilized various types of linear and nonlinear models – including logit and probit models – with interaction terms in order to investigate the impacts of various types of factors on marketing performance. In recent years, for instance, numerous linear and nonlinear marketing models with interaction terms have been appeared heavily in several premium marketing journals such as Journal of Marketing, Journal of Marketing Research, Marketing Science,ó among others. Methodologically, estimating the interaction terms in both types of models – also called difference-in-difference or multiplicative interaction models – implies that the effect of one independent variable on the dependent variable depends on the magnitude of another independent variable. Due to the efforts of Ai and Norton (2003) who has proposed an approach to analyze the interaction effects in linear and nonlinear models, marketing scholars have been fully aware of the correct way to interpret them. However, many researchers in marketing still misinterpret the effects of interaction terms especially in nonlinear models. Recognizing this current practice in marketing, we are interested in 1) warning the marketing community with the importance of interpreting the interaction terms appropriately and 2) introducing several ways to analyze correctly the interaction effects in linear and nonlinear models, by covering the roles of interaction terms in other special types of nonlinear models including ordered response models, truncated and censored models, and hierarchical Bayesian models, among others. We discuss managerial implications of our findings.

■ SA10

10- St. George D

New Product Diffusion II

Contributed Session

Chair: Rosanna Garcia, Associate Professor of Marketing, Northeastern University, 360 Huntington Avenue, Boston, MA, 02115, United States of America, r.garcia@neu.edu

1 - Demystifying the Bass Diffusion Model: The Hidden Role of Distribution Channel

Sungjoon Nam, Assistant Professor, Rutgers Business School, 1 Washington Street, Newark, NJ, 07102, United States of America, sjnam@business.rutgers.edu

It has been believed for a long time that the Bass Diffusion Model can identify underlying two different roles of communication channels in new product diffusion. However, previous literature has limitations to test these assumptions due to measurement problems of the Word-of-Mouth effect and the unobserved 'correlated errors. This paper challenges these believes and uncovers the hidden role of distribution channels in the Bass Diffusion Model using a new micro level adoption patterns in a video-on-demand service controlling for communication channels, competition and demographics. Contrary to the primary assumptions of the BDM model, the estimated results show that the imitation parameter, 'q' does not represent the role of the internal communication channel (Word-of-Mouth effect) but present the role of distribution channel. The innovation parameter, 'p' is associated with both internal (Word-of-Mouth) and external (Advertising) communication channels. These results imply that the two different communication roles (internal and external) cannot be separately identified in the usual settings in the absence of measure on Word-of-Mouth. The distribution channel effects vary significantly across different retail distribution channels. The new product adoption is significantly affected by the breadth of retail stores and time varying distribution channels' local and in-store promotional effects.

2 - Supply Constrained Diffusion Models: An Investigation of Parameter Bias

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Diffusion of innovations has been an important field of study in marketing going back to Bass (1969). Diffusion models have drawn recent criticism for their limited consideration of the marketing-manufacturing nexus. Various external and environmental factors have resulted in supply-constraints; yet, extant diffusion models implicitly assume unlimited supply. We formally investigate the Ho, Savin & Terwiesch (2002) conjecture of bias in diffusion parameter estimates under constrained supply. We take a simulation-based approach with synthetic data to recover the known true parameter to test the bias conjecture across a wide range of conditions. Specifically, we generate data using a supply-constrained diffusion process and estimate parameters using standard diffusion models. Our findings support the conjecture of parameter bias across a wide range of experimental conditions. Consequently, in order to correct the misspecification in the models and recover the true parameters in the presence of supply-constraints, we propose two supply-constrained diffusion models. Specifically, we augment the Srinivasan-Mason operationalization of the Bass model, as well as the non-uniform interpersonal influence model of Easingwood, Mahajan and Muller, to include explicitly a supply constraint term as part of the model specification. We employ a large-scale grid search with non-linear least squares based estimation procedure and assess the ability of the employed models to recover the known parameter values under a wide range of simulated scenarios. We provide results on the comparative performance of our proposed models in overcoming the misspecification and recovering the true diffusion parameters.

3 - The International Takeoff of New Services

Margot Loewenberg, University of Zurich, Institute of Business Administration, Plattenstrasse 14, Zurich, 8032, Switzerland, margot.loewenberg@business.uzh.ch, Markus Meierer, René Algesheimer

Takeoff is a critical success factor for new products and services. It is defined as the point where the first large increase in sales occurs. Taking the U.S. broadband market as an example, AT&T was among the first to offer broadband services. The firm reached takeoff after a few quarters, while later entrants, e.g. Qwest, being confronted with high competition needed longer to reach takeoff. Practitioners not only need to know when aggregated product sales in a specific category take off. They need to be able to predict the takeoff of their firms' products. Besides indicating customers' acceptance of a product or service, knowing the timing of takeoff helps to guide resource allocation and to decide whether to enter or leave a market. So far, research studies have neglected this kind of firm-level perspective and have solely focused on the aggregated product category-level. Addressing this research gap, we study the takeoff of 441 broadband internet operators across 85 countries to analyze whether competition at time of a firm's market entry influences the takeoff of a new service. We also examine the influence of different states of development of a country on the time to takeoff. Applying a two-level proportional hazard model, we analyze quarterly subscriber data from 1997-2011. Besides including further firm- and country-level variables, we also control for unobserved heterogeneity and

endogeneity. Results show that firms facing less competition at time of market entry reach takeoff faster than companies entering markets with higher competition. Further, results indicate that firms reach takeoff faster in developed than in developing countries. The study addresses the implications of these results in detail.

4 - The International Rate of Discontinuance

Rosanna Garcia, Associate Professor of Marketing, Northeastern University, 360 Huntington Avenue, Boston, MA, 02115, United States of America, r.garcia@neu.edu, Antonio Ladron de Guevara, Javier Palacios Fenech

Research on diffusion of innovations has historically suffered of pro-innovation bias. This bias has limited marketing scholars to learn only about the dynamics of rapidly spreading innovations. In this article, the discontinuance process is divided into five categories and its relation to the adoption process is described. While marketers have focused on diffusion of innovations, studying discontinuance provides an opportunity to explore the needs of the market and create a more profitable and sustainable approach to marketing activity. The terminology about disposal, dispossession and discontinuance has been used inconsistently and applied to different meanings and in different manners when the product's end-of-life is studied. Differences among these related concepts: discontinuance, disposal, and dispossession, are clarified in this research. For a better understanding of the dynamics of discontinuance, diffusion models are used in order to explore the influences that affect the rate of discontinuance of black-and-white television sets in 41 countries in which a peak on the level of penetration occurred after 1977. The rate of discontinuance is found to be faster in poorer countries, for which discontinuance starts later. Cultural dimensions of a country are also found to affect the internal and external influences of the international rate of discontinuance of black-and-white television. Products that are discontinued in leading markets face a very rapid decline of the potential remaining markets. Implications for managers and policy makers are discussed. Noteworthy, they might take wrong decisions if it is assumed that the rates of adoption and discontinuance share the same dynamics.

■ SA11

11- Empire

Channel Governance and Contracting II

Contributed Session

Chair: Shan Yu, Doctoral Student, Eller College of Management, University of Arizona, McClelland Hall, Room 320, P.O. Box 210108, Tucson, AZ, 85721-0108, United States of America, shanyu@email.arizona.edu

1 - Toward Predicting the Influence on Dimensions of Contractual Completeness in International Context

Emmanuel Chao, PhD, Research Fellow, Agder, Post Box 422, Kristiansand, 4631, Norway, emmanuel.j.chao@uia.no

Studies on degree of contractual completeness have indicated that there are two dimensions which make up this concept i.e exante specifications and adaptations of ongoing relationship. However we understand very little how these dimensions are predicted in international context and in theory (TCA). This paper takes step further in terms of specifying how these dimensions (of degree of contractual completeness) are predicted. The study involved two countries i.e. Poland and Tanzania. In Poland the online survey was carried out (using survexact software). About 1800 polish firms were involved. Firms were first contacted by telephone and online questionnaire was then issued after willing to participate. The final sample was 201 which accounts for 8.5% response rate. In Tanzania,questionnaires were delivered and collected personally to ensure adequate response rate. Final completed questionnaires were 140 from targeted sample of about 500 firms. Data analysis used OLS and all models predictive power were satisfactory. The study in Poland found out that exante spefications are not determined by degree of asset specificity or general (macro) environmental variations but adaptations of ongoing relationships are affected by the same. The study in Tanzania found out that the exante specifications were not also affected by degree of asset specificity or environmental variations; however ongoing adaptations were only affected by environmental variations and not asset specificity. Implications for international studies indicate the influence of asset specificity on degree of contractual completeness to be a function of environmental variations for developing economies than for developed economies.

2 - Ex– Ante Governance Mechanisms and Distribution Expansion: Empirical Analysis of Franchising

Nicole Hanson, Texas A&M University, 220 Wehner Building, 4112 TAMU, College Station, TX, 77843, United States of America, nhanson@mays.tamu.edu, Venkatesh Shankar, Gary Frazier

High-growth firms expand their distribution channels faster than low-growth firms. How do the ex-ante mechanisms governing their relationships with channel partners differ between high- and low-growth firms? The answer to this question can provide insights into effective governance mechanisms and enable firms in developing more effective growth strategies. We address this important question in the franchising context. We develop a conceptual model relating franchise system size to franchisee selection factors, contractual factors, and support factors. We formulate hypotheses about the main and interaction effects of these factors on the overall distribution system size, and then test these hypotheses through a rigorous panel data model estimated using a uniquely assembled dataset involving 1,500 franchisors during a 14-year period. Our empirically generalizable results offer important insights where distribution growth is the highest. While conventional wisdom dictates relying heavily on contractual options and providing initial franchisees with start-up support, we do not find empirical evidence for such recommendations. Instead, we find support for an increase in the overall system size when social support is provided via a franchise association, financial support is given by offering on-going financial assistance, and higher on-going advertising fees are charged. Additionally, we find that passive ownership has a negative effect on the overall system growth when viewed in isolation; however, as the franchise system ages and gains more units, passive ownership does not necessarily have a negative impact on distribution growth.

3 - Forward Integration Into Retailing: Motives, Determinants of Channel Structure, and Performance

Dominik Orbach, University of Cologne, Albertus Magnus Platz 1, Cologne, Germany, orbach@wiso.uni-koeln.de, Werner Reinartz, Mark Elsner

In many retail environments, brand manufacturers increasingly integrate forward, i.e., open own stores, implement e-commerce channels, or operate shop-in-shop formats. While existing research has built on several established theories to explain this step forward – e.g., principal agent theory and transaction cost theory – we examine the impact of new motives on forward integration. First, based on in-depth interviews with brand manufacturers, we identify and define six new motives for forward integration. Second, we explore the effects of the "old" vs. "new" motives on the structure of a firm's channel system. More specifically, we propose a two-step selection model to explain the degree of forward integration. In the first step, we model a manufacturer's decision whether to integrate forward or not; in the second step, we account for the factors that explain the degree to which a firm relies on integrated channels (i.e., the degree of vertical integration). We test our model with a dataset of 226 firms from the textile and fashion industry and find evidence for several effects of the new motives on the degree of vertical integration. Finally, we use a Darwinian Economics approach to test whether a greater fit with the environmental conditions – as described by our model – is associated with greater firm performance. The results indicate that a firm's conformity with the proposed model is linked to a greater profitability.

4 - Restricted Rights & Payment Schemes in Technology Licensing: A Cross-National Empirical Investigation

Shan Yu, Doctoral Student, Eller College of Management, University of Arizona, McClelland Hall, Room 320, P.O. Box 210108, Tucson, AZ, 85721-0108, United States of America, shanyu@email.arizona.edu, George John, Chae-Un Lim, Mrinal Ghosh

The marketing of intellectual property (IP) through licensing agreements has become increasingly prominent in both the technology and industrial marketing domain. Two of the most prominent features of these technology licensing agreements (TLAs) are (a) the extent to which licensor contractually restricts the licensee's discretion on the use/application of the licensed IP, and (b) the payment schemes agreed on the IP exchange. Despite the prominence of this form of exchange, systematic empirical evidence on the diversity of these arrangements and the rationale behind the imposition of these licensing restrictions and the use of fixed fees versus royalties as payment schemes has received scarce attention. In this paper, we use a data set on licensing agreements between Korean licensees and international licensors to study the microstructures of these contract forms. Specifically, we work out of the transaction cost economics/incomplete contracting tradition to argue that these licensing restrictions and payment schemes reflect the ex ante and ex post hazards posed by the particular technology being transacted to the contracting parties. We delineate the specific technological factors that matter to these choices as well as show the interrelationship between the licensing restrictions and the payment schemes. Implications for research and practice are discussed.

■ SA12

12- Parliament

Bayesian Econometrics: Applications

Contributed Session

Chair: Sunghoon Kim, PhD Student, Pennsylvania State University, 485 Business Building, University Park, PA, 16802-3603, United States of America, suk220@psu.edu

1 - Modeling Information Content in Sales Spikes of Fast Decay Products

Yu Yu, Assistant Professor, Georgia State University, 35 Broad Street, Marketing Department, Atlanta, GA, 30303, United States of America, yyu5@gsu.edu, Ashish Sood

A commonly assumed characterization of product sales for many experiential and hedonic product categories is that they follow a fast (exponential) decay over time. Prior research interested in predicting sales function controls for sales spikes as a deviation of sales cycle in a number of ways including accounting for seasonality. However, products may not always follow a smooth exponential decay: some products do not have their maximum sales at launch, while others may experience an increase in sales (a burst or spike) after initial sales decay. In some cases, there are multiple sales spikes during the product life cycle. In this paper, we not only account for the deviations but also capture the information content in sales spikes. We model the sales of video games, a classic, fast-decay product category, as an exponential diffusion process with Poisson Jumps. We show that deviations from common mathematical formulations of the product life cycle of such categories (e.g. exponential function) can collectively account for a non-trivial portion of a product's total sales, and thus are managerially relevant. The findings clearly caution against indiscriminately ignoring sales spikes and provide insights on factors that may affect these spikes. The authors discuss the implications of these findings.

2 - Utility and Attention - A Structural Model of Consideration

Keyvan Dehmamy, Doctoral Student, Goethe University of Frankfurt, Grueneburgplatz 1, Frankfurt a.M., 60323, Germany, dehmamy@wiwi.uni-frankfurt.de, Thomas Otter

We propose a structural model of consideration based on the exclusion of an observed variable causally related to attention (only) from utility maximization. In our model, consumers engage in constrained utility maximization in a discrete-continuous model of demand considering a (sub-)set of discrete choice alternatives. The variables causing attention only, and therefore excluded from utility maximization, are the number of facings (NoF) of a particular SKU and its position on a shelf that consumers choose from in a discrete choice experiment. Under the standard assumption of exogenous preferences the NoF and position of a particular SKU may increase the (automatic) attention paid to the offering but cannot alter the preferences governing the (optimal) quantity decision given a consideration set. In this sense the NoF and the position of an SKU provide information about its availability. These variables however do not act as persuasion devices that alter the utility obtained from a particular SKU. Structural identification of utility separate from attention therefore comes from jointly considering the choice and quantity decision and the theoretical argument that optimal quantities, conditional on consideration, are independent from the NoF and the position. We illustrate our ideas using data from a commercial conjoint study where choice sets are simulated store shelves. Conditional on consideration, we employ Bhat's (2005) econometric implementation of additive, translated, non-linear (direct) utility (see also Kim et al. 2006). We complete this model by a multivariate logistic model (e.g. Besag 1974, Russell and Peterson 2000) for the consideration stage. Bayesian estimation is carried out using MCMC.

3 - Modeling Geo-dependent Attitudes with Spatial Factor Analysis: An Application to Financial Planning

Stanislav Stakhovych, Monash University, Department of Marketing, P.O. Box 197, Caulfield East, 3145 VIC, Australia, stanislav.stakhovych@monash.edu, Tammo H.A. Bijmolt, Michel Wedel

The paper addresses the allocation of financial planners to geographical regions. While the classical approaches of sales territory design use existing sales territories and data on existing customers in repetitive buying context, the future sales performance may not only depend on sometimes unavailable current customers but also on potential customers. The proposed solution is to use the attitudes toward financial products of potential customers and take into account that these attitudes can be spatially correlated. This approach is motivated by the fact that spatial variation in attitudes plays an important role in decisions on geographical marketing efforts, such as targeting of direct mail campaigns and scheduling of sales representatives. To address these challenges, we propose a new Bayesian factor analytic model which allows extracting spatially correlated latent attitudes. Further, we propose a procedure for spatial scheduling of financial planners based on the model results. We apply this approach in an empirical study on consumer attitudes in the financial domain. In particular, we show that attitudes related to risk taking and loyalty are spatially correlated, which is used for improved assignment of financial planners to regions. Finally, we discuss managerial implications and areas for future research.

4 - Model Based Segmentation Featuring Simultaneous Segment Level Variable Selection

Sunghoon Kim, PhD Student, Pennsylvania State University, 485 Business Building, University Park, PA, 16802-3603, United States of America, suk220@psu.edu, Duncan Fong, Wayne DeSarbo

We propose a new Bayesian latent structure regression model with variable selection to solve various commonly encountered marketing problems related to market segmentation and heterogeneity. The proposed procedure simultaneously performs segmentation and regression analysis within the derived segments, as well as determining the optimal subset of independent variables per derived segment. Comparative analyses are presented contrasting the performance of the proposed methodology against standard latent class regression and traditional Bayesian finite mixture regression. Our proposed Bayesian model is shown to compare favorably against these traditional benchmark models. We then present an actual commercial customer satisfaction study performed for an electric utility company in the Southeastern part of the US where we examine the heterogeneous drivers of perceived quality. Finally, we discuss limitations of the research and directions for future research.

■ SA13

13- North Star

Entertainment Marketing II

Contributed Session

Chair: Fang Wu, Assistant Profession of Marketing, Shanghai University of Finance and Economics, 777 Guoding Road, School of International BA, Shanghai, China, wu.fang@mail.shufe.edu.cn

1 - Launching Products During High vs. Low Seasons: Implications for Small Firms

Judy Ma, Rensselaer Polytechnic Institute, 110 8th St, Troy, NY, 12180, United States of America, maj7@rpi.edu, Dmitri Markovitch, Dongling Huang

A fundamental concern for many small firms is how to strategically overcome their small-player disadvantage in markets dominated by a handful of large firms. In this paper, we examine the performance implications for small firms given the timing of their product launches in the presence of demand seasonality. In high seasons, there is more consumer demand, but competition is more intense. In low seasons, demand is not as great, but the lower competition allows the small firm to gain more visibility. We study these tradeoffs with data from the motion pictures industry, an oligopolistic industry in which demand varies drastically over the course of a year. Moreover, we examine how the theatrical release decisions for the movies in our dataset affect their subsequent performances in the secondary market of DVDs. Our findings provide managerial insights regarding how seasonality affects shelf space, marketing expenditures, word-of-mouth, and secondary market performance for small players.

2 - Consumer Involvement with Experiential Products

Yulia Nevskaya, PhD Candidate, University of Rochester, 4-345 Carol G. Simon Hall, Rochester, NY, 14627, United States of America, yuliya.nevskaya@simon.rochester.edu, Paulo Albuquerque

This paper studies the continuous involvement and usage of an experiential product by consumers. We apply recently developed methods of estimating dynamic discrete choice models in continuous time to measure the impact of intrinsic motivation and external rewards on consumption. We apply our model to a data set on consumer usage of a subscription-based computer game where product design is essential to keep consumers active and decrease a churn rate. Based on the estimation results, we test counterfactual product configurations. The approach can be applicable to a number of categories where consumers continuously enjoy the product and get experience from usage.

3 - From Piracy to Business Intelligence: Using Pre-release Piracy Information to Predict Music Sales

JooHee Oh, Post-Doc, Massachusetts Institute of Technology, 100 Main St, Room E62-412, Cambridge, MA, 02421, United States of America, jooheeoh@mit.edu, Gareth James, Il-Horn Hann

Much attention has been given by the business press and academic work on the relationship between Peer-to-Peer (P2P) downloading activities and sales of sound recordings. What has garnered less attention is the information value that digital piracy can offer. Specifically, the file-sharing activities of music files that are not yet officially released can potentially be valuable to music labels. In this paper, we demonstrate how piracy data in P2P networks enable businesses to generate early sales-forecasts to fine-tune decision that affect marketing activities before the official launch of a music album. While a large percentage of promotional dollars are spent early in the product life cycle of an album, it is estimated that almost ninety percent of albums are not able to generate a positive return. We provide an empirical model to improve early investment decisions using demand and supply side of piracy data. Our results confirm that file sharing data is strongly informative of the new album sales. Specifically, each unit increase of file request, demand-side of piracy, is correlated with 1365 albums of first week's sales after controlling the effects of album/artist characteristics. A unit increase of supplying peer explains additional 27 units of

album sales. Using Functional Data Analysis (FDA), we demonstrate the importance of incorporating functional variables such as rate of change information in file request. The use of piracy data and its shape characteristics improves the mean absolute percentage error (MAPE) of benchmarking models by about 20%.

4 - Pre-launch Analysis of Dynamic Market Structure

Fang Wu, Assistant Profession of Marketing, Shanghai University of Finance and Economics, 777 Guoding Road, School of International BA, Shanghai, China, wu.fang@mail.shufe.edu.cn, Natasha Zhang Foutz

Analysis of market structure has focused on mature product categories and post-launch competition. In industries with frequent product introductions and short product life cycle, such as entertainment and technologies, it is imperative to identify market structure pre-launch to guide important marketing decisions, such as advertising and distribution. However, the lack of sales data and dynamic shifts in the competitive landscape due to, for instance, changes in product configurations or release timing, present unique challenges. The authors thus propose a dynamic model to capture the evolution of the competitive set and brand positions. Calibrating the model using a film prediction market, they reveal the key forces driving the competitive dynamics. They also exhibit the evolutionary paths of each product's competitive position, clout, and vulnerability prior to its launch. The findings will shed light on competitive strategies such as pre-announcement of release timing and pre-launch advertising.

■ SA14

14- Defender

Marketing Strategy II

Contributed Session

Chair: Eelco Kappe, Assistant Professor of Marketing, Pennsylvania State University, University Park, PA, United States of America, erk11@psu.edu

1 - Distribution of Changes in Buyer Purchasing Behavior

Giang Trinh, Research Associate, Ehrenberg-Bass Institute, University of South Australia, School of Marketing GP.O. Box 2471, Adelaide, 5001, Australia, giang.trinh@marketingscience.info, Cam Rungie, Malcolm Wright, Carl Driesener, John Dawes

This paper proposes a method to diagnose the source of brand sales increase or decline. The method is based on the distribution of changes in buyer purchasing behavior in two sequential time periods. The distribution of changes describes the stochastic nature of changes in purchase frequency (e.g. some buyers who purchase a brand one, two, three... times more, and some other buyers purchase less, from one time period to another). Importantly, the method creates theoretically expected benchmarks of the extent of changes in purchasing behavior. Comparison between the observed data and the predicted distribution of changes allows brand managers to determine if a sales increase or decline is due to a small shift in purchase propensity of a large group of buyers or a big change in purchase propensity of a small group of buyers. The authors derive the distribution of changes for the well-known negative binomial distribution (NBD). Two practical examples of the method are presented.

2 - Brand Deployment Consistency and Market Share

Harry Antonio, Emory University, 1300 Clifton Rd NE, Atlanta, GA, 30322, United States of America, harry_antonio@bus.emory.edu, Douglas Bowman

Brand consistency refers to the degree of congruence among all aspects of a brand and surrounding marketing activities. Past research on brand consistency has largely been in the context of laboratory studies in evaluating brand extensions, or limited to consideration of a single focal category; there is little work examining its effects in field studies across the entire deployment of a brand, especially linking it to a brand's product market performance. An important aspect of consistency is how a brand is deployed across categories. In this paper, a brand is asserted to have degrees of consistency in regard to the categories in which it competes, and its marketing practices in relation to the norms of those categories. The importance of consistency in a brand's deployment across categories is developed by considering the functions of a brand and by drawing on principles from the brand extension literature. 13 years of household scanner panel data from the IRI Builders database is used to test hypotheses relating consistency in brand deployment to market share.

3 - Do Brands Really Work? Dynamics and Heterogeneity of Brand Performance

Sascha Raithel, Assistant Professor, Ludwig-Maximilians-Universitaet in Munich, Kaulbachstr. 45 / I, Munich, 80539, Germany, raithel@bwl.lmu.de, Xueming Luo, Marko Sarstedt

This study uses a large-scale dataset covering multiple dimensions of consumer perceptions of brand performance. The daily level brand ratings for over 1,400 brands in three countries (US, UK, Germany) and more than three years reveal new insights into the dynamics and heterogeneity of brand performance. Most prior research has focused on the aggregate effect of brand equity. Marketing modelers often investigate the "mean" effect but neglect the "variance" effect of brand performance. Specifically, this study examines the dispersion/heterogeneity effect to evaluate the full impact of brand equity on stock market performance (stock return, risk, and volume). We model the long-term, accumulative effects with a time series approach because brands are a long-term asset. We also show what brand-level factors moderate the dynamics and heterogeneity of brand performance.

4 - The Interplay between Sales, Marketing and Clinical Reviews in the Pharmaceutical Industry

Eelco Kappe, Assistant Professor of Marketing, Pennsylvania State University, University Park, PA, United States of America, erk11@psu.edu, Ashish Sood, Stefan Stremersch

Firms in pharmaceutical industries support the sales of their products with both clinical reviews and marketing expenditures to patients and doctors. At the same time, independent researchers or competitors also release clinical reviews on such products. We discern three summary metrics to characterize the entire body of clinical reviews on a product – valence, dispersion and volume. We empirically analyze how the summary metrics of clinical reviews impact the marketing expenditures for and sales of products in a substantial therapeutic market. We show how only certain metrics affect sales and marketing expenditures and why omitting these dimensions of the body of clinical reviews leads to an upward bias in the estimates of marketing responsiveness parameters. Our findings allow firms to anticipate and counteract marketing strategies of competitors and assess the return on investments of clinical reviews.

■ SA15

15- Great Republic

Innovations and Firm Performance

Contributed Session

Chair: Thomas Dotzel, McGill University, Desautels Faculty of Management, 1001 Sherbrooke Street West, Montreal, QC, H3A1G5, Canada, thomas.dotzel@mcgill.ca

1 - Innovation and Supply Chain Financing

Ashwin Malshe, Assistant Professor- Marketing, ESSEC Business School, 100 Victoria St, 13-02 National Library Building, Singapore, 188064, Singapore, malshe@essec.edu

Although consumers and investors reward innovation, new product introductions are inherently risky. The author proposes a model in which downstream channel partners partly bear this risk and negotiate longer payment periods as a compensation from innovative firms. In turn, innovative firms negotiate more trade credit and longer repayment periods from their suppliers, thereby spreading the risk more uniformly across the supply chain. The author uses a unique dataset of 2,400 Chinese firms to test the effect of innovation on supply chain financing. The dataset contains information on a firm's new product introductions and patent grants over a period of three years (2000-2002). In addition, along with several other key variables, the database captures payment terms of firm's suppliers (upstream partners) as well as customers (downstream partners). The author finds significant impact of innovation on supplier financing over and above that of i) access to alternative sources of financing (e.g., banks), ii) market power (e.g., market share, total revenue), iii) quality of supplier and customer relationship (e.g., duration of the relationship), and iv) other factors such as industry, labor, and financial position, etc. Further, innovative firms with higher (lower) advertising intensity get customer payments over shorter (longer) periods. This is consistent with the risk-reducing effect of advertising. Thus, the author shows that whereas value creation (innovation) leads to longer supplier payment durations, value appropriation (advertising) leads to shorter customer payment durations.

2 - Epochal Innovation and Stock Market Bubbles

Alina Sorescu, Associate Professor, Texas A&M University, TAMU 4112, College Station, TX, 77843, United States of America, asorescu@tamu.edu, Sorin Sorescu, Will Armstrong, Bart Devoldere

Major innovations - radical and disruptive - have commanded substantial academic and managerial attention. Among those, perhaps the most significant are epochal innovations, defined by Nobel Prize winning economist Simon Kuznets to be "major breakthroughs in the advance of human knowledge, and dominant sources of sustained growth over long periods of time" (Kuznets 1971). We examine the stock market reaction to the emergence of epochal innovations commercialized by the private sector over the past two centuries. Noting that Kuznets' definition takes an ex-post perspective, we set out to formally conceptualize epochal innovation and propose a set of defining characteristics that can help identify it as it occurs. We then compile a census of epochal innovations and measure the path of stock returns for firms involved in the commercialization of these innovations. Using the West (1987) econometric model, we show that these firms experience a stock market bubble during the two decades following the commercialization of each innovation. We document the timing and size of each bubble and show that on average, epochal innovations add value to the economy even after the burst of the bubble. Indeed, the return to a portfolio of firms commercializing epochal innovations is higher

at the end of the bubble period when compared to a passive investment in the stock market index. A possible interpretation of our results is that stock market bubbles allow firms to raise inexpensive capital that can be used to commercialize the epochal innovations. Our study has important implications for marketers, investors and public policy officials.

3 - New Services versus New Goods: Effects on Firm Value and Risk
Thomas Dotzel, McGill University, Desautels Faculty of Management, 1001 Sherbrooke Street West, Montreal, QC, H3A1G5, Canada, thomas.dotzel@mcgill.ca, Venkatesh Shankar

Many leading firms that were traditionally known as manufacturing firms, such as IBM, generate the majority of their revenues today from services. They are seeking to introduce both new goods and services in order to provide superior customer value, generate revenue, and stay competitive. However, despite the growing importance of services, extant literature's focus has been on financial value created by new goods. We empirically address this issue by studying how the financial outcomes of new goods differ from those of new services and if there are asymmetries among different types of these new products (e.g., radical versus incremental new goods and Internet-enabled vs. People-enabled new services). Furthermore, we examine how new goods and new services interact with each other to produce financial outcomes. Are the effects between the two types of new products substitutional or can they be complementary? We develop a modeling system that relates new services, new goods, firm value, and firm risk to one another while controlling for firm-and market-specific factors. We estimate our model on a unique panel data set that we assembled from multiple data sources. Our findings allow managers to make better informed decisions about introducing new goods and/or new services and improve organizations' competitiveness.

■ SA16

16- St. George A

Channels: Game Theory II

Contributed Session

Chair: J. Miguel Villas-Boas, Haas School of Business, University of California, Berkeley, Berkeley, CA, 94720-1900, United States of America, villas@haas.berkeley.edu

1 - Trade Promotion Budget and Allocation Decisions under Demand Uncertainty
Miguel Gomez, Assistant Professor, Charles H. Dyson School of Applied Economic and Management, 321 Warren Hall, Ithaca, NY, 14853, United States of America, mig7@cornell.edu, Vithala R. Rao, Hong Yuan

In this paper, we examine trade promotion decisions in manufacturer-retailer channels where retailers face consumer demand uncertainty. We first present the theoretical analysis for two types of markets where trade promotion discounts are offered either as off-invoices or as scan-backs. We then derive testable hypotheses by comparing wholesale and retail prices, retailer order quantities, and profits given the same trade promotion discount. Finally, we extend the basic model so that the trade promotion discount leads to market expansion and solve for the optimal discount level. To test our theory, we then employ market experiments where we manipulate demand uncertainty. Consistent with our theoretical predictions, we find that both manufacturer and retailer prefer off-invoice to scan-back due to demand uncertainty. When trade promotion discount does not lead to market expansion, wholesale and retail prices are higher and retailer order quantity lower when the same amount of trade promotion discount is allocated to off-invoice versus scan-back. When the market expanses as manufacturers offers deeper discount, the optimal trade promotion discount is larger when it is allocated to off-invoice versus scan-backs. Overall, our research suggests that laboratory market experiments can shed light on trade promotion outcomes for which industry data are sparse.

2 - Pricing and Quality Provision in a Channel: A Model of Efficient Relational Contracts
Cristina Nistor, PhD Student, Massachusetts Institute of Technology, Sloan School of Management, Somerville, MA, 02144, United States of America, cnistor@mit.edu

I model how quality concerns affect relationships in a channel. A firm concerned about uncontractible quality for a customizable good has to pay higher prices to sustain a relationship with the supplier. If the customizable good has very volatile demand, premium payments on this good cannot be sustained. Instead, the downstream firm pays a premium for a good with more stable demand that is correlated with demand for the customizable good. I use a novel dataset containing sales made by a wholesaler to Asian restaurants in the Southeastern United States to test this prediction empirically. As predicted by the proposed model, if customizable goods have very volatile demand, the high end restaurants do not pay a premium on those goods but instead pay a premium for other goods with more stable demand.

3 - The Optimal Individual Marketing Strategies in Imperfect Competition in the Presence of the Internet
I-Huei Wu, National Taiwan Normal University, 5F, No. 637, Bei-an Road, Taipei, Taiwan - ROC, ihwu@ntnu.edu.tw, Chyi-Mei Chen, Shan-Yu Chou

The presence of the Internet channel provides the firms who desire to implement individual marketing a great chance to build and sustain brand loyalty by collecting, analyzing, and utilizing customer information. However, the imperfect targetability and the strategic behavior from sophisticated consumers challenge the benefit of individual marketing. In addition to these two factors, the firms should also consider the impacts of personalized pricing on competition intensity. In fact, the firms can promote customers to purchase on the Internet by offering customized services according to customer's deal history. Even though this kind of service could make consumers enjoy individual marketing more, it may still influence competition intensity. Besides, the optimal individual marketing strategy may affect the price dealing behavior. Furthermore, the existing studies have not already addressed the issue about the individual marketing strategy under imperfect competition by considering the effects of customized service, strategic consumer, and imperfect targetability. Therefore, this research derives main results as follows. 1. In the absence of customized service, no firms may decide to invest on personalized pricing when the low-end consumers are critical enough even if individual marketing is costless. In other words, personalized pricing without customized service may intensify price competition. 2. The presence of customized service may not only enhance the firms' incentives to implement personalized pricing but also lead to a Pareto-improving equilibrium for the two firms. 3. With regard to the price for the new customers, the firm with individual marketing prefers to discount less but more frequently than the firm without individual marketing.

4 - Too Much Information? Information Gathering and Search Costs
J. Miguel Villas-Boas, Haas School of Business, University of California, Berkeley, Berkeley, CA, 94720-1900, United States of America, villas@haas.berkeley.edu, Monic Sun, Fernando Branco

A seller often needs to determine the amount of product information to provide to consumers. We model costly consumer information search in the presence of limited information. We derive the consumer's optimal stopping rule for the search process. We find that, in general, there is an intermediate amount of information that maximizes the likelihood of purchase. If too much information is provided, some of it is not as useful for the purchase decision, the average informativeness per search occasion is too low, and consumers end up choosing not too purchase the product. If too little information is provided, consumers may end up not having sufficient information to decide to purchase the product. The optimal amount of information increases with the consumer's ex-ante valuation of the product. One can also show that there is an intermediate amount of information that maximizes the consumer's expected utility from the search problem. The paper can be seen as providing a rationale for why too much information may hurt consumer decision-making.

Saturday, 10:30am - 12:00pm

■ SB01

01- Essex Ballroom South

Personalization and Customization

Cluster: Internet and Interactive Marketing

Invited Session

Chair: Benedict Dellaert, Professor, Erasmus University Rotterdam, Burgemeester Oudlaan 50, H15-07, Rotterdam, 3062 PA, Netherlands, dellaert@ese.eur.nl

1 - Right Ad, Wrong Time? A Field Experiment on the Effects of Retargeting on Online Shopping Behavior
Alex Bleier, PhD Student, University of Cologne, Albertus-Magnus-Platz 1, Cologne, 50931, Germany, bleier@wiso.uni-koeln.de, Maik Eisenbeiss

Utilizing information on customers' individual online shopping behavior to follow them with personalized advertisements through the web has become known as "retargeting". Despite the fact that this practice has gained large momentum in recent years, research on its effectiveness is still in its infancy. Yet, for retailers to maximally gain from employing this sophisticated advertising method, three aspects are of key interest: (1) What are customers' particular reactions to retargeted banners in terms of their online shopping behavior? (2) How do these reactions vary with respect to different banner contents and their delivery? (3) What is the role of customers' previous online shopping activities in this context? To tackle these questions, we conduct a field experiment with a major fashion and sporting goods retailer. Analyzing individual level clickstream data on retargeted advertisement display, consequential reactions and online shopping behavior, we derive results that are of importance to academics and practitioners alike. First, we find that the impact of retargeting varies significantly between different dimensions of online shopping behavior. Second, we show that the effectiveness of a specific banner hinges considerably on its degree of

personalization and repetition. Third, we demonstrate how the influence depends on the individual customer's current shopping state. With respect to theoretical research, we contribute to an enhanced understanding of the effects that personalized advertisements exert on individual online shopping behavior. Substantively, our analyses provide practitioners with managerial implications and once more challenge the traditional click-through rate as a measure of success for online advertising.

2 - IPTV Customization

Gui Liberali, Assistant Professor of Marketing, Erasmus School of Economics, Erasmus University, 3000 DR, Rotterdam, Netherlands, liberali@ese.eur.nl, Bas Donkers, Stefan Stremersch

Cable TV and on-line streaming video broadcasters gather massive amounts of content from producers, and deliver them to consumers in the form of hundreds of programs every day. However, a consumer can only watch a single program in any given moment, and has a limited amount of time to make a choice. Consumers, industry, and regulators acknowledge that all sides would be better off if choice overload could be mitigated. We propose an optimization method that tackles this problem by helping firms to optimally assign programs to users and dynamically learn from these assignments. We develop a forward-looking model that does optimal experimentation across users to learn the relationship between the users characteristics and the commonalities across movies. We use a dynamic allocation index to solve a dynamic program that ranks all movies according to the expected reward given what is known about the choice probabilities, and the value of further learning. Traditional recommendation systems are not forward-looking so they do not explore alternatives with lower means, but higher variances. Morphing theory is forward-looking but learning is focused on a set of fixed morphs. The success of some industries such as cable TV, streaming video and on-line newspapers is dependent on its ability to efficiently choose from an infinite supply of new content every day. We demonstrate feasibility and estimate sales improvements by benchmarking against industry practice and competing models. Our solution is general enough to apply to many industries that have products based on dynamic content such as news, books, and TV shows.

3 - When Does Personalization Pay Off?

Isabelle Kes, TU Braunschweig, Schleinitzstr. 23a, Braunschweig, 38106, Germany, i.kes@tu-bs.de, David M. Woisetschläger

Personalized advertisement is seen as the mean to increase advertisement effectiveness and efficiency by selecting ad content being relevant to the customer (Milne and Bahl, 2010) and by answering the need for convenience of customers at the same time (Ganesh et al., 2010). Especially regarding the depreciative opinion of many users on personalized advertisement it is important to know whether circumstances exist that offer more potential for personalization than others. It is common sense that personalization is more effective than standardization. This study questions whether personalization is really always more effective and, if at all, what determines the success of personalized advertisement. In particular we tested the effect of the level of personalization, frequency of exposure, and the time since a customer's last action on the probability of an ad click. Additionally we controlled for customer history. To answer these research questions we used a real experimental design and sent out standardized as well as two types of personalized banners with varying frequency of exposure to customers with varying history in a period of three weeks. Contrary to existing research results our findings reveal that more personalization per se is not always better. Surprisingly, a low level of personalization is even better in some cases. Furthermore, we find that frequency of exposure cannot be considered in isolation but interacts with the level of personalization. Sending out less personalized banners more frequently affects the probability of a click just slightly positive. At the same time, increasing the frequency of exposures slightly for strongly personalized advertisement betters the probability of a click immensely.

4 - Default "After-Image": The Effect of Not Choosing a Default Option on Subsequent Option Choice

Benedict Dellaert, Professor, Erasmus University Rotterdam, Burgemeester Oudlaan 50, H15-07, Rotterdam, 3062 PA, Netherlands, dellaert@ese.eur.nl, Daniel Stadel, Jan Landwehr, Andreas Herrmann, Bas Donkers

In this study, we propose that default attribute levels in mass customization not only affect consumers choices of attribute levels for the attributes for which the defaults are set (first order default effects) but may also affect subsequent attribute choices (second order default effects). These second order default effects are tested in an online mass customization configurator in the car industry. Based on existing manufacturer data we first build a multivariate multinomial probit model that takes into account both first and second order default effects on consumer product choices. We use this model to construct defaults that are likely to promote high-end consumer mass customization option choices when initially chosen by consumers. Next, these defaults are implemented in the online car configurator. An analysis of the resulting real-world consumer choices demonstrates significant increases in high-end option choices for the attributes for which the defaults are set as expected. For those who select the defaults initially, we also find an increase for later attributes for which no defaults were set. However, for those who do not select the initial default we find an opposite effect. These consumers tend to move away from high-end options in later choices. Thus, the results provides empirical support for a default "after-image" effect, i.e. a second order default effects when consumers reject an initial default option. Finally, we conducted a satisfaction survey amongst users of the online car configurator in which the defaults are implemented. The results show no negative effects of the proposed defaults on user satisfaction in either condition.

■ SB02

02- Essex North Center

Customer Reviews/User-Generated Content

Contributed Session

Chair: Hsin-Chen Lin, Purdue University, 403 W. State Street, West Lafayette, IN, 47907, United States of America, lin42@purdue.edu

1 - Intrinsic and Monetary Incentives of Product Review Contribution in Online Social Shopping Platform

Yacheng Sun, Assistant Professor, University of Colorado- Boulder, 419 UCB, Boulder, CO, 80303, United States of America, Yacheng.Sun@Colorado.edu, Xiaojing Dong, Junlin Du

The emerging Online Social Shopping Network (OSSN) is a unique platform that combines online shopping and social-networking. We empirically study the drivers of product review contributions by consumers connected within an OSSN. In particular, we explore how such contributions are affected by consumers' intrinsic (related to the extent of connectedness of the consumer) and extrinsic (measured as monetary reward) incentives. We examine data provided by an Asian OSSN, which records (1) the detailed activities of each registered consumer, including the provisions of product reviews and (2) the network structures of these consumers. The data also reflects a natural experiment where the OSSN introduced monetary reward in an effort to increase product review contributions. The detailed data helps us to analyze how such contributions are affected by (1) the degree of connectedness (measured by the number of friends and completeness of personal profiles) within the OSSN; (2) the introduction of monetary reward and (3) the interactions between the degree of connectedness and monetary reward. Our main findings are two-fold. First, in the absence of monetary incentives well-connected consumers contribute more than poorly-connected consumers. Second, after monetary reward is introduced poorly-connected consumers increase their contribution, but well-connected consumers significantly decrease their contribution. These results are robust after controlling for individual consumer level unobserved heterogeneity using a hierarchical Bayesian model.

2 - Virtual Community vs. Virtual Society: A Sociological View of Online Consumer Reviews

Ravi Shanmugam, Assistant Professor of Marketing, Santa Clara University, Dept. of Marketing, Lucas Hall, Santa Clara, CA, 95053, United States of America, rshanmugam@scu.edu, Shelby McIntyre, Edward McQuarrie

In this study, we apply a sociological perspective to the phenomena of online consumer reviews. The sociological view may be contrasted with an economic account based on utility maximization. The economic perspective accounts for the benefits to review users of the market information supplied in reviews. However, the economic view offers insufficient explanation for why anyone should write uncompensated reviews, since the value of reviews written by others can be appropriated without contributing a review oneself, thus maximizing benefits relative to costs. A sociological account, by contrast, focuses on the social rewards of writing reviews, and highlights the goal of advancing one's status and reputation within a virtual 'society. Another alternative is a voluntary, communitarian account, in which writing reviews constitutes a type of charitable behavior. We investigate these alternative accounts of reviewer behavior on the popular review site Yelp.com, which has many features that operationalize the concept of reviewer reputation. This study uses a survey of Yelp reviewer motives and behaviors (n = 357) and a text analysis of approximately 5000 restaurant reviews. Both the survey and the analysis of review content show numerous differences between frequent and infrequent reviewers. Because of the disparity in review count, most of the reviews seen by a consumer of Yelp reviews will be contributed by frequent review writers, who we propose to have a distinct profile with regard to motivation. There is currently little theoretical insight into the characteristics of consumers in a "Web 2.0" world. This paper aims to contribute a sociological theorization of one salient group in the new consumer landscape: writers of unpaid online reviews.

3 - An Investigation on the Effects of Helpfulness of Customer Reviews: A Case of the Movie Industry

Omer Topaloglu, Doctoral Candidate, Texas Tech University, MS 2101, Lubbock, TX, 79409, United States of America, omer.topaloglu@ttu.edu, Mayukh Dass, Ashish Sood

With growing popularity of online user-generated contents such as online customer reviews, research in electronic word-of-mouth (eWOM) has investigated its impact on customer decision making process. In particular, scholars have examined how the online review dimensions, such as valence, volume, or dispersion of consumer reviews affect product sales, awareness, and

customer satisfaction. Although these studies advance our understanding of the impact of eWOM, they typically neglect one of the vital characteristics of online reviews, i.e. helpfulness of the reviews. We measure Helpfulness as the number of viewers who found a review useful, indicates how other customers perceive the review content useful for their decision making process. Using data collected on 274 movies released from Feb. 1999 to Dec. 2010, that has at least 12 weeks tenure in the theater, we use 400,000 online reviews from IMDB and Yahoo websites, we investigate the moderating effect of helpfulness of reviews on the impact of volume, valence, and dispersion on sales. We conclude by discussing the managerial implications of our findings and provide guidance for online content managers and movie studios.

4 - Modeling Opinion Formation and Word-of-mouth: A Case Study in Online Book Sales

Hsin-Chen Lin, Purdue University, 403 W. State Street, West Lafayette, IN, 47907, United States of America, lin42@purdue.edu, Artur Jackson

Customer perception affects not only product sales but also online opinion formation. We use Hawkes self-exciting processes to model customer information propagation and perception flow. We then test our model by coupling it with a utility-based interaction hypothesis (concerning customers' interaction with the review environment) and use it to infer sales dynamics from the review history of books on Amazon.com. Our results show that the model can correctly infer sales dynamics from the review history alone even without considering the effect of reviews on sales. The model also illuminates a potential mechanism for the oft observed undershooting effect in product valence which is fundamentally different from the mechanism proposed previously by other researchers. This research shows that much of the review and sales dynamics can be studied without considering the effect of reviews on sales. It seems that the dominant force driving both sales and review dynamics is that of general consumer social networks, with online review forums having only a secondary effect.

■ SB03

03- Essex North West

The Impacts of New Media - I

Contributed Session

Chair: Yiyuan Liu, PhD Candidate, University of Wisconsin Milwaukee, Sheldon B. Lubar School of Business, 3202 N Maryland Ave., Milwaukee, WI, 53201, United States of America, yiyuan@uwm.edu

1 - Customer Tracking in Shopping-malls: An Exploratory Analysis

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This study is about tracking the movements of customers (i.e paths) in a shop environment such as shopping-malls. Path data contains valuable information for marketing researchers because it describes how consumers interact with their environment. Until recently, human observation was the only method to capture this data. Today, technology evolutions make it possible to track customers' movements much more in detail and on much larger scale. Recently, a number of papers have appeared in marketing journals that set the scene for an academic treatment of customer tracking. The goal of this research is to add to this growing body of literature. For this research project, we tracked customers based on Bluetooth enabled devices. This method has shown to be effective in other contexts, such as music festivals. In a first experiment, we gathered path data in a small-sized Belgian Shopping Center. Because of the nature of the data, no off-the-shelve methodology exists for analyzing it. In the first phase of this project we have applied methods for some descriptive analyses. These methods reveal the dominant shopping routes, time spent on each location, etc. In addition some more advanced methods were applied to identify clusters of shops that are visited. Preliminary results show that it is possible to find logical and interpretable clusters of shops that share the same customers. One of the best predictors of cluster membership turned out to be physical barriers, such as staircases. In subsequent phases of this research, the goal is go beyond the descriptive nature of our first analysis. This will be done by linking the information from the shopping paths to other sources of customer information, i.e. questionnaire data and transactional data.

2 - In Which Direction Does Online Price Dispersion Go? A Meta-analytic Review

Yiyuan Liu, PhD Candidate, University of Wisconsin Milwaukee, Sheldon B. Lubar School of Business, 3202 N. Maryland Ave., Milwaukee, WI, 53201, United States of America, yiyuan@uwm.edu, Sanjoy Ghose

Nowadays, the notion of one price that follows from a model of perfect competition no longer exists. Reasons include consumers' extensive online search efforts, increasing adoption of mixed pricing strategy by companies, proliferation of differentiated services, as well as markups and markdowns by sellers to meet demand uncertainty. Those trends have sparked considerable research on price dispersion, defined as the magnitude of price variation for physically identical items, which is either spatial (across sellers at one point in time), or temporal (prices vary within a seller over time). However, empirical analyses on the nature of price dispersion have led to conflicting results, i.e., online price dispersion is found to be either increased or decreased relative to offline price dispersion, and variety of perspectives are proposed to explain the price dispersion. There does not exist yet a quantitative review summarizing those findings utilizing estimates of price variations and all possible drivers that include market and retailer/e-tailer characteristics, as well as research characteristics of the study itself. In the present research, we conduct a meta-analytic study on 308 price dispersions from studies across 39 articles published between 1996 and 2010. By a hierarchical linear model, we systematically integrate and uncover 1) significant underlying factors that are driving price dispersion in different directions, such as scales and measurements of price variation, base price, product category, service, consumers' uncertainty avoidance ability (search effort), etc., 2) whether neglect of heterogeneity in the study or other research characteristics result in discrepancy of findings, 3) the method bias-corrected mean price dispersion online.

3 - Cross-national Analysis of Customer Satisfaction/Loyalty on Mobile Information Services

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The relationships between customer satisfaction and loyalty have been investigated in numerous areas, but there are not many studies focused on mobile information services. The aim of this research is to understand the relationship between factors on customer satisfaction and/or purchase intention in a comprehensive model on a cross-national basis, focusing on hedonic and utilitarian services. We used structural equation modeling to investigate latent variables which have influence on customer satisfaction and/or purchase intention based on four traditional benchmarking models: TAM; ACSM; TPB; Service Quality model. The proposed comprehensive model gave a relatively good fit to the survey data from Japan and the US, respectively. This includes the following variables: Perceived Expectations, Perceived Quality, Customer Satisfaction, Service Quality, Perceived Ease of Use, Perceived Value, Attitude, Behavioral Intention, Actual Usage, and Customer Loyalty. The result showed that the estimated models for Japan and the US were similar for both utilitarian services and hedonic services in general. There was a difference in the level of an estimated path coefficient from perceived quality to customer satisfaction for hedonic services: the coefficient estimates for the US was greater than those for Japan. This was not the case for utilitarian services. For utilitarian services, there was a difference in an estimated path coefficient from actual usage to customer satisfaction: the coefficient estimate for Japan was negative and that the US was not statistically significant. Since we investigated common factors and their relationships for two countries, our results provide useful implications for global marketing.

■ SB04

04- Courier

Aesthetics

Contributed Session

Chair: Hao Shen, Chinese University of Hong Kong, Department of Marketing, Shatin, Hong Kong - PRC, shenhao@baf.msmail.cuhk.edu.hk

1 - The Self and Product Curvature Preferences

Tanuka Ghoshal, Assistant Professor of Marketing, Indian School of Business, Gachibowli, Hyderabad, India, tanuka_ghoshal@isb.edu, Peter Boatwright, Dilip Soman

While product aesthetics and design have been credited as a tool for gaining differential advantage in the marketplace (Bloch 1995, Creusen and Schoormans 2005), the relationship between the self and the shape of a product- in particular, angularity versus curvilinearity, has not been investigated in depth. It is known that people choose products congruent with their self-beliefs (Belk 1988, Gao, Wheeler and Shiv 2008). We investigate whether an individual's preference for curvilinear versus angular products is influenced by inherent individual traits, particularly with respect to their self-beliefs about the shape of their own body. Preliminary findings indicate that for different kinds of products, there is a higher likeability of products with curvilinear shapes, however, this is restricted to women only. Further studies find that only women with a higher degree of satisfaction with their own body image tend to exhibit a heightened likeability for curvilinear products, and this is particularly prevalent for products high on "self concept", that are more reflective of the self (Sirgy 1982). Manipulation of women's satisfaction with their perceived body image (using the Figure Rating Scale; Stunkard et al 1983) resulted in varying degrees of likeability for products of curvilinear versus angular shapes. Other factors controlled for were fluency (Reber, Schwarz and Winkielman 2004), need for cognition (NFC; Cacioppo, Petty & Kao 1984), centrality of visual product aesthetics (CVPA; Bloch, Brunel and Arnold 2003) and consumer need for unique products (CNUP; Tian, Bearden & Hunter 2001) and level of involvement.

2 - Do Multicultural Aesthetic Profiles Really Exist in the Field of Arts and Design?

Joelle Lagier, Associate Professor, Rouen Business School, bld André Siegfried, BP215, Mont Saint Aignan, 76825, France, jlg@rouenbs.fr, Mourad Touzani, Fatma Smaoui

Due to the constant aesthetization of objects in our daily lives in a multicultural world, consumers' vision and attitudes are regularly evolving. This mutation is characterized by increasingly pronounced eclecticism and hedonism when individuals appear to favor at the same time a mixture of styles and objects which best express their pleasure and personality. However, this emerging phenomenon leads companies to express numerous uncertainties and questions. These trends are centered on a certain number of questions covering the current concerns of managers and the resulting marketing questions: How are perception and aesthetic attitude formed? How are the corresponding judgment and evaluation processes set up? In this context, are there different aesthetic profiles which are likely to shed light on these judgments and preferences? The objective of this research is thus to study if multicultural aesthetic profiles exist in the field of arts and design. This study relies on the concept of aesthetic style which is defined as being "the personal way that a consumer perceives the aesthetic dimension of an event or an object and the way he/she reacts to an aesthetic or cultural stimulus" (author, 2006). Our research refers to a quantitative study based on a purposive sample of 400 individuals in two different countries: France and Tunisia. These initial results allow us to bring new criteria for population segmentation and to suggest to managers more suitable offers for consumers that they know and understand better.

3 - If You Can't Grab it, it Won't Grab You: The Effect of Restricting the Dominant Hand on Target Evaluations

Hao Shen, Chinese University of Hong Kong, Department of Marketing, Shatin, Hong Kong - PRC, shenhao@baf.msmail.cuhk.edu.hk, Jaideep Sengupta

It is not uncommon for a person to be forming an impression of a target object while holding another object in one hand. This research argues that the latter should influence the former. Because holding an object with the dominant hand tends to impair the ease with which the perceiver simulates reaching out and holding the target object, a less positive impression of the target will be formed. We find support for this lower-liking effect across multiple studies, using different target and restricting objects. We also obtain evidence for boundary conditions that are consistent with the proposed mechanism. The lower-liking effect is only observed when the representation of the target object is likely to spontaneously activate a 'holding action, not otherwise; further, the effect is reversed if the object being held actually facilitates the act of reaching out and using the target object. In sum, restricting the dominant hand (by occupying it) will typically lower evaluations of a target – but this effect is moderated both by the nature of the target and the nature of the restricting object.

■ SB05

05- Essex Center

International Topics

Contributed Session

Chair: Mbaye Fall Diallo, University Paris 13, 5 B rue Jean Moulin, Nangis, 77370, France, mbayediallo2003@yahoo.fr

1 - The Impact of Power Asymmetry on Strategies and Outcomes in Intercultural Business Negotiations

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Negotiations in business-to-business (B2B) markets between selling and buying companies increasingly cross borders. In these negotiations, managers are often confronted with unequal power distributions between the seller and the buyer. Extant research focuses on social status and the parties' best alternatives to negotiated agreements (BATNA) as antecedents of such power asymmetries. Parties in low power positions regularly reach poor negotiation outcomes because stronger parties likely apply behavioral patterns such as threats. However, these studies do not consider the characteristics of negotiations between parties with different cultural backgrounds, which may impact how parties exercise power. Hence, we use an intercultural setting to study power asymmetries. Combining theories regarding power and culture-bound negotiation styles, we predict negotiation strategies (integrative, distributive) to be conditional on the cultural background (the level of collectivism) of the more powerful party. Hereby, we manipulate power through team size and extend the investigation to culturally mixed teams. To test our hypotheses, we simulate B2B negotiations between a seller team (high-power party) and a solo buyer (low-power party). The empirical results from German-French dyads show that the culture-bound negotiation style of the high-power party dominates the interaction. In contrast, and interestingly, the low-power party neglects its culture-specific negotiation style and instead uses the style of its counterpart, which can have positive or negative effects on its own negotiation outcome. This, in turn, urges low-power parties to carefully choose an appropriate negotiation strategy, and to enhance its power position by increasing its team size.

2 - Factors Influencing Inter-firm Co-marketing Within Industrial Clusters

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With the development of economic globalization, industrial clusters are becoming more and more important for regional and national economy. Due to geographic agglomeration, there are the possibilities for cluster firms to lower the cost in production and transaction, to flow information, and to take advantage of cluster externalities. To realise it, cluster firms should co-marketing with each other, because they may derive complementary advantages from co-marketing which, as a kind of marketing strategic thinking and an operational tool, can help firms to utilize external resources, to polymerize and amplify individual firm functions, and to create competitive abilities for dealing with intense competition world-wide. However, the literature on inter-firm co-marketing in cluster context is relatively lack. As the starting point, this paper, from firms' point of view, studies on the factors which influence inter-firm co-marketing for the purpose of better understanding and promoting inter-firm co-marketing behavior. To do so, the research conducts an empirical investigation which adopts a multiple-case approach and involves six Chinese traditional industrial clusters (garments and shoes industrial clusters which are famous in China). The result shows that the main factors which affect inter-firm co-marketing within industrial clusters include entrepreneur's communication ability, marketing personnel ability, resource complementarity between co-marketing firms and external environment. Based on these factors a research model is built up. And then a managerial proposal is made out: cluster firms need to take the factors into serious consideration in order to implement co-marketing effectively.

3 - Empirical Test of Gender Stereotype in the Competitve Environment

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Gender gap is a persistent finding in the labor market across countries. The explanations range from gender discrimination to gender difference in selection into competition. However, what we do not know is: once choose to compete, are women more likely to lose to men? Psychology literature suggests that men and women tend to react differently to gender stereotype by adjusting their efforts when competing against the opposite gender. As a result, men are more likely to outperform women in the competition. In this paper, we test this theory using real competition observations in an online video game context. The specific features in our data allow us to clearly identify the effect of gender stereotype. We find that men will react to gender stereotype by putting more effort when they perceive the opponents to be women, even when in fact the opponents are men, whereas women seem to be insensitive to the gender of opponents. Our findings provide additional insights to the existence of gender gap in the labor market.

4 - Store Brand Purchase Behavior in an Emerging Market: Proposition and Test of an Integrative Model

Mbaye Fall Diallo, University Paris 13, 5 B Rue Jean Moulin, Nangis, 77370, France, mbayediallo2003@yahoo.fr

Given their strategic role, store brands (SBs) are increasingly offered by retailers in emerging markets (EMs) and investigated by researchers. What is less clear, however, is how EM consumers make their choices between the SBs on offer from global and local retailers. This research addresses this question by studying consumer and image factors affecting SB choice in the Brazilian market. This research contributes in the literature in three main ways: 1) proposing and validating a conceptual model of SB choice integrating consumer and image factors in the context of a less well investigated EM, compared to China or India; 2) extending the local/global brand issue to the retail sector; 3) showing the influence of individual variables (socio-demographics and product category) on SB choice in an EM. Using structural equation modeling, we analyzed data from a sample of 379 consumers. Our hypotheses were also tested in a global (N=177) and a local retailer (N=202) sample. The results indicate that store image perceptions, SB price-image, SB value consciousness and attitude toward SBs have direct or indirect positive effects on SB purchase behavior. However, for price related constructs, the relationships are stronger for the local retailer compared to the global one. Furthermore, using ANOVA analyses, we showed significant differences in SB purchase behavior (SB purchase intention and SB choice) depending on the retailer perception (as local or global) and on product categories (food/non-food). These findings have implications for global consumption theory in the retail sector and for retail managers involved in SB product development in emerging countries.

■ SB06

06- St. George B

Pricing: B2B

Contributed Session

Chair: Sourav Ray, Associate Professor of Marketing, McMaster University, DeGroote School of Business, 120 Main Street, W., Hamilton, ON, L8S-4M4, Canada, sray@mcmaster.ca

1 - Price Variation and Customer Search Cost in a B-to-B Market

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In this paper we study the underlying cause for the substantial price variation observed in a B-to-B market. Our test results show that the price dispersion cannot be explained by the change of supply costs and inventories of firms. The pattern of price changes is also inconsistent with that predicted in the Edgeworth cycle model. We find that price changes in our data are i.i.d. overtime, consistent with the outcome of mixed price equilibrium in the consumer price search model. Based on these results, we assume that buyers incur search costs when searching for price, and estimate the search cost distribution from a structural search model using the price and quantity information observed in the data. Based on the estimation results, we further explore two important implications of the model. First, different consumer search strategies generate different types of price variations at equilibrium: non-sequential price search strategy only leads to a concave and smooth distribution function of price. In contrast, the equilibrium price distribution implied by sequential search strategy can be non-smooth with multiple kinks. This difference helps us to identify consumers' price search strategy from the observed price distribution. Second, we conduct a series of simulation studies to examine the implication of search cost on the price competition. In contrast to intuition, the results show that a lower search cost distribution can support a mixed price equilibrium with higher average price and larger price variation.

2 - Commitment Effects of RPM in Durable Goods Markets

Oystein Daljord, PhD Student, Stanford GSB, 655 Knight Way, Stanford, CA, 94305, United States of America, daljord@stanford.edu

Channel interactions between manufacturers and retailers are of significant interest to marketers, but the empirical literature on channels has primarily focused on nondurable goods, ignoring the demand-side dynamics induced by falling prices and changing product quality on the nature of retailer-manufacturer interactions. I study empirically the effect of consumer price expectations and the associated Coasian dynamics on the incentives of manufactures and retailers to set life-cycle pricing policies for durable goods. I conjecture that Resale Price Maintenance in the vertical channel helps retailers commit to prices in the downstream market and avoid the Coasian problem associated with time-consistent intertemporal pricing. I utilize a rich dataset of scanner data for books sold in the Norwegian market, where resale price maintenance is legal. The data span a natural experiment in the form of a recent deregulation in which shortened the fixed-price period imposed by manufactures on downstream retailers. After the shortening of the fixed price period, I show that retail prices of books decrease faster and deeper.

3 - Rockets and Feathers: A Supply Side Explanation

Ayelet Israeli, Kellogg School of Management, 2001 Sheridan Road, Evanston, IL, 60208, United States of America, a-israeli@kellogg.northwestern.edu, Eric Anderson, Anne T. Coughlan

Empirical evidence in various markets documents the "Rockets and Feathers" phenomenon – retail prices rise faster than they fall in response to changes in costs. The existing theoretical literature that aims to explain this asymmetry focuses on collusion and demand side explanations such as consumer learning, consumer search and imperfect information. In this paper, we show that the "Rockets and Feathers" asymmetric pricing may be a result of supply side behavior. We tie inventory management and pricing to retail pricing to explain why prices rise faster than they fall. In our model, retailers face different average costs due to inventory considerations such as order size, order frequency and warehouse size. We show that when wholesale costs change, the subsequent impact on retail prices is asymmetric. Prices rise like a rocket to maintain profit margins after a wholesale cost increase. But, when wholesale costs fall, retailers that hold more inventory have less incentive to reduce their prices. We show that inventory serves as a commitment device that limits price reductions and causes prices to fall like feathers.

4 - Price Adjustment Costs and Price Rigidity: Implications for Strategic Pricing Capability in Distribution Channels

Sourav Ray, Associate Professor of Marketing, McMaster University, DeGroote School of Business, 120 Main Street, W., Hamilton, ON, L8S-4M4, Canada, sray@mcmaster.ca, Mark Bergen

Price adjustment costs (PAC) are argued to lead to Price Rigidity, which is a property of prices that refers to their propensity to remain unchanged. PACs could hobble a firm's ability to respond to changing economic factors through changes in its prices. At the same time pricing decisions by a firm are not independent of considerations associated with other members of its distribution channel. Thus PACs are of particular interest to marketing managers concerned with the capabilities of their channels to operate in a dynamic environment. Unfortunately, there is limited systematic investigation into how PACs impact pricing decisions in a marketing channel. In this paper we study some general implications of PACs for price rigidities in a distribution channel. Using a simple economic model, we illustrate how PACs impact the channel's price rigidity, and by implication, the channel's ability to exercise price flexibility. In the process we argue how PACs can impart strategic pricing capability to the channel.

■ SB07

07- St. George C

Services Marketing

Contributed Session

Chair: Nita Umashankar, Georgia State University, Atlanta, GA, United States of America, numashankar@gsu.edu

1 - The Relevance of Marketing Competencies in Financial and Non Financial Industries

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Marketing capabilities are a key issue in the marketing debate and rank top among MSI Priorities 2010-2012. Understanding how companies master and improve their marketing competencies to gain superior performances is therefore crucial. Two researches have been conducted on the relevance of the marketing competencies in different industry settings: financial and non-financial. The first involves 300 European Marketing and Sales Managers in manufacturing and service industries. The second focuses on the financial industry, not deeply investigated by literature as far as we know, involves 50 Marketing Directors of banks and insurance Companies operating in Italy and includes all the top banks and insurance companies and a sample of small local banks. Our researches answer the following questions: which is the role of marketing in the different settings? How marketing competencies differentiate? How are managers able to develop marketing capabilities for a customer focused organization? We measured companies' ability to manage marketing and sales competencies and the use of marketing metrics. The main findings show that, in manufacturing and service industries, marketing information does not translate into differential marketing strategies whereas execution is the main driver of performance. For marketing managers implementation competencies have a positive and significant impact on performances, while for sales managers pricing competencies are the relevant ones with a positive significant impact on performances. In the financial industry, management competencies are mainly industry-based. Marketing is focused on product development and communication: short period view and low attention to analysis and strategic phase. Different managerial implications emerge.

2 - Competition for Service Quality and Price: Study of the Airline Industry

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In service dominant industries, such as airlines, in addition to price, service quality plays a critical role in determining the success of the firm. In such context, consumers derive utility from price and service quality; thus, in addition to competition for price, firms also compete for service quality. With the objective to study this dual competition for service quality and price, we build a model that captures the idiosyncratic aspects of the airline industry. In the model we explicitly recognize that firms compete at the market level, where market represents a route from one airport to another that is serviced by one or more airlines, and thus it becomes important to specify the model for competition on service quality and price at the market level. We also allow for feedback between competition for service quality and competition for price such that managers tradeoff allocation limited resources between these two variables, which leads to the two variables being endogenous at the firm level. Further, when a firm cuts price, for example, our specification that models the interplay between service quality and price allows for a competitive response in service quality and/or price. To estimate the model we collect data from the many databases maintained by the Bureau of Transportation and assemble a unique multisource database. Analysis of these data using state of art econometric techniques reveals the complexities inherent in competition in service dominant industries where service quality and price both influence consumer utility and as a result determines consumer choice and drives firm-level demand and competition for customers.

3 - Disentangling the Effects of Failure Recovery on Satisfaction and Behavior Intentions

Henning Kreis, Freie Universität Berlin, Marketing Department, Otto-von-Simson-Str. 19, Berlin, 14195, Germany, henning.kreis@fu-berlin.de, Till Dannewald

As it is nearly impossible for firms to always provide products or services free from error, failure is an unavoidable incident within a buyer-seller situation. Failure recovery strategies thus are a very important management tool and have been shown to not only prevent customers from switching, but also to increase satisfaction and loyalty (e.g. Andreasen 2001). Research has also put a great deal of interest to these topics, documented in a broad variety of studies (e.g. Smith et al. 1999, Maxham 2001), however, a review of Krishna et al. (2010) and a meta analysis of de Matos et al. (2007) on the service recovery paradox call for more detailed research. Especially it is argued, that a lot of moderators of the relationship of failure recovery on satisfaction and behavior intentions have been theoretically derived but not sufficiently tested empirically so far. In our study we tackle this subject within the automotive industry and include failure severity and recovery speed as moderators when we relate satisfaction and behavior intentions to failure recovery. Specifically we focus on recommendation intention as an effective and inexpensive way of endorsement. Using large-scale but detailed longitudinal data of new car buyers from different countries allows us to disentangle the effects of failure recovery on different types of satisfaction (overall satisfaction, satisfaction with dealer) and different types of recommendation intention (brand recommendation, car recommendation, dealer recommendation) while incorporating various dynamic and country-specific effects. Thus our research contributes to the failure recovery literature and the ongoing discussion on the conditions under which the service recovery paradox holds.

4 - Modeling the Influence of Macro-economic, Attitudinal and Behavioral Factors on CLV: The Case of the Airline Industry

Nita Umashankar, Georgia State University, Atlanta, GA, United States of America, numashankar@gsu.edu, V. Kumar, Kihyun Kim, Yashoda Bhagwat

There are many industries that are affected by market and customer sentiment, in addition to customers' attitudes toward the product or service. Yet, firms do not account for all of these factors when segmenting their customer base. We question the way firms segment their customers and propose a novel way of segmenting customers to maximize their profitability based on macro, attitudinal factors, and service failure characteristics. We use the airline industry as the empirical context for our study. Typically airlines segment their customer based on the purpose of travel into 'business' and 'leisure' travelers. However, little emphasis is placed on the future profit potential of these customers and their responses to marketing initiatives. To this regard, we develop a CLV modeling framework that answers the following research questions: a. What are the behavioral and attitudinal factors that influence the CLV of business and leisure customer segments? b. How does market mood (consumer sentiment and GDP), influence the overall customer profitability? Does its influence vary across airline customer segments? c. How do service failure and recovery factors influence customer profitability? Using the customer level data from a leading national airline, we answer the above research questions and develop implications for managers. We use multiple modeling approaches. First, we use a Bayesian approach. Second, we use a latent class approach. Then, we compare these results with how industry segments their customers to evaluate which approach maximizes profitability. We contribute to the literature by creating a comprehensive framework that integrates attitudinal, macro-economic, and service failure factors to estimate customer profitability.

■ SB08

08- Adams

Dynamic Structural Models II

Contributed Session

Chair: Patrick Choi, Carnegie Mellon University, Pittsburgh, PA, United States of America, pakyan@andrew.cmu.edu

1 - Evolution of Attribute-specific Preference Through Consumer Learning

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Marketing managers seek to understand how consumer preferences for product attributes evolve as their consumption experiences accumulate. As an effort to understand the evolution of consumer preference, the extant consumer learning models proposed consumer learning about the alternative-specific overall preference such as brand in the brand choice model. While these models allow for capturing the evolution of alternative-specific preference, it is also worthwhile to expand the consumer evolution to attribute-specific preference. There exist product categories where consumer's preference about key attribute (e.g. flavor) is significant to the customer's choice, and is well explained by consumers learning dynamic process. In such cases, the breakdown of alternative specific preference into multiple key attribute level preferences can provide more insightful analysis. In this paper, we propose a structural model of consumer's Bayesian learning of attribute-specific preference, using scanner panel data. The proposed model enables marketing researchers to identify consumer's multiple separate learning of preferences for multiple attributes. Moreover, the model results provide a snapshot of the segmentation of consumers' learning of different attributes and this snapshot can provide insights into market structure. We conduct policy evaluations such as the introduction of a new flavor for a brand and obtain interesting implications for managers.

2 - Identifying the Discount Factor of Forward Looking Consumers Based on Consumption From Inventory

Selin Akca, Goethe University Frankfurt, Grueneburgplatz 1, Frankfurt, Germany, sakca@wiwi.uni-frankfurt.de, Thomas Otter, Daniel Klapper

We present a model of dynamically optimizing consumers that identifies the discount factor based on empirically verifiable assumptions about how the inventory is depleted. In our model the inventory (stochastically) determines the time at which a particular product quality purchased now will generate consumption utility through usage. The consumer knows the inventory level and the implied time interval until utility from consuming the current purchase is realized. This time interval varies with inventory level and structures the trade-off between purchasing inferior and superior quality brands. Specifically, purchasing a superior brand now for later consumption is relatively less attractive than purchasing a superior brand now for immediate consumption because of discounting. The implied change in substitution patterns between superior and inferior brands as a function of inventory identifies the discount factor based on observable quantities only, i.e. non-parametrically. The assumptions required for the utility function are: i) consumption utility does not depend on inventory; ii) storage costs are identical for all qualities of the product. We do not require assumptions about price expectations except that they are constant.

3 - A Dynamic Structural Model of Sequential Store Choices and Category Purchases

Patrick Choi, Carnegie Mellon University, Pittsburgh, PA, United States of America, pakyan@andrew.cmu.edu, Baohong Sun, J. Jeffrey Inman

How consumers choose which stores to fulfill their shopping lists is an underexplored research topic. Consumers may choose not to purchase all categories at one retailer, and instead may choose to split their category purchases across multiple competing stores. In making these store visit and purchase decisions, consumers have to balance the product availabilities, prices, search costs, and conveniences of the several retailers. With imperfect price information, some consumers may visit stores and make purchase decisions sequentially whereas some consumers may preplan their purchases. The main contribution of this research is to estimate a structural econometric model from a consumer-level panel dataset to investigate the decision process underlying consumers' purchase decisions across multiple categories at multiple stores. Our model explains consumers' choices of the store visit sequences and the purchases during the store visits by incorporating consumer searching behavior. Our model enables us to draw implications of the consumer decision process on the store relationships. We run policy simulation to quantify how a change in the pricing policy of a store affects consumers' order of visits and the likelihood of purchases during a store visit. This counterfactual provides insight on the traffic-generation effect and sales conversion effect of loss-leader strategy.

■ SB09

09- Helicon

Survey Research: Improving Methods

Contributed Session

Chair: Yansong Hu, Assistant Professor, Warwick Business School, University of Warwick, Coventry, CV4 7AL, United Kingdom, yansong.hu@wbs.ac.uk

1 - Statistical Software Providing Image Clustering Algorithms for Marketing Purposes

Robert Naundorf, Brandenburg University of Technology Cottbus, Chair of Marketing and Innovation Management, Erich-Weinert-Str. 1, Building 10, Cottbus, 03046, Germany, robert.naundorf@tu-cottbus.de, Daniel Baier

The digital age and especially the Internet led to a ubiquity of digital images. Particularly social network services (e.g. Facebook, Twitter, Flickr) encourage their users to upload photos and to share them with others. Thus the need for analysing images statistically is growing constantly. Clustering would be an adequate method for structuring large image databases and detecting similarities and differences. Furthermore clustering images can be used for market segmentation purposes (Baier/Daniel 2012). This requires the existence of content-based methods for extracting the images' properties (Lew et al. 2006). Statistical software seems to be appropriate for performing such tasks. Therefore we compare a number of current statistical software packages with regard to their image processing capabilities and the availability of image feature extraction algorithms. However, as we will show, the inspected software packages are poorly suited for processing large sets of images or lack specific requirements of

the commercial domain. In conclusion we present a new software addressing existing shortcomings. References: Baier, D. and Daniel, I. (2012): Image Clustering for Marketing Purposes. Studies in Classification, Data Analysis, and Knowledge Organization, 38. Lew, M. S., Sebe, N., Djeraba, C. and Jain, R. (2006): Content-Based Multimedia Information Retrieval: State of the Art and Challenges. ACM Transactions on Multimedia Computing, Communications, and Applications, 2 (1), 1–19.

2 - Key Drivers, Yes Please (... But Could the Focus be on a Top 2 Box Score?)

Jorge Alejandro, Market Probe, 2655 N Mayfair Rd, Milwaukee, WI, United States of America, j.alejandro@marketprobe.com

A significant body of customer research has helped organizations over several years with providing actionable insights that are the result of measuring the relevant aspects of the customer experience. Since these attitudinal outcomes can be reasonably expected to be associated with business results, the economic incentive to seeking key drivers of customer behavior has remained unquestionable. Advances in computational processing have continuously improved the way these key drivers are measured. However, several models used for this purpose tend to focus on modeling the mean response whereas managers tend to prefer to utilize easier to use and to communicate measures such as top or top two box scores as captured by a five or ten point interval scale. Alternative modeling strategies that include individual binary logic regression models, as well as an ensemble of them (logic forest), can give a different perspective to both practitioners and researchers by allowing them to explore this type of models including the case when both outcomes and predictors are binary. In this research, the results of a case study that includes the application of traditional and the more recent ensemble methods are presented along with the managerial implications of the findings.

3 - Grouping of Customers using Uploaded Photos Versus Responses to Rating Scales: A Comparison

Ines Daniel, Brandenburg University of Technology, Erich-Weinert-Strafle 1, Building 10, Cottbus, 03046, Germany, ines.daniel@tu-cottbus.de, Daniel Baier

Since Smith's introductory article (Smith 1956), market segmentation is associated with the division of a heterogeneous market into a number of smaller homogeneous markets. Clustering algorithms are standard tools in market segmentation to get this classification. However, recently, the available resources for this purpose have extended. So, e.g., in social networks potential customers provide images which reflect their activities, interests, and opinions. One possibility of analysis is lifestyle segmentation. It has received a wide attention among consumer researchers in the last 50 years (Wedel/ Kamakura 2000). However, in recent studies, the authors have demonstrated that it is also possible to group customers based on the contents of uploaded digital images that describe the consumers' preferred activities, opinions, and interests (see Baier/Daniel (to appear)). To compare whether images lead to similar results as conventional methods for lifestyle analysis, a comparison study was conducted among 500 people. We discuss the results of the study. We also analyze possible advantages and disadvantages of using images for lifestyle analysis compared to conventional procedures of grouping customers for market segmentation (Daniel/Baier (to appear)). Our research question is: Is it possible to replace item batteries in lifestyle segmentation by ratings of uploaded or predefined images? Baier, D., Daniel, I. (to appear): Image Clustering for Marketing Purposes, Studies in Classification, Data Analysis, and Knowledge Organization, Vol. 43. Daniel, I., Baier, D. (to appear): Lifestyle Segmentation Based on Contents of Uploaded Images Versus Ratings of Items, Studies in Classification, Data Analysis, and Knowledge Organization.

4 - Respondent Evaluation and Creation: A Crowdsourcing Experiment

Joseph White, Director, Marketing Sciences, Maritz Research, 1355 N. Highway Drive, Fenton, MO, 63099, United States of America, joseph.white@maritz.com, Michael Kemery

As crowdsourcing is a relatively new concept marketing researchers are still trying to fully understand and assess its potential impact on the field. Our paper is intended to further the discussion by providing a strong introduction to crowdsourcing and how it may be applied to marketing research. Currently, as little empirical work has been conducted to assess crowdsourcing as a new potential sample source, this research begins the discussion with the basic question of who comprises the crowd. Is a crowd a representative sample? If not, what strategies could we employ to obtain a representative sample from the crowd? What other strengths or weaknesses do we see related to using the crowd as a sample source? This understanding will help practitioners in their consideration of further exploring crowdsourcing. We then extend the discussion to potential applications in marketing research by testing for the equivalence of results between crowd and panel results for two common areas of research, discrete choice experiments and brand perceptions. This part of the discussion will provide insight into whether crowdsourcing can be used as a replacement of traditional approaches or if the methodology might be better used to augment these practices.

5 - Early Use and Stoppage Behaviours of New Products

Yansong Hu, Assistant Professor, Warwick Business School, University of Warwick, Coventry, CV4 7AL, United Kingdom, yansong.hu@wbs.ac.uk, Qing Wang

For many new products and technologies, continued usage is critical for their market success. We analyze how consumers' evolving learning and emotional experiences, accumulated product knowledge and social dependence impact on their early use and stoppage behaviours. We draw on theories of psychology and sociology to conjecture how individual learning, emotions, product knowledge as well as social dependence can affect the early use and stoppage behaviours, and how these effects may vary between genders. Given the substantive interests on usage behaviours, we used data from a longitudinal study of users of new telecommunications and electronics products and conducted hazard modelling and three-stage least squares analysis to investigate the conjectured effects as drivers of early usage and stoppage. The results provide a sharper understanding of the relationships between individual learning, emotions, product knowledge, social dependence and early usage and stoppage.

■ SB10

10- St. George D

Innovation III

Contributed Session

Chair: Jonathan Bohlmann, Associate Professor of Marketing, North Carolina State University, Nelson Hall, Campus Box 7229, Raleigh, NC, 27695, United States of America, jon_bohlmann@ncsu.edu

1 - Rasch Modeling Innovative Behavior in Inter-organizational Radical Innovations

Alexandra Rese, Brandenburg University of Technology Cottbus, Chair of Marketing and Innovation Management, Erich-Weinert-Str. 1, Building 10, Cottbus, 03046, Germany, rese@tu-cottbus.de, Hans-Georg Gemünden, Daniel Baier

Rasch models have been used especially in psychometrics and human sciences for the analysis of social behavior, abilities or personality traits (Rasch 1980). Rasch analysis is used here to examine a set of dichotomous promoting behavior items in inter-organizational radical innovations with respect to the dimensional structure and item fit. Empirical research in innovation management has shown that key people play an important role in initiating and implementing innovations (Walter et al. 2011). However, these key people have been hardly investigated in an inter-organisational context so far (Rese, Baier 2011). Rasch analysis allows for taking several measurement issues into account which are required for validity and support scale improvement. Regarding the occupation of a role for each person a total raw score of the role trait can be calculated. The focus and aim of this study is first of all to develop a scale to assess the behavior of several actors in inter-organizational radical innovations. Besides the identification of roles the role structure is analyzed: With respect to an assumed size of two to five cooperating organizations the question answered is how many people work together and take on roles. References Rasch, G. (1980). Probabilistic Models for Some Intelligence and Attainment Tests, Mesa Press, Chicago, IL. Rese, A. and Baier, D. (2011). Success factors for innovation management in networks of small and medium enterprises. R&D Management, 41(2), 138-155. Walter, A., Parboteeah, K. P., Riesenhuber, F. and Hoegl, M. (2011). Championship behaviors and innovations success: an empirical investigation of university spin-offs. Journal of Product Innovation Management, 28(4), 586-598.

2 - Exploring Success with Open Innovation: An Investigation of New Product Development Performance

Sanjay Sisodiya, Assistant Professor of Marketing, University of Idaho, Department of Business, 875 Campus Dr / P.O. Box 443161, Moscow, ID, 83844, United States of America, sisodiya@uidaho.edu, Yany Grégoire, Steve Shook, Jean Johnson

The concept of open innovation is of continued interest as managers and academics attempt to discover efficient ways to leverage firm resources in new product development (NPD). At face value, open innovation, a paradigm for innovation where firms actively embrace the use of external inputs for innovation and external paths to markets (Chesbrough 2003, 2006), appears to be a simple concept where one must leverage internal and external resources. While evidence suggests that open innovation leads to success with NPD (e.g., Huston and Sakkab 2006; Enkel, Gassman, and Chesbrough 2009), there is little evidence supporting the importance of useful measures for evaluating open innovation activities. Thus more research needs to be performed to discover appropriate measures for evaluating success with open innovation and the factors that influence this success. A number of metrics can be used to define success (Griffin and Page 1993), thus we approach NPD success from the program level and overall firm performance. At the program level, we argue that firms will have increased levels of outputs from open innovation activities because an increased number of projects will be completed. At the firm level, we argue that there will be improved performance as resources are deployed in a more efficient and timely manner. Additionally, at the firm level we investigate both short-term and long-term success using measures of financial performance. These relationships are tested using primary and secondary data gathered from 211 high tech firms. Results support the notion that open innovation can leads to success, and more importantly there are varying degrees of success depending upon firm and environmental factors.

3 - Entrepreneurship and Innovation in Financial Institutions

Chander Velu, Univesity of Cambridge, Trumpington Street, Judge Business School, Cambridge, CB2 1AG, United Kingdom, cv236@hermes.cam.ac.uk

Established firms are a major source of entrepreneurship. Research has shown that more than two thirds of founders of startup firms across a broad cross-section of industries have pursued opportunities from ideas that were encountered or closely related to their previous employment. We study the relationship between innovation and entrepreneurial spawning in firms. We examine how the innovativeness of the influence the type of entrepreneurial opportunities pursued by its employees. Using a dataset that we have collected on employees of financial institutions in the US over a 20 year period who left and set up a new venture, we examine the factors that influence the type of entrepreneurial activities undertaken by them. We discuss the managerial and policy implications of innovation in financial institutions.

4 - Innovation in Buyer-supplier Relationships: Strategies and Perceptions

Jonathan Bohlmann, Associate Professor of Marketing, North Carolina State University, Nelson Hall, Campus Box 7229, Raleigh, NC, 27695, United States of America, jon_bohlmann@ncsu.edu, Daniel Lynch

Productive buyer-supplier relationships often generate improved performance outcomes, such as cost savings or improved time-to-market. Greater supplier participation in new product development and innovation can also lead to better new product performance. While considerable research exists on trust, information sharing, and other aspects of a buyer-supplier relationship, not all studies consider innovation factors, and most studies take a single-sided perspective. A variety of findings in past research points to the importance of considering both the buyer and supplier perspectives – in a dyadic fashion – to more fully examine the relevance of various relationship characteristics on innovation and outcomes. In this study we analyze dyadic data, where perceptions of buyer-supplier paired firms reveal important aspects about relationships and the role of innovation. Data from executives of a large high-tech buying firm and its suppliers were gathered to measure relationship perceptions (trust, collaboration, etc.), approaches to innovation, strategic directions, and performance outcomes. The data include 121 buyer-supplier dyads where each buyer has corresponding data from a supplier; both products and services are represented. Analyses examine the role of innovation in the relationship, how innovation links with various relationship variables such as trust and collaboration, and how different strategies and relationship perceptions between buyers and suppliers potentially inhibit innovation and performance. Perceptions in product- and service-based relationships are also compared. The results present a dyadic-level analysis of how cross-purposes in buyer and supplier perceptions may negatively impact outcomes.

■ SB11

11- Empire

Privacy and Marketing

Cluster: Special Invited Sessions

Invited Session

Chair: Ivan Png, National University of Singapore, 15 Kent Ridge Drive, Singapore, 119245, Singapore, iplpng@gmail.com

1 - Imperfect Targeted Advertising and Privacy Regulations

Stephen Bruestle, University of Virginia, Charlottesville, VA, United States of America, Sdb8g@virginia.edu

I investigate how privacy regulations affect welfare. Tougher privacy regulations reduce the accuracy of information collected on consumers. Less accurate information decreases welfare by discouraging targeted advertising. When firms target advertise, privacy regulations have an ambiguous effect on welfare. Less accurate information decreases welfare by inducing a smaller, less-targeted selection of products. Yet less accurate information increases welfare by inducing fewer annoying ads. In extensions, I find that tougher privacy regulations increase the product selection benefit and the ad annoyance cost through reducing ad avoidance and the ad price; and decrease the product selection benefit and the ad annoyance cost through greater marketing costs.

2 - Will Johnny Facebook Get a Job? An Experiment in Hiring Discrimination via Online Social Networks

Alessandro Acquisti, Associate Professor, Carnegie Mellon University, Pittsburg, PA, United States of America, acquisti@andrew.cmu.edu, Christina Fong

We present a controlled field experiment of the impact of information posted on online social networks by job applicants on US employers' hiring decisions. Our research focuses on how employers react to information about personal traits they are not legally allowed to ask about during interviews, but which they can infer from perusing applicants' publicly available online profiles: religious, political, and sexual orientation, as well as family status and family plans. Our approach is inspired by an earlier study on racial discrimination in the labor market ("Are Emily and Greg More Employable than Lakisha and Jamal? A Field Experiment on Labor Market Discrimination Our Approach", 4(94), American Economic Review, 2004). Our experiment follows a similar design, transposed to the Web 2.0 scenario. It consists in responding to online job postings with resumes of fictional candidates whose names - if the employer searches for them on search engines such as Google and Bing - directs the employer to Facebook profiles we also created. While the resumes contain identical information for the various applicants, the Facebook profiles differ on a number of traits that the economic literature has highlighted as possible causes of job discrimination and that are, in fact, illegal to discuss during interviews. We measure the ratios of callbacks (ie, invitations to interviews) that the different fictional applicants receive as a function of their personal traits.

3 - Is Patient Data Better Protected in Competitive Healthcare Markets?

Rahul Telang, Carnegie Mellon University, 5000 Forbes Avenue, Pittsburgh, PA, 15213, United States of America, rtelang@andrew.cmu.edu, Martin S. Gaynor, Muhammad Zia Hydari

We study the effect of hospital market concentration on the quality of patient data protection practices. Economic theory is indeterminate on the effect of competition on the likelihood or extent of data breaches at firms. It is plausible that firms facing tough competition may cut costs on activities that thwart data breaches, as these activities are less visible to consumer. As a consequence, the impact of competition on information security is an empirical question. We use approximately 200 reported data breaches in US hospitals over the period 2006 - 2011 as a measure of the quality of patient data protection practices. Treating each Core Based Statistical Area (CBSA) as a distinct hospital market, we measure market concentration by calculating the Herfindahl-Hirschman Index (HHI) in each of these markets. Surprisingly, we find that increased competition is associated with a decline in the quality of patient data protection. Our analysis indicates that a 100 point increase in HHI leading to a 5% decline in the average count of data breach incidents. We posit that hospitals in more competitive markets may be inclined to shift resources to more consumer visible activities from the less consumer visible activity of data protection. Our findings have interesting policy implications. The notion that markets work effectively and competition can cure information security challenges is not readily supported by our results.

4 - Privacy Externalities and "Opt Out": Theory and Evidence From Do Not Call

Ivan Png, National University of Singapore, 15 Kent Ridge Drive, Singapore, 119245, Singapore, iplpng@gmail.com, Khim-Yong Goh, Kai-Lung Hui

Concerned about privacy, consumers have opted out from direct marketing by the millions. Legislators have proposed laws to enable consumers to opt out from monitoring of browsing activity. However, there has been relatively little analysis of how opt out facilities actually work in practice. Here, we make two contributions. First, we develop an analytical model of opt out in the context of consumer privacy that explicitly accounts for strategic behavior by sellers and consumers. We show that opt out increases with the consumer population if the effect of consumer opt out on vendors outweighs that on consumers. Second, we take the analysis to data from the U.S. Do Not Call registry, using two empirical strategies to test the externality. One is a cross-section analysis with the consumer population instrumented by land area. The other exploits the exogenous timing of the registry for a difference-in-differences test. Supported by multiple robustness checks and falsification tests, we conclude that opt out facilities do give rise to externalities between consumers and vendors. Further, the externalities result in a diseconomy of scale in direct marketing.

■ SB12

12- Parliament

Bayesian Choice I

Contributed Session

Chair: Sri Devi Duvvuri, Assistant Professor, University at Buffalo, 215 F Jacobs, Buffalo, NY, 14221, United States of America, sduvvuri@buffalo.edu

1 - Modeling Indivisible Demand

Sanghak Lee, Ohio State University, 2159 Hedgerow Rd. Unit#A, Columbus, OH, 43220, United States of America, lee.3121@osu.edu, Greg Allenby

Disaggregate demand in the marketplace exists on a grid determined by the package sizes offered by manufacturers and retailers. While consumers may want to purchase a continuous-valued amount of a product, realized purchases are constrained by available package sizes. This constraint might not be problematic for high-volume demand, but it is potentially troubling when demand is small.

Despite the prevalence of packaging constraints on choice, economic models of choice have been slow to deal with their effects on parameter estimates and policy implications. In this paper we propose a general framework for dealing with indivisible demand in economic models of choice, and show how to estimate model parameters using Bayesian methods. An analysis of simulated data and a scanner-panel dataset of yogurt purchases indicates that packaging constraints can severely bias parameter estimates and measures of model fit. The effect of introducing a smaller package size is investigated in a counter-factual analysis.

2 - Out-of-stock as a Promotional Tool: Consumer Learning and Retailer Profitability

Jason Duan, Assistant Professor, University of Texas at Austin, Marketing Department, B6700, 1 University Station, Austin, TX, 78703, United States of America, duanj@mccombs.utexas.edu, Frenkel ter Hofstede

In this study we investigate the effects of out-of-stocks on consumer purchase behavior at retail outlets. When a consumer faces an out-of-stock situation of the product of her choice, she may decide to postpone the purchase, choose a different package size of the same brand or switch to another brand. Switching due to out-of-stocks can help the consumer gain more information on different brands and package sizes, which in turn may change the consumer's future product preferences. Such changes have an impact on a retailer's category profit. Based on structural utility maximization, we develop a discrete-time competing risk hazard model which simultaneously explains consumers' purchase incidences, timing and product choices. To capture the long-term impact of out-of-stock, we allow consumers to learn from past experiences with the products, some of which result from out-of-stocks. We specify a Bayesian learning model in which consumers update their preferences. We apply our methodology to two year purchase histories of a panel of consumers for a product category characterized by frequent out-of-stocks. Our estimation uses individual-level data and complete information on product availability at the time of sales. Policy simulations based on the estimated results can help retailers design more efficient inventory management strategies.

3 - How Does Assortment Size Impact Consumer Choice?

Tae-kyun Kim, Assistant Professor, Rutgers Business School, 1 Washington Park, Rm 993, Newark, NJ, 07102, United States of America, taekyunk@business.rutgers.edu, Sivaramakrishna Siddarth

Given the limited shelf space of retail stores, effectively managing assortment has been an important topic for both academics and practitioners. Researchers have looked at various aspects of assortment influencing diverse outcome variables. For instance, researchers typically studied assortment reduction and it impact on brand choice (Zhang and Krishna 2007), category level sales (Borle et al. 2005) or store level sales (Sloot et al. 2006). Within the assortment domain, understanding the impact of assortment size on consumer choice is an important area of research. While many researchers have found that large assortments can have a negative impact on stores (Boatwright and Nunes 2001, Draganska and Jain 2005, Zhang and Krishna 2007), it is unclear whether this result is due to the manner in which this variable was operationalized. Typically, assortment size is measured by the number of alternatives and its squared term but these measures cannot distinguish whether larger assortments actually decrease utilities or impact choice in a nonlinear fashion (e.g. decreasingly increasing). In this paper, we focus on the choice behavior at the brand level to study the assortment size impact on consumer choice behavior. In addition, we propose assortment size measures based on random utility maximization and bounded rationality. We use these measures to separate nonlinear impact of assortment size from its negative impact on choice behavior. Our proposed measures are empirically tested using hierarchical Bayesian methods utilizing consumer panel data.

4 - Measuring Consumer Category/Brand Values

Sri Devi Duvvuri, Assistant Professor, University at Buffalo, 215 F Jacobs, Buffalo, NY, 14221, United States of America, sduvvuri@buffalo.edu

Effective customer relationship management requires robust measurement of consumers' responses to various marketing stimuli. In this paper we investigate the drivers of consumer category/brand values. We address this question by developing a Bayesian factor analytical model. To test the existence of an intrinsic consumer-specific value schema, we estimate two competing models — Thurstone model and hierarchical model. The Thurstone model assumes the existence of only group-specific factors (e.g., factors for related products) for explaining the variation in response sensitivities. The hierarchical model also posits an additional general or intrinsic response-sensitivity factor. We use scanner panel data from several categories (including complements, substitutes, and independent categories) to test these models.

■ SB13

13- North Star

Social Influence II

Contributed Session

Chair: Alexander Krasnikov, Assistant Professor, George Washington University, School of Business, 2201 G St NW, 301B, Washington, DC, 20052, United States of America, avkrasn@gwu.edu

1 - Groups and Variety-seeking: An Empirical Investigation in a Household Panel

Jose-Domingo Mora, Assistant Professor of Marketing, University of Massachusetts Dartmouth, 285 Old Westport Road, CCB 219, North Dartmouth, MA, 02747, United States of America, jmora@umassd.edu

Although individual variety-seeking has been extensively researched (e.g. Kahn, 1990, 1995; Inman, 2001) variety-seeking in group settings has been scarcely addressed by marketing scholars. Ariely & Levav (2000) and, more recently, Quester & Stayer (2009) studied individual variety-seeking within groups when group choices are sequential. We investigate individual variety-seeking when groups make simultaneous, common choices affecting all group members and members are free to desert. This situation is usual in household purchases, especially with information and experiential products. As groups and individuals process information differently, we also study the effects of amount of choice. A random coefficients model is estimated on panel data of television viewing at home, using a Tobit specification where utility derived from variety-seeking is operationalized as number of channels viewed for at least one minute. Predictors include group, individual, household and product characteristics; we control as well for variety-seeking when consumer are alone. We find a concave relationship of variety-seeking with group size, and strong interactions between levels of choice (high, in subscription TV homes; vs. low, in non-subscription TV homes), group size and group composition. Importantly, these interactions are attenuated by covariates accounting for group-level phenomena, i.e. mutual affect (Lull, 1980), shared cognition (e.g. Tindale et al., 2002) and information processing capacity (e.g. Hinsz et al., 1997); which shed light on how group processes shape variety-seeking. We hypothesize that the residual interactions after accounting for those factors result from increasing shifting costs as groups grow larger and the drive towards variety-seeking as choice increases.

2 - Group Buying: Boon, Bane or Both? A Normative Study of Alternative Contexts and Approaches

Feihong "Jerry" Xia, Doctoral Student, University of Pittsburgh, Joseph M. Katz Graduate School of Busin, Pittsburgh, PA, 15260, United States of America, fex8@pitt.edu, Rabikar Chatterjee, R. Venkatesh

Group buying sites such as Groupon and LivingSocial are growing in popularity among consumers even as the businesses they promote have reported equivocal success (Phibbs 2012). Jing and Xie (2011) propose a model based on the ability of group buying sites to incentivize informed adopters so as to win over uninformed consumers. Our study seeks to complement this work in three ways. First, we model a more general form of heterogeneity under which consumers differ not only in how informed they are, but also in their willingness to pay contingent on being fully informed. Second, we contrast the potential of group buying for durable and non-durable goods. With the latter, expanding the consumer base through group buying in the first period should increase the pool of customers who might repurchase in the second period. Third, we draw on the above to identify the conditions under which a business should prefer group buying over more traditional approaches, and which among alternative group buying mechanisms is the most profitable to a business. Our results suggest that the attractiveness of group buying to a business is not guaranteed, and the buying context and the choice of mechanism have a significant bearing on the outcome. We examine how existing group buying sites can be more successful by modifying their current model in specific ways.

3 - Desire for Uniqueness Versus Conformity in Conspicuous Demand: Modeling the Effect of Consumer Attitude Functions

Kyuhong Han, Korea University Business School, Anam-dong 5-ga, Seongbuk-gu,Seoul,Korea, Seoul, 136-701, Korea, Republic of, hkyuhong1@gmail.com, Jaehwan Kim

From time to time consumers purchase products due to extrinsic attributes (e.g., social needs) rather than intrinsic attributes (e.g., feature). Moreover, in the case of conspicuous demand this phenomenon becomes prominent. Fulfilling the social needs such as desire for uniqueness and conformity are the representative characteristics for extrinsic attributes that lead consumers to conspicuous demand. In this study, the two counterparts are analyzed by the consumers' sensitivity to the number of buyers already existing in the market. There are quite a few studies covering conspicuous demand and dealing with the effect of number of buyers on consumer demand. However, we recognize and address two major limitations in the literature. First, these studies assume two exclusive types of consumers who show an unconditional preference according to the number of buyers. In other words, according to the studies, a consumer always values a product with more (or less) buyers whenever and whatever he/she is to purchase. In reality, consumers value both uniqueness and conformity but prefer one over another according to the product or purchase situation they face. By including demographics along with four attitude function (knowledge, social-

adjustive, value-expressive, and utilitarian function) components into the model, the across- and within-individual differences are handled. Second, the prior studies demonstrated the existence of conspicuous demand only through controlled experiments or propositions. However, this study is based on choice-based conjoint design for a more realistic analysis. A hierarchical Bayes model is developed to identify the across- and within-individual variation in consumers' needs for uniqueness and conformity in conspicuous demand.

4 - Social Status and Excessive Consumption in Mortgage Market

Alexander Krasnikov, Assistant Professor, George Washington University, School of Business, 2201 G St NW, 301B, Washington, DC, 20052, United States of America, avkrasn@gwu.edu, Christo Pirinsky

The sharp rise in U.S. mortgage default rates over the 2007-2010-period has led to the most severe financial crisis since the Great Depression. Some of the most common explanations of the subprime credit expansion proposed in the literature have been predatory lending, securitization, and bad monetary and housing policies. However, the demand (i.e. consumer) side of subprime lending has been relatively neglected in the discussion, and yet, it is an important aspect of equilibrium market outcomes. A long line of research in economics suggests that individual consumption and subjective well-being depend crucially upon the consumption of others. In this research we study how private lenders account for status concerns in the housing market. Our general approach could be characterized as follows – we construct measures of excessive housing demand (consumption) in a county and evaluate how this demand relates to the overall mortgage supply by lenders and socio-economic characteristics in the region. We argue that proximity to wealthier neighborhoods creates an incentive for over-consumption in the housing market. We expect that social influence in the housing market would spread from wealthier households (neighborhoods) towards less wealthy households (neighborhoods), given that people are prone to upward social comparisons. The strength of this social influence would also depend critically on the proximity to its source. We measure excessive demand with the fractions of declined loan applications and subprime loans in a given county. We obtained such data from the mortgage applications for single-home purchases received by private lenders that were collected by the Federal Reserve under provisions of the Home Mortgage Disclosure Act for time period 2004 - 2007.

■ SB14

14- Defender

Advertising Strategy

Contributed Session

Chair: Meltem Kiygi Calli, Okan University, Faculty of Economics and Administrative, Sciences, Tuzla Campus, Istanbul, 34959, Turkey, meltem.kiygicalli@okan.edu.tr

1 - An Empirical Investigation of Price Content in Search Advertising

Yupin Yang, Assistant Professor, Beedie School of Business, Simon Fraser University, 8888 University Drive, Burnaby, BC, Canada, yupin_yang@sfu.ca, Guanting Tang

This article describes an empirical study of price content in search advertising, using the data containing thousands of search ads from the online accommodation industry. In advertising, price content is often provided to inform consumers about products' prices or to change consumers' perception about products' quality and price. In the article, we first apply content analysis method to analyze the format of price content for search ads. While price content can be expressed in many ways in advertising, we have categorized them into three basic types: actual price number, a percentage off, and relative price comparison/benefit /statement. Second, we empirically examine how the format of price content in a search ads is related with the advertiser's characteristics including its customer base, its position in the distribution channel, its product quality and its product portfolio breath, and the keyword's characteristics including the keyword's popularity, price, and length. Our empirical findings can enhance our understanding of price content design in the search advertising and provide some guidelines to manage online advertising content.

2 - Modeling the Dynamics of Multiple Media Consumption using a Markov Chain

Vijay Viswanathan, Northwestern University, Evanston, IL, United States of America, vijay-viswanathan@northwestern.edu, Kalyan Raman

With a multitude of media forms now available, there is increasing evidence of cross-platform or multiple media use. This study examines the dynamics of multiple media consumption using granular observation data. Our model not only captures the dynamics of media consumption, but also examines the effects of relevant individual and situational variables on the dynamics of media consumption. Specifically, we estimate a multiple state Markov model to model the transitions between five different media options during primetime. We incorporate time-varying covariates such as the location in the house that can influence an individual to switch to another medium. We find that there are striking similarities in the long-term behavior of switching probabilities among different media. In addition to the empirical analysis, we present analytical results on the stationary probabilities of the multiple media consumption Markov chain. The results help marketers understand not only which combination of media to use to target certain individuals but also when they should spend their efforts during primetime.

3 - Uncovering Dynamics in Advertising Strategy Types: A Hidden Markov Model

Charles Kang, PhD Student, Pennsylvania State University, 408A Business Building, Smeal College of Business, University Park, PA, 16802, United States of America, cak314@psu.edu, Frank Germann, Rajdeep Grewal, Sridhari Sridhar

Advertising managers have the fundamental responsibility of determining their advertising budget and its allocation across various media outlets in an optimal manner. This task is complex because there are various media outlets with different cost structures and attractiveness. In addition, advertising strategy needs to change dynamically since a number of new media avenues (e.g., Online) have emerged, the cost and effectiveness of advertising in existing media outlets has changed and firms may monitor how their competitors spend their advertising dollars before making their decisions. As a result, firms have to choose among a smorgasbord of advertising strategy types. Sparse academic guidance exists on which advertising strategies seem to work, with extant insight being largely anecdotal. To address this fundamental issue, we seek to answer three research questions: (1) what major advertising strategy types appear to exist? (2) what are the organizational factors that influence firms advertising strategy type switching behavior? and (3) which advertising strategy types yield the most success? To answer these questions, we model firms' advertising behavior using a Hidden Markov Model where firms' advertising strategy types are hidden states, with firms having a probability of switching from one state to another. We allow covariates to influence the transitional probability matrix, which can help explain why firms switch between advertising strategy types. From the analysis based on the data on advertising budgets and allocation from the KANTAR advertising database and supplementary financial data, this article provides distinctive insights about what major advertising strategy types emerge, why advertising strategy types evolve, and when they are successful.

4 - Call Center Operation and Capacity Management

Meltem Kiygi Calli, Okan University, Faculty of Economics and Administrative, Sciences, Tuzla Campus, Istanbul, 34959, Turkey, meltem.kiygicalli@okan.edu.tr, Marcel Weverbergh, Philip Hans Franses

The effectiveness of call center operations is a crucial link in the marketing activity for companies organizing their business around a centralized, telephone based collection of orders and ensuing planning of order executions. This study investigates the manpower planning and the performance for a national call center dealing with car repairs and on the road interventions. The purpose of this analysis is to investigate to what extent the results from the advertising/calls relationship discussed in Kiygi Calli, et al. (2012) can be used in the capacity planning of the call center; this means how sensitive is the call center capacity to the increase in calls of the call center due to advertising. This study demonstrates the importance of the link between marketing activities and operational management. The starting point is a forecasting model for the incoming calls, taking into account the impact of radio and TV commercials. An autoregressive-distributed lag model is used, accounting for fluctuating autoregressive effects over time. Using these estimation results, we construct a forecasting tool based on a weekly media plan. The forecasts are the input into the capacity planning simulation models. We apply a discrete event simulation that models the process directly on per second level. The simulation shows increases in queue size, waiting times and abandoned calls in active weeks (meaning with advertising). On the positive side, the indications from our simulation are that the adjustments in manpower between active weeks and inactive weeks (meaning without advertising) have resulted in an improved (on average 6 calls/agent in an hour) ratio of calls to agents, but for active weeks the system is inherently less manageable.

■ SB15

15- Great Republic

Marketing and Firm Performance III

Contributed Session

Chair: Vinay Kanetkar, Chair, Associate Professor, University of Guelph, Department of Marketing and, Consumer Studies, Guelph, ON, N1G2W1, Canada, vkanetka@uoguelph.ca

1 - Retailer Performance and the Voluntary Disclosure of Monthly Same Store Sales

Chenxi Zhou, University of Florida, 2635 SW 35th Place, Gainesville, FL, 32608, United States of America, zhou.1985@ufl.edu, Jennifer Tucker, Barton Weitz

As a commonly used measure of overall performance within the retailing industry, the same-store sales growth considers growth in stores that have been open for at least one year. This number puts major retailer's performance under the spotlight and serves as a barometer for the economy. However, recently,

many retailers choose to withdraw from the previous monthly disclosure and start reporting quarterly on the same store sales. This new trend intrigues a hot debate between the retailer managers and investors from Wall Street. We join in this debate through empirically investigating the retailers who have shifted their disclosure policy from monthly to quarterly. Using unique datasets collected for the retailing industry, we find that the retailer's performance (i.e., the growth in the profit margin) in fact improves after the cease of monthly disclosure and this effect is more pronounced for the retailers in the "fad" category. Consistent with this finding, the selling expenses are also found to increase after the cease of monthly disclosure. Furthermore, our results suggest store-related variables (i.e., the same store sales performance, the new store opening speed) and market-related variables (i.e., the direct marketing channel sales, the number of private labels) will influence the retailers' decisions on the information disclosure. Finally, good performance retailers are more likely to substitute the monthly same store information with a wider quarterly voluntary information disclosure. This paper provides important managerial implications not only to marketers on how to rightly disclose voluntary information and but also to investors on how to discern the good firms from bad ones retreating from public disclosure.

2 - The Variance of Customer Satisfaction and Stock Return Risk

Eun Young Lee, Doctoral Candidate, Korea University Business School, Anam-dong, Seongbuk-gu, Seoul, Korea, Republic of, eyey@korea.ac.kr, Dong Wook Lee, Shijin Yoo

This research investigates the relationship between the variance of customer satisfaction (CS) across customers and the firm's stock returns risk. Though marketing academics have investigated the relationship between the level of CS and stock returns risk, we shed light on the role of the variance of CS since even with the same level of CS, the difference of the variance of CS may lead to different firm performance. We analyzed 10 years of National Customer Satisfaction Index (NCSI) data and daily stock returns in Korea to investigate the relationship among the level of CS, the variance of CS, systematic risk, idiosyncratic risk, and total risk. As a result, the variance of CS is found to have a significant relationship with systematic risk, and there exists a significant interaction between the level and the variance of CS in the relationship with stock returns risk. We found that the variance of CS plays a risk reducing role, which can be beneficial for the firm only under certain circumstances. Academic and managerial implications will be also discussed.

3 - The Impact of Price on Profitability: Study of Four Stock Markets

Vinay Kanetkar, Chair, Associate Professor, University of Guelph, Department of Marketing and, Consumer Studies, Guelph, ON, N1G2W1, Canada, vkanetka@uoguelph.ca

There is a large body of literature that suggested that marketing has significant and important impact on firm's financial outcomes. This paper is expected to contribute to this literature by proposing theoretical proposition as well as by providing empirical evidence consistent with the economy theory. Using economic theory about profit function, it is formulated that when firm operates in competitive environment and maximize profit, then revenue to profit ratio is an indication of impact of price on profitability. This analytical result is extended by deriving link between price elasticity (if price is changed by 1%, demand is changed by percentages) and firm's operating margin to profitability. By using econometric methodology and income statement data for firms that form Dow Jones Industrial Index (30 firms) demand and profit price elasticities are estimated. The mean price elasticity for Dow30 companies is -2.5 and price profit elasticity is -1.5. That is, if an average firm is to raise its price by 1%, the average firm's demand would decrease by 2.5% and profit decline by 1.5%. In this paper, we use data from Shanghai, Mumbai and Toronto stock exchange companies to extend our results for Dow 30 companies.

■ SB16

16- St. George A

Game Theory In Marketing III

Contributed Session

Chair: Chuan He, Associate Professor of Marketing, University of Colorado, Boulder, Leeds School of Business, Boulder, CO, United States of America, chuan.he@colorado.edu

1 - Strategic Incentives for Licensing

Hulya Karaman, PhD Student, Washington University in St Louis, 1 Brookings Drive, St Louis, MO, 63130, United States of America, hkaraman@wustl.edu, Sherif Nasser

Traditional justifications as to why firms employ licensing are based on the idea that firms license in order to reach alternative distribution channels, decrease cost of production through economies of scale, pass the innovation onto firms that are better suited to exploit it, establish their technology as industry standard or deter entry. In this paper we contribute to the literature by enhancing our understanding of licensing agreements that involves technology transfers between two competitors. First, we show that vertically differentiated firms may employ licensing as a means of price coordination. Second, we demonstrate that increased competition in the product market can induce licensing agreements to be reached in equilibrium.

2 - On Bayesian Bidding Strategies of a Multi-period Participant in Sequential Online Auctions

Prabirendra Chatterjee, University of Washington, 14535 Bothell Way NE, Seattle, WA, 98155, United States of America, prabir16@uw.edu

Online auctions have become increasingly popular due to low transaction costs and their ability to reach wider consumer base. Retailers looking to clear off large inventories of items are beginning to exploit this channel by conducting a large number of auctions one after another, termed as sequential online auctions. Recent studies have shown that bidders in online auctions are heterogeneous and hence, prior studies assuming homogenous bidder behavior do not explain the bidding strategies and ensuing competition in this changed market environment where bidders have opportunities to participate in many auction selling identical items. Despite growing popularity of these auctions, the research exploring the various bidding strategies in these auctions is sparse. Recent researches have shown that along with unit demand bidders, sequential online auctions also attract multi-unit demand bidders who are able to spread their demand over many auctions. Following that, we model competition and bidding strategies of bidders who are heterogeneous in their demand and experience. We model both multi-period and single period participant bidders. The paper characterizes full set of Bayesian Nash Equilibria of these sequential auctions under two different circumstances – i) a long lived (multiple period) strategic bidder is competing against a homogeneous set of long lived strategic bidders, ii) a long lived strategic bidder is competing against a mixed set of long lived and short lived (single period) strategic bidders. In a repeated game framework we also show that a Uniform price auction setting may lead to certain implicit cooperation among the multi-period participants in order to maximize the aggregate discounted payoff.

3 - The Kindle-Macmillan War... Which Business Model for the eBook Industry?

Sihem Taboubi, Associate Professor, HEC Montreal, 3000 Chemin de la Côte Sainte Catherine, Montreal, QC, H3T2A7, Canada, sihem.taboubi@hec.ca, Georges Zaccour, Peter Kort

The paper aims at investigating which business model should be adopted for pricing decisions in the eBook industry. This industry is composed of book editors (such as Macmillan in the USA or Hachette in France) which produce books in different formats (paperback, digital). Books are distributed through eLibraries controlled by compagnies that commercialize reading devices, such as Kindle (Amazon) and iPad (Apple). A particular feature of this industry is that the products offered by the eRetailer and the manufacturer are complements, and this complementarity is of a particular kind. Indeed, sales of the eReader vanish whenever the sales of eBooks are equal to zero, while the mirror situation do not apply, since other reading devices could be used to read eBooks (eg. Computers). Two business models created a huge controversy in this industry in 2010. The first one, used before the entry of new competitors at the eRetail level, was a pricing model where the retailer controls the retail price. The second model (i.e. agency model) allows the book editors to control the retail price. In this paper, we use game theory to compute strategies, profits, and consumer surplus of both business models in a bilateral monopoly. By comparing the results under both scenarios, we identify which pricing policy is the best for the eBook editor, the eRetailer, and consumers.

4 - Pricing Prototypical Products

Chuan He, Associate Professor of Marketing, University of Colorado, Boulder, Leeds School of Business, Boulder, CO, United States of America, chuan.he@colorado.edu, Wilfred Amaldoss

When we think of colas, Coca-Cola first comes to mind. Products such as Cola-Cola, Tide laundry detergent and Chapstick lip balm are the prototypical products in their respective categories. Over three decades, research in consumer psychology has accumulated evidence on how prototypicality structures memory, shapes the composition of consideration set and influences purchase decision. Yet there is no research on how it affects the competitive behavior of firms in a horizontally differentiated market. For example, some prototypical products are lower priced than other products in their category, whereas in certain other categories the prototypical product is higher priced. Using a novel model, we make an initial effort to examine theoretically the impact of prototypicality on the pricing decisions of firms competing in a horizontally differentiated market. Our analysis shows that when consumer valuations are low, the prototypical product charges a lower price and yet earns more profits compared to other products in the category. However, when consumer valuations are high, the rank order of the prices of the prototypical product and a nonprototypical product is reversed, but not the order of profits. We subject these predictions to an empirical test. The experimental results lend support for the qualitative predictions of the model.

Saturday, 1:30pm - 3:00pm

■ SC01

01- Essex Ballroom South

Online Channel

Cluster: Internet and Interactive Marketing

Invited Session

Chair: Ilaria Dalla Pozza, Associate Professor, EMLV Paris, Pôle Universitaire Léonard de Vinci, Paris, France, ilaria.dalla_pozza@devinci.fr

1 - Analyzing Preferences of Multichannel Shoppers Based on Cognitive Orientation

Oliver Emrich, Head of Competence Center for E-Commerce, University of St.Gallen, Dufourstrasse 40a, St.Gallen, Switzerland, oliver.emrich@unisg.ch

The behavioral distinction between customers who use and do not use the Internet has become increasingly blurred as more than 90% of customers are projected to already use multiple channels, including online shops. However, individual customer differences persist with regard to how they use the Internet for shopping. Based on schema theory, we introduce a new scale to measure multichannel customers' cognitive orientation and explain individual differences in their evaluations of online shops and multichannel services. Customers orient themselves during online shopping by adopting cognitive maps they have 1) learned from web-specific representations (web-based orientation) or 2) transferred from physical representations (store-based orientation). Based on a representative survey with 1,012 respondents, we find that web-based and store-based orientation schemas result from previous exposure to shopping environments and help explain when and how the visual design representation across multiple channels contributes to competitive advantage of multichannel retailers. We show how retailers can leverage their multichannel resources by addressing cognitive maps for specific customer segments with orientation cues and considering learned customer routines in other channels. Thus, our study extends previous research on multichannel management, such as research shopping, brand interactions across channels, and the impact of different channel configuration strategies on customer experience.

2 - Introducing Online Mobile Channels in Multichannel Environment: An Analysis of Cross-channel Effects

Umut Konus, Assistant Professor, Eindhoven University of Technology, Postbus 513, Eindhoven, 5600MB, Netherlands, U.Konus@tue.nl, Jing Li

Online mobile channels (OMCs) have become increasingly prominent in the recent years. A majority of multi-channel customers adopt and use different forms of OMCs, such as the mobile Web, shopping applications of smart phones and tablet computers to search information, purchase products and services, and obtain after-sales services. Prior studies reveal that customer adoption of a newly introduced channel affects and is affected by the existence and customer use of existing channels. The proliferation of OMCs implies that firms need a clear understanding of customer shopping behavior on OMCs while coordinating the OMCs with existing marketing channels to create optimal multichannel offerings. However, no study has examined how customers' adoption and usage of a newly launched OMC are affected by other online and offline channels that the firm has already been using. This study therefore investigates the customer adoption of an online mobile channel by focusing on the cross-channel effects between online mobile channels and (1) other online channels (e.g., non-mobile Web) and (2) offline channels (e.g., stores, call centers and catalogs) of the firm. Moreover we examine how marketing communications, customer characteristics and time trend moderate the cross-channel effects after the launch. Longitudinal transactional data captures customer purchases on multiple channels, including those on the OMC, from a multi-channel retailer. We use panel probit models to examine customer purchase incidence and channel choice after the launch of an OMC. We offer implications for further research and practice.

3 - How Multichannel Advertiser Communication Affects Conversion Rates of Online Shops

Jan H. Schumann, Assistant Professor of Marketing, Technische Universität München, Arcisstr. 21, München, 80333, Germany, jan.schumann@wi.tum.de, Florian Wangenheim, Sebastian Klapdor

Advertisers employ multiple channels to reach consumers over the Internet. Yet only little is known on how they should be orchestrated to maximize effectiveness of advertiser communication. The authors address this issue drawing on advertising response and purchase decision-making theory as well as on findings on user search and information processing on the web. They formulate a model for analyzing these effects and apply it to a large consumer-level dataset. The authors test their model using cookie-level clickstream data from a European advertiser in the fashion and apparel industry. Their data cover the aforementioned channels for digital advertising and show for each channel when the consumer clicked on an advertiser message. Furthermore, it contains conversion data, i.e., we can see if a consumer has purchased something in the shop. The dataset was collected over a period of 6 months. In total, the authors observe 1,664,673 user journeys of which 12,426 converted. Based on the results of this model, the authors are the first to find empirical evidence for multichannel synergies purely between online channels: the propensity of purchase is higher, if consumers are reached on multiple channels. Interestingly, the channel order plays a decisive role. Users that start their browsing journey on channels primarily used for information gathering and afterwards react to messages on navigation channels, show a significant uplift of conversion likelihood than users starting off on navigation channels. Moreover, both multichannel and channel order effects are substantially influenced by previous purchase. The results mark an important step towards a theoretical model for explaining online purchasing behavior through exposure to multichannel advertising.

4 - The Role of Facebook and Twitter in a Multichannel Strategy: The Example of a Telecom Provider

Ilaria Dalla Pozza, Associate Professor, EMLV Paris, Pole Universitaire Léonard de Vinci, Paris, France, ilaria.dalla_pozza@devinci.fr, Erwan Le Quentrec

In an effort to develop, nurture and strengthen customer relationships and boost their profitability, companies are offering customers a wide range of channels to look for information about products or services, make a purchase, complain and ask for help. Recalling Neslin et al. (2006), ëmultichannel management' refers to the integrated coordination and deployment of channels firms use to connect and exchange with customers, with the end goal of improving customer acquisition, development and retention. Several authors advocate the need for more research in multichannel settings to better understand how consumers choose and use the channels available to them and exploit their complementarities (Dholakia et al. 2010). However, the majority of the research in the multichannel management domain has focused on the search and purchase phases, with a lack of attention to the post-purchase phase (Konus, Verhoef and Neslin 2008). The rise of the Internet and Social Media (such as Facebook and Twitter) has established new ways firms can connect and exchange information with customers. However, understanding how these channels integrate with other traditional channels still remains under-investigated. According to the above premises, our research aims at: - Understanding the value and role of Facebook and Twitter as customer care channels in a multichannel strategy. - Investigating channels synergies and competitive effects among channels in the post-purchase phase. - Understanding customer attitudes and feelings. We conduct our research for a major European Telecom provider. Our research is conducted through 100 qualitative interviews to customers who use Facebook and Twitter as customer care channels.

■ SC02

02- Essex North Center

Online Customer Behavior

Contributed Session

Chair: Meenakshi Handa, Associate Professor, Guru Gobind Singh Indraprastha University, Sector 16 C, Dwarka, New Delhi, 110075, India, meenakshi_handa@hotmail.com

1 - The Impact of Smart Device Screen Size on Paid-content Preference on Multi-screen Environment

Kyeongseo Hwang, Korea Advanced Institute of Science and Technology, 85 Hoegiro Dongdaemoon-Gu, Seoul, Korea, Republic of, kh299@business.kaist.ac.kr, Sung-Hyuk Park, Ingoo Han

As revolutionary mobile devices capable of internet communication have introduced, the number of different screens equipped with identical functionalities that a user confronts is increasing. Consequently, digital content providers utilize Multi-Screen strategy providing same content across a variety of platforms. Our paper shows that the parameters in existing theoretical frameworks of online consumer utility such as product selection and digital content properties (content price and file size) to determine paid-content purchase behavior on multi-screen environment. The goal of our research is to discover the role of different screen size devices for paid-content sales from business intelligence perspectives. Our methods control for differences in content preferences across smart devices through screen size effects with econometric model. We explore research questions using data from one of the biggest eBook providers in East Asia on eBook sales history over the 12 months from January 2011 to December 2011. We sampled 3,000 individual customers who registered a single smart phone, 3 to 4 inch screen, at the beginning of a service and added one or more devices with larger or similar screen sizes within collected time frame. We show that users holding larger screen smart devices appear to respond to increase paid-content purchase performance. In particular, price sensitivity of content is decreased and the preference of larger sized contents is increased for users holding both small and large screen devices. Our results provide managerial implications to content providers on building a marketing strategy to promote better paid-content purchase performance from users.

2 - Do (How) Digital Natives Adopt A New Technology Differently than Digital Immigrants? A Longitudinal Comparison of Four Competing Theoretical Models

Ankit Kesharwani, University of Memphis, Fogelman College of Business, Memphis, TN, 38111, United States of America, kshrwani@memphis.edu, Daniel Sherrell

Based on their comfort level with the digital world, digital users can be classified as either digital immigrants or digital natives (Palfrey and Gasser, 2008). Digital immigrants (DI) are those who started using digital devices or technology at some stage in their adult lives, while digital natives (DN) are users who were born into a digital world after 1977 (Tapscott, 2009). The existing research typically focuses on tech-savvy young adults (i.e., DN) and has spent little effort trying to understand increasingly tech-savvy adults (i.e. DI). The objective of the study is to investigate the relative effectiveness of four competing theoretical models (e.g., Theory of Planned Behavior) of attitude-intention formation in explaining and comparing the continued new technology usage intentions of DN and DI. Using a three-wave panel model, this study contends that an explanation of the continued use of technology should consider the following four mechanisms: the current belief evaluation – future behavior relationship (attitude-intention model), (ii) the current belief evaluation - future belief evaluation relationship (sequential belief updating), (iii) the current behavior – future behavior relationship (habit), and (iv) the current behavior – future belief evaluation relationship (self-perception theory). The study will enable us to assess the effectiveness of each theoretical model at each of three time periods to predict these two digital-familiar groups' intentions for continued technology use as well as assess the ability of the four psychological processes noted above to explain continued technology use behavior over time.

3 - A Study of the Relationship Between Shopping Orientation and Online Shopping Behaviour Amongst Indian Youth

Meenakshi Handa, Associate Professor, Guru Gobind Singh Indraprastha University, Sector 16 C, Dwarka, New Delhi, 110075, India, meenakshi_handa@hotmail.com, Nirupma Gupta

The increasing use of internet by young adults in emerging markets such as India provides an opportunity to marketers to tap a new and underdeveloped segment of young net users. A better understanding of the drivers of online shopping behaviour of young adults can enable online marketers to design more effective marketing strategies. Currently limited research has been done in this area in India. The present research explores the relationship between shopping orientation of young adults in India and online shopping behavior. Primary data was collected through a self-administered questionnaire from 800 college students. The study reports the relationship between shopping orientation and online shopping behaviour of respondents in terms of online shopping adoption, frequency and spending. The study finds a significant difference in the shopping orientations of online and non online shoppers. Online shoppers are more convenience oriented than non online shoppers and are less experiential and entertainment oriented. Similarly trial, occasional and frequent shoppers differ in the extent of entertainment orientation. There is a significant difference in the shopping orientations of males and females with the latter being more entertainment and experiential oriented. Based on the findings, recommendations are made for measures whereby young adults can be encouraged to engage in online shopping.

■ SC03

03- Essex North West

The Impacts of New Media - II

Contributed Session

Chair: Ashish Agarwal, University of Texas at Austin, 1 University Station, CBA 5.234, Austin, TX, 78759, United States of America, ashish.agarwal@mccombs.utexas.edu

1 - Crowdfunding: Discovering the Moment of Choice

Sunghan Ryu, KAIST College of Business, Supex Hall, 85 Hoegiro, Dongdaemoon-Gu, Seoul, Korea, Republic of, hans@business.kaist.ac.kr

Crowdfunding is a new phenomenon of customers' participation as a form of financial support. It is an initiative undertaken to fund money for a new project proposed by entrepreneurs, artists or someone, by collecting small to medium-size investments from many other people. Crowdfunding has its root in the broader range of streams including charity, crowdsourcing, and social networking. As a new phenomenon, however, the crowdfunding model and its impact on corporate and customers are not fully understood. Hence, in this research, in order to fill those gaps, I aim to model the possibility of a person's investment for a certain project and to explore factors affect a person's choice to invest for a certain project and I model individual i's investment decision at project t = 1, ... , T_i using a linear logit model. The result of empirical study with data from one of the representative crowdfunding platform in South Korea shows goal amount and funding period have negative impacts on investors' choices while non-profit projects and projects selected by partnership organization tend to be selected. The most interesting finding is the variety of benefits as rewards for investment has a negative impact on investors' decision. In terms of amount of donations, it is declared non-profit projects and partnership have positive impacts on the amount people donated while goal amount has negative impact on it. Implications for the results and future research topics are discussed.

2 - Affiliate Program as Consumer-generated Advertising Media

Makoto Mizuno, Associate Professor, Meiji University, 1-1 Kanda-Surugadai, Chiyoda, Tokyo, 101-8301, Japan, makmizuno@nifty.com

Affiliate program is a form of online advertising allowing a wide range of web users (typically, bloggers) to insert advertising into their websites (blogs) and rewarding them based on the actual purchase (conversion) achieved. This differs from other online advertising programs in "participation" of consumers for insertion of advertising. If it is successful, social interaction between consumers can amplify advertising effectiveness. On the other hand, dependence on consumers' initiative might entail uncontrollability of advertising planning. To harness this media more effectively, marketers need to understand how affiliates would behave interacting with the audience and one another given a fee structure. First, we conducted two web-based questionnaire surveys for bloggers (actual/possible affiliates) and for blog audience (possible targets of affiliate advertising). The results of analyses suggest that (1) the affiliates may be motivated by not only economic reasons but also non-economic (social) reasons and (2) the audience may react to the advertising considering the relationship with the affiliates. Because of complexity of the mutual interaction between affiliate bloggers and their audience, we construct an agent-based model and simulate the possible behaviors. In our model, the bloggers and the audience are connected through a so-called scale-free network and respectively make decisions based on limited knowledge and conflicting economic/social motivations. After examining the empirical validity, we explore the possible outcomes raised by complex interactions beyond the actual observation.

3 - How Organic Results Impact Sponsored Search Advertising Performance

Ashish Agarwal, University of Texas at Austin, 1 University Station, CBA 5.234, Austin, TX, 78759, United States of America, ashish.agarwal@mccombs.utexas.edu, Michael Smith, Kartik Hosanagar

We study the impact of competing listings in organic and sponsored search results on the performance of sponsored search advertisements. We use data generated through a field experiment for several keywords from the ad campaign of an online retailer. Using a hierarchical Bayesian model, we measure the impact of competition on both click-through rate and conversion rate of sponsored search ads for these keywords. We find that competitor listings in organic results have a higher impact on click performance than competitor listings in sponsored results do. We also find that both sponsored and organic listings have an impact on conversion performance and that higher competition can lead to higher conversion performance for generic keywords.

■ SC04

04- Courier

Decision Making II

Contributed Session

Chair: Dimitrios Tsekouras, PhD Candidate, Erasmus University Rotterdam, Burgemeester Oudlaan 50, H15-20, Rotterdam, Netherlands, dtsekouras@ese.eur.nl

1 - Tiers in Consumer Fractional Ownership Markets

Yu Wang, Assistant Professor of Marketing, The University of Texas at Dallas, 800 West Campbell Rd., SM 32, Richardson, TX, 75080, United States of America, yuwang@utdallas.edu, Eman Haruvy

In fractional ownership markets, consumers purchase a share in a property and can later exchange it with other owners through a secondary market. Forward-looking consumers may purchase low quality shares at a low price with the intention of trading up. This poses a serious problem. We show that firms can adopt a tiered approach for exchange so as to restore sales of high quality shares in the primary market, while at the same time facilitating exchanges in the secondary market. Data from laboratory markets strongly support this argument. Firm revenue and total social surplus are both higher in tiered than in tier-free markets. Furthermore, the impact of the tier structure depends on the exchange mechanism the firm uses. Over time, participants adapt to changes in tier structure in the direction predicted by theory. Risk aversion and gender partly explains the deviation of data from theoretical predictions.

2 - Managing Consumer Categorization under Category Uncertainty

Akihiro Nishimoto, Professor, Otaru University of Commerce, 3-5-21 Midori, Otaru, 047-8501, Japan, nishimoto@res.otaru-uc.ac.jp, Akihiro Inoue

This research focuses on indentifying and managing product categorization under category uncertainty taking account of the consumers' heterogeneity. Category uncertainty is the difficult situation for consumers to categorize a new product in one product category. The studies on category uncertainty have been investigated, and various types of category uncertainty have been demonstrated. Among them, a typical categorization is the one based on the single-category belief. The other is based on the multiple-category belief. A notion under single-category belief is that the new product is categorized in one category when consumers recognize it. In contrast, an idea under multiple-category belief is that the new product is categorized in more than two categories. In this research, we have run three studies and focused on a hybrid product to demonstrate consumer categorization in category uncertainty. A hybrid product is the one which has more than two categorical characteristics. Then, it has the potential possibility that it is categorized into more than two product categories In the first study, we have demonstrated consumer categorization based on the single-category belief by modeling the fuzzy-based regression. In the second study, we also have extracted the consumer categorization based on the multiple-category belief by the hierarchical conjoint analyses for investigating on various types of consumer categorization at the individual level. And in the third study, we have constructed the experimental design to verify the effect of property priming to category uncertainty for managing the heterogeneity of consumer categorization.

3 - Bounded Rationality in Consumer Choice

Onesun Yoo, Assistant Professor, University College London, Management Science and Innovation, Gower Street, London, WC1E 6BT, United Kingdom, onesun.yoo@ucl.ac.uk, Rakesh Sarin

The proliferation of consumer review websites (e.g. Yelp.com) has made it easy for consumers to share their experiences and to gain objective information about the quality of novel products and services. Despite the decrease in uncertainty about products and services, researchers are increasingly finding empirical deviations between what consumers should buy based on consumer preference models and what they do buy. To gain a better theoretical understanding of the source of the phenomena, we examine the the consumers' decision-making process and characterize the role of product perception. The decision model builds on Simon's (1955) bounded rationality framework, where a consumer employs the following two approximation schemes. First, the consumer's utility is characterized by a step function, and the jump in utility occurs at a critical level. Second, the critical level is determined during the information gathering process, in which the consumer gathers objective information about the product. The interpretation of the objective information may however differ depending on the strength of his initial hypothesis (perception) about the product. We investigate the implications of our model to a consumer's willingness-to-pay, the demand curve, and a product's brand equity. Finally, using our model, we examine the competitive equilibrium between two firms and characterize the equilibrium market share and price. We find that when consumers' perceptions are taken into account, two firms in competition are always able to charge prices that are higher than the competitive equilibrium prices, due to the implicit divisions in the market. Our framework therefore provides explanations to many empirical deviations and suggests alternative pricing strategies under competition.

4 - Choice Set Complexity Effects on Consumer Product Knowledge

Dimitrios Tsekouras, PhD Candidate, Erasmus University Rotterdam, Burgemeester Oudlaan 50, H15-20, Rotterdam, Netherlands, dtsekouras@ese.eur.nl, Benedict Dellaert

Firms such as financial service providers and online advisory services are increasingly challenged to promote sufficient levels of product understanding with their customers. Traditionally, strategies to promote consumer product knowledge have focused on providing more and richer product information to consumers. However, in this study we propose that differences in the composition of the product choice sets that are offered to consumers also affect consumer product knowledge. More specifically, we investigate the effect of choice set complexity and how it impacts objective and subjective consumer knowledge. We propose that greater choice set complexity increases objective consumer knowledge because complex choice sets require greater cognitive elaboration on the alternatives. Conversely, greater complexity also is likely to lead to decreased consumer choice confidence and therefore we expect that it lowers subjective product knowledge. We test our hypotheses using clickstream data from a financial product comparison website combined with brief online surveys, as well as data from a controlled experimental lab environment in the consumer electronics product category. The results provide support for the proposed effects of choice set complexity on consumer product knowledge. Finally, we also validate if the effect of choice set complexity on product knowledge is managerially meaningful in that it influences consumer website conversion and willingness to pay for the chosen alternative.

■ SC05

05- Essex Center

Marketing in Indian Subcontinent

Contributed Session

Chair: Gurbux Kotwani, Associate Professor, Delhi University, Dyal Singh College, Lodhi Road, New Delhi, 110003, India, glkotwani@hotmail.com

1 - Changing Preferences for Gold Jewelry: A Study on Jewelry Customers in an Indian City

Lalitha Rani Daggubati, Professor, Andhra University, Department of Commerce and Management, Visakhapatnam, 530003, India, mlalitha09@yahoo.com, Rama Devi Annapantula

India has been perceived as one of the biggest markets and largest consumer of gold. India ranks second in global demand for production of jewelry after Middle East. Many paradigm shifts like globalization, shift from sellers to buyers market, improved information and communication, transport and technology are changing not only the nature of businesses but also customers, attitudes, likes and preferences. An empirical analysis of the customers relating to purchase of gold jewelry was conducted in Visakhapatnam. Visakhapatnam is a tier two industrial city in the state of Andhra Pradesh in India with a population of 1.7 million. Four hundred respondents were selected by convenience sampling method and were analyzed using total weighted average scores and chi-square tests. The market is characterized by increasing competition, high consumer choice, and an intellectual enlightened and demanding customer. The customer preferences in terms of kinds of jewelry, shopping environment, frequency of purchase, occasion of purchase, selection of store, opinion of branded jewelry etc with respect to their age, education, income, gender and socio economic backgrounds were analyzed. The research reveals that customers prefer machine made, light weight, less expensive jewelry irrespective of their age, gender, community, religion etc. They also give importance to branded jewelry as it is a status symbol. Customers are now moving towards more trendy, artificial jewelry for regular purchases but still favor traditional jewelry for auspicious and religious occasions. Jewelry retail stores and malls with visual merchandising, quality assurance, product variety and different styles which are creating a total marketing experience are being sought.

2 - Values and Consumption Behavior: Exploring the Link in Indian Context

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Consumption behavior and in particular sustainable consumption behavior is expounded to be very unpredictable in literature. The reason most of the behavioral studies and models have not been able to predict consumer actions in different contexts is because consumption is much more than just a social and economic process of buying goods, it is a mean of forming and expressing identity, a mean of articulating the characteristics of human mind that have developed due to cultural and societal influences. In this paper, we are trying to explain consumption patterns by linking them to the personal values of individuals. Personal values have been found to be important factor in determining the type of product an individual would buy. The focus is on Indian consumers and the objective is to identify unique characteristics of the value-system of Indians in order to predict their attitudinal and behavioural patterns. Values recognized in current values scales like VALS and Schwartz value scale can't be generalized to all cultures since different cultures have different adaptations and conceptualizations of same values. Here we attempt to build a values scale, representing Indian beliefs, incorporating perspectives from ancient Indian texts, views of modern Indian thinkers and philosophers, besides collating values recognized in literature. Further the relationship between values and sustainable consumption behaviour is explored. Thus this study extends the research on importance of personal values in consumer behaviour domain and with the development of suitable methodology for data collection, has important implications for researchers and marketing managers.

3 - The Impact of Materialism on the Consumption Behavior of the Pakistani Consumer

Farah Naz Baig, Lecturer, Karachi University, Main Campus, Karachi, Pakistan, fbaig@iba.edu.pk

Pakistan, with a population of 180 million people, is a promising market when it comes to various international brands in diverse product categories. The purpose of this research is to identify whether the materialistic values are having any impact on the consumption behavior of the Pakistani consumers. Is materialism impacting the adoption of innovative products that these consumers have been recently exposed to? This is an exploratory study for the Pakistani market. It will be conducted in two phases; first phase: desk research; second phase: data from 200 respondents will be collected. The concept of materialism has been researched by using scales developed by Belk (1984) and Richins and Dawson (1992). However, for the purpose of the research the questionnaire designed by Mishra,Manit; Mishra,B B (2011) will be used. This scale was particularly developed for the Indian market which is closer in terms of cultural orientations with the Pakistani market. Data collected from survey will be analyzed with the help of a) descriptive statistics b) regression analysis c) Confirmatory factor analysis.

4 - Marketing Agricultural Produce in India by Empowering Farmer's Organization

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India suffers an estimated food grain and agriculture produce loss of $500 billion every year due to the lack of efficient agricultural marketing infrastructure in the country particularly in rural areas. One of the biggest challenges for India is to find ways to organise farmers who may not have any idea about supply chain management and efficient agricultural marketing system and to create institutional mechanisms to empower them. One of the key issues is lack of cold storage facilities and inefficient supply chain management in rural area which inhibit farmers to market their produce at appropriate time and price. Indian farmers employ innovative mechanism to reduce the post harvest loss, which is quite substantial at present. This paper presents one such innovative mechanism of designing cost effective, efficient, environment friendly storage system for agricultural commodities adopted by a group of 300 members of a farmer's organization in a remote locality in one of the most backward districts of North Bihar in India. Opportunities given to farmers to run post-harvest facilities all by themselves in a professional way empower them, as farmers can hold on to their harvest more than 24 hours and have a say in fixing price for their produce. This paper discusses about a mechanism by which a Self Help Group can be formed and empowered to devise on its own, cost effective and environment friendly grain storage mechanism and agricultural market mechanism.

5 - Personality Traits and Value Expressive Influence: Implications for Marketing Communication in India

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Objectives: Marketing literature has broadly classified reference group influence into value expressive, normative and informational influence. This paper focuses on the impact of the consumer's personality traits on susceptibility to value expressive influence (VEI) in Indian conditions. The insights so obtained can be effectively used in designing marketing communications. Methods: This study is based on 647 cases. An inventory was developed to measure VEI for Indian population. Personality traits were measured with the help of Cattell's Sixteen Personality Factor (16PF) inventory. F-Test and Discriminant function analysis were applied to ascertain the personality traits that discriminated between high, medium, and low susceptibility groups of VEI. Results: The cohort comprised of 38% female and 55% married respondents. Individuals susceptible to high VEI were relatively found to be: socially aware (factor N), in-disciplined and follows own urges (Factor Q3), assertive and self assured (Factor E), outgoing and warm (Factor A), happy go lucky (Factor F), venturesome (Factor H), tough minded (Factor I), expedient (Factor G) and somewhat more apprehensive (Facor O) and self sufficient (Facor Q2). Conclusions: A communication message with powerful visualization of personality traits of the people susceptible to VEI can change product appeal, enhance self concept, and create new target audiences. Copy must convey such personality traits to attract individuals susceptible to VEI. Negative personality traits may not be depicted as it may adversely affect self concept. For many conspicuous consumption products or services where VEI is likely to be high, these personality dimensions may be creatively used in marketing communications.

■ SC06

06- St. George B

Pricing Structures

Contributed Session

Chair: Bo Zhou, Duke University, 100 Fuqua Drive, Box 90120, Fuqua School of Business, Durham, NC, 27708, United States of America, bo.zhou@duke.edu

1 - Service Refund as a Price Discrimination Mechanism

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The refund policy is commonly used in the service industry (such as airline, hotel and ticket reservation) where the service provider adopts advance selling strategy. Consumers can reserve the service during the advance selling period or make a purchase during the spot selling period. For the consumers who reserve the service in advance but finally cannot redeem it, the service provider may offer them an opportunity to return the service by paying a refund charge. In this paper, we show that in addition to the commonly perceived function of the return policy as a profit driver, the return policy also serves as a price discrimination mechanism. More specifically, we show that when there is no capacity constraint, an appropriately chosen refund policy can help the seller maximize the profit by serving the dual functions as a profit driver and as a price discrimination mechanism. However, as the seller faces a more rigid capacity constraint, the role of the refund policy as a price discrimination mechanism diminishes. Finally, we show that in a continuous market, a partial refund charge is optimal and serve as both profit driver and price discrimination mechanism.

2 - Lock-in vs. Repeat Purchase: Two-stage Service Pricing for Pool Leak Detection and Repair Services

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Like many other repair services, to solve a swimming pool leak problem requires two stages: detection and repair. Different from the two-part tariff setting that involves only one firm, the two-stage setting allows a customer to have detection and repair done by different parties. This feature creates some interesting challenges to both customers and service providers. Without the detection service, a customer cannot resolve two major uncertainties: the severity of the problems and the costs of fixing them. However, immediately after the detection, a lock-in is naturally created because the customer may incur a second detection cost if she selects a different firm to do the repair. Meanwhile, a firm faces a major challenge in its two-stage pricing: how much should it utilize the lock-in to maximize its profit? If the firm over-utilized the lock-in, a customer might feel being exploited and would not make repeat purchases in the future. This paper studies three major research questions: What are the major factors that affect customers' purchase decisions and their afterwards evaluations? Do customers use different time horizons in making their decisions and evaluations? How far should a service provider look into the future in its pricing decisions? Using seven-year customer-level panel data from a leading pool leak detection firm at a metropolis in Texas, I first generate customer insights in their decisions and evaluations. Then I estimate optimal two-stage prices in two scenarios: with or without considering repeat purchase. By applying the structural estimation method, I quantify the profit difference between these two scenarios. The customer and managerial insights generated can be applied to other two-stage services such as industrial repairs and medical services.

3 - Product Improvement and Guaranteed Future Buybacks

Bo Zhou, Duke University, 100 Fuqua Drive, Box 90120, Fuqua School of Business, Durham, NC, 27708, United States of America, bo.zhou@duke.edu, Preyas Desai, Debu Purohit

Recently, consumer electronics retailers have begun offering guaranteed future Buy Back Programs. In these programs, consumers have the option to purchase the Buy Back Program together with the new product. Later when they are ready to upgrade, consumers can bring back the old product, and get a pre-specified proportion of the original purchase price back to use toward their next purchase. In this paper, we develop a better understanding of the strategic role of a Buy Back Program and show that under certain conditions, these programs can both serve as a signaling device and a price discrimination tool. We develop a two-period model of a monopolist firm that sells the old product in the first-period and may or may not introduce a new product in the second-period. There are two types of firms in the market. The quality of their offerings are identical, but they differ in their likelihood of a new product introduction. There are two consumer segments in the market, tech-enthusiasts and mainstream consumers, who differ in their valuation of quality of the product. Consumers know the quality of both the current product and the potential upgrade, and they may or may not know about the seller's probability of offering an upgrade in the next period. They purchase at most one unit in each period. We find that when information about the upgrade probability is asymmetric between firm and consumers, a firm with a lower likelihood of a future upgrade (L-type Firm in our model) will be strictly worse off. Interestingly, a Buy Back Program can help the L-type firm signal to consumers about its true identity. It also helps the firm better price discriminate both consumer segments.

■ SC07

07- St. George C

Topics in Services

Contributed Session

Chair: Dai Yao, PhD Student, INSEAD, 1 Ayer Rajah Avenue, Singapore, 138676, Singapore, dai.yao@insead.edu

1 - Consumer's Perceptions of Service Experience and Service Quality of an Alliance Network

Vikrant Janawade, Aix Marseille Université, FEA Forbin, 15-19, Allée Claude Forbin, Aix En Provence, 13627, France, vikrant.janawade@univ-amu.fr

The perceptions formed by a consumer about a firm's service, helps create a service experience,which in turn, influences rational and emotional perceptions of a firm's quality of service (Berry et al, 2006). Whilst,service quality measurement is objective and focuses on consumer's cognitive and attitudinal reflection towards functional and technical feature of a firm's external service milieu (Parasuraman et al,1988; Cronin and Taylor, 1992, 1994; Dabholkar et al, 2000; Brady and Taylor, 2001; Brady et al, 2002). Measurement of service experience is subjective. It has a holistic approach to assess consumers' inner feeling during a service consumption process and their psychological affective representation of experiential features of a firm's service (Otto and Ritchie, 1996; Orshingher and Marzocchi, 2003; Berry et al, 2006; Chen and Chen, 2010). Literature suggests,to date, researchers have confined their studies to understand and measure the consumer's perception of service experience and service quality of a sole service provider. However,researchers, so far, have not addressed nor measured consumer's perception of service experience and service quality in a

multiple service provider context like an alliance network. Therefore the objectives of this exploratory study are; a) to conduct interviews with airline travellers and understand their attributes of service experience and service quality of an airline alliance. And, b) to create measurement constructs for assessing consumer's perceptions of service experience and service quality in an airline alliance context,where a group of airlines have dovetailed their services sequentially from one airline to another airline,to provide seamless travel experience to consumers.

2 - Information Asymmetry and Service Evaluation in Professional Services: An Empirical Study

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In the marketing literature one conceptualization of service quality distinguishes between 'technical' and 'functional' elements. In medical and pharmacy services, technical quality elements are usually deemed more important than functional elements. However, there is a lack of empirical research on whether customers indeed place more importance on technical elements when evaluating these types of services. Moreover, economic theory posits that in professional services so-called information asymmetry between service providers and customers prevents customers from accurately evaluating service quality. This study's goal is to explore the relative impact of technical and functional service elements on customer satisfaction in professional services. A questionnaire survey measured patient evaluation of community pharmacist services. We used multi-sample SEM analyses to compare the evaluation structure by customer attributes and involvement levels. Findings show that functional service elements significantly influenced satisfaction, whereas influence of technical service elements was mostly insignificant. Moreover, evaluation structures differed by patient gender, experience with medication, and stability of physical condition. This study contributes 1) theoretically by introducing the information asymmetry construct to the services marketing literature; 2) empirically by providing evidence suggesting that patients use functional service elements as a proxy for technical quality when evaluating pharmacy services; 3) managerially by suggesting that pharmacy management may need to segment patients and provide differentiated services based on patient characteristics.

3 - To Arrive or Not to Arrive: An Empirical Investigation Into Patient No-shows

Genevieve O'Connor, PhD Student, Rutgers Business School, 34 Warwick Rd, Haddonfield, NJ, 08033, United States of America, vievefaulk@gmail.com

Patients who fail to keep a doctor's appointment present three distinct challenges to the healthcare community – loss of revenue, underutilization of equipment, and risk to patient's health. Drawing on research that examines the relationship between patient/operational characteristics and appointment cancellation/no-show status, this is the first study of its kind to follow actual patient behavior. This study assesses four hypotheses regarding the impact of customer loyalty, service failure and irrational consumer behavior on cancellation and no-show behavior. To test these hypotheses, I examine one year of appointment cancellations/no-shows for the department of medicine at a major metropolitan hospital in the Northeast. Logistic regression results indicate that consumer's loyalty is critical in managing relationships but regard must be taken to the fact that consumers can behave irrationally. Further, if a consumer underwent a service failure from their provider, they are more inclined to fail their provider in subsequent visits. This research provides a model for managers to manage customer loyalty and service more efficiently and enhance overall productivity. In addition, this research fills an important gap in appointment failures research by using patient behavior data rather than attitudinal measures to predict the likelihood of non-arrivals.

4 - Do Female Marketing Personnel do Better in Service Industries? Insight the Female Characteristics

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A lot of female marketing personnel work in service industries to face customers. This research demonstrates the advantages and correlations of the various factors of characteristics of female marketing personnel in service industries. Based on the theoretical assumptions, the hypotheses are that the advantages and correlations of female characteristics factors with gentleness, patience, compatibility, generosity, dexterous and endurance of female marketing personnel. Results are: (1) The female are stronger than the male in the characteristics factors with gentleness, patience, compatibility, generosity and dexterous of female marketing personnel, and endurance characteristic is not one of the female advantages characteristics factors of female marketing personnel. (2) There are correlations of the female characteristics factors in service industries. Conclusion is that female marketing personnel owning the female characteristics do better in service industries.

5 - Let Ill News Fly Apace: Firms' Response to Customer Complaints on Social Platforms

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Conventional wisdom as well as many industry reports hint that a firm should respond to customer complaints in an instant fashion in the digital world, since ill news flies apace, which is enabled by the social platforms, and thus lowers the utilities of the consumers who are exposed to and is detrimental to the firm's future profit. This argument, nevertheless, overlooks a pivotal role of the ill news that it also enables more consumers to be aware of the firm. We incorporate these considerations into a stylized model where a firm relies on social interactions among consumers for product diffusion. We investigate the firm's optimal strategy of response to customer complaints, and find that a firm with a large or a small customer base responds in a quick fashion, although for different reasons, while a firm with a median level of customer base responds in a dilatory fashion, to actually benefit from customer complaints. We also provide several anecdotal examples to justify our theoretical findings.

■ SC08

08- Adams

Structural Economic Models

Contributed Session

Chair: Anirban Mukherjee, Assistant Professor, Singapore Management University, 50 Stamford Road, #5056, School of Business, Singapore, 178899, Singapore, anirbanm@smu.edu.sg

1 - Modeling the Effects of Advertising Executions on Advertising Allocations and Consumer Purchases

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The effect of advertising on consumer purchase behavior is often analyzed in the literature while completely ignoring the content of the advertising. This is troubling since in practice, practitioners recognize the great importance of advertising content in addition to advertising exposure. We attempt to fill this gap in the literature by studying the effect of exposure to different creative executions on consumer purchases, controlling for the endogenous selection of different creative executions for different advertising slots. Analyzing a novel Nielsen-Catalina consumer panel data set that records exposure to different advertising creative executions and consumer purchase behavior, this research aims to model the demand for products and brands as a function of firms' advertising decisions as well as model the supply-side advertising decisions by firms as a function of advertising effectiveness on consumer demand. On the demand side, we specify interaction effects between the creative executions and characteristics of the advertising slot as they affect purchase behavior. We also intend to evaluate the extent advertising satiation effects occur for specific products, brands, or categories, and whether satiation is specific to different creative executions and advertising campaigns. The nature of advertising satiation effects (whether or not they are specific to different types of creative executions or different advertising campaigns) will be a key determining factor in the firms' decisions to invest in multiple creative executions and campaigns, and the effectiveness of the different advertising executions and their interaction effects on demand will determine the optimal advertising slots for each of the firms' creative executions.

2 - Estimating Dynamic Models of Price and Non-price Conducts in the Salty Snack Industry

Margil Funtanilla, Graduate Research Assistant, Texas Tech University, Mail Stop 2132, Lubbock, TX, 79409, United States of America, m.funtanilla@ttu.edu, Benaissa Chidmi

Market conditions change overtime and so do optimal strategies. Because of this, oligopolistic firms are faced with the essential challenge of formulating decisions on price, advertising, and promotions, among others, that will allow them to cope effectively with the changing circumstances. This task goes beyond learning whether a marketing policy will benefit or harm their products based on its cumulative effect on brand choice. It becomes indispensable to incorporate competitive considerations in assessing the long-term impact of marketing decisions (Jedidi, Mela and Gupta, 1999). As such, a firm develops its strategies based on price, advertising, and promotions while accounting for the fact that its choices affect the optimal future actions of its rivals. Using weekly scanner data from IRI and TNS advertising data for salty snack brands in different categories from 2001 to 2006, we examine pricing, advertising, and promotions conduct in the U.S. salty snack industry. Data descriptive indicates that at the national level, the consistent market leader controls about 62% of the dollar sales, its nearest competitors have shares of about 4% and 3%, respectively. The rest is distributed to numerous other companies including private label. At the market level,

interesting patterns emerge where relatively smaller manufacturers tend to specialize given that the large manufacturers generally offer a full range of products. To achieve our objective, we follow the methodology presented by Dube, Hitsch, and Manchanda (2005) wherein, a random coefficients logit model of demand for the salty snack industry is specified to estimate price, advertising, and promotions elasticity matrices. Demand estimates are used to determine the Markov Perfect Equilibrium pricing, advertising, and promotions strategies. Moreover, given the growing national concern surrounding the health impact of salty snacks, we use the elasticity estimates to simulate the welfare effects of taxes that can potentially be levied on salty snacks.

3 - Targeting Strategies in the US DVD Market: A Study of Dynamic Segment-Specific Competition

Anirban Mukherjee, Assistant Professor, Singapore Management University, 50 Stamford Road, #5056, School of Business, Singapore, 178899, Singapore, anirbanm@smu.edu.sg, Vrinda Kadiyali

The authors study dynamic competitive targeting strategies in the U.S. DVD market in 2000 - 2005. Consumers have different preferences for DVD freshness (number of weeks between theatrical and DVD release) and DVD price. The authors assess how different studios account for their rivals' targeting strategies as they tailor their own targeting strategies to serve different consumer segments. To estimate this game, the authors use the solution concept of time-nonhomogeneous Markov perfect Nash equilibrium. Estimates of the competitive game model are used to create a brand map and a metric of studio competition. They find that two studios, Disney and Lionsgate, target dissimilar consumers and face lower competitive pressures than other studios. There appear to be several "white spaces" or untargeted combinations of consumer segments that may be profitable.

■ SC09

09- Helicon

Survey Research: Improving Measures

Contributed Session

Chair: Pilsik Choi, Clark University, 950 Main Street, GSOM, Worcester, MA, 01610, United States of America, pchoi@clarku.edu

1 - Scale Orientation, Grids and Modality Effects in Mobile Web Surveys

Jeremy Loscheider, Research Analyst, Maritz Research, 1375 North Highway Drive, Fenton, MO, 63099, United States of America, jeremy.loscheider@maritz.com, Keith Chrzan, Ted Saunders

Respondents increasingly use smart phones to take web-surveys we design for a PC viewing environment. While researchers may not control the environment in which a respondent chooses to complete a web survey, there may be ways to improve web survey design for mobile respondents to offer a better survey experience. In this research we address two survey design questions: 1. Given that some previous research hinted that respondents scroll vertically more readily than horizontally, will we get better results (in terms of reliability, dropoff rates, straightlining and the halo effect) if we arrange scales vertically instead of horizontally? We see grid questions appearing to cause terminations among our mobile web respondents. Is this a function of the difficulty of the grid format or would we see the same dropoff if we break a k-item grid into k separate questions? We also investigate several comparisons of PC-web and mobile web experiences. 2. Do respondents display a mode preference? Does one modality show more drop-offs than the other? How long does the survey take in PC and mobile web environments? How does data quality (in terms of test-retest reliability and predictive validity) compare for PC and mobile web modes? We address the questions above using a multi-cell test-retest design for which we interviewed 1,505 respondents in November and December 2011.

2 - Quantifying Social Desirability Bias Through Item Randomized Response

Martijn de Jong, Professor of Marketing Research, Erasmus University, Burgemeester Oudlaan 50, Room H15-08, Rotterdam, Netherlands, mgdejong@ese.eur.nl, Jean-Paul Fox, Jan Benedict Steenkamp

In recent years, marketing and consumer behavior researchers have become increasingly interested in behaviors that are subject to dishonest reporting. Recently, item randomized response (IRR) has been introduced in the literature as a technique to obtain truthful answers to sensitive questions. While a number of methods have been proposed to check and correct for social desirability, few approaches exist that allow researchers to quantify the amount of social desirability bias in self-reports. This paper quantifies social desirability bias by examining within-person differences between answers obtained under direct questioning and randomized response via a mixed within-between-respondents design. The model controls for various behavioral effects. Furthermore, it relates the differences to covariates to examine which factors drive the need for privacy protection when answering sensitive questions. An empirical application is provided for excessive alcohol consumption, involving 1408 respondents from a GfK web-panel.

3 - Attention and Answers: Using Eye Tracking to Explore the Interaction of Respondents with Surveys

Daniel Stengel, Catholic University of Eichstaett-Ingolstadt, Auf der Schanz 49, Ingolstadt, Germany, daniel.stengel@ku.de, Joachim Bueschken

When collecting market research data through self-administered surveys, researchers routinely assume that all relevant information contained in the survey instrument (instructions, questions, scale descriptions etc.) is read and understood before answers are given. In particular, it is assumed that each question in a survey receives the attention necessary for respondents to provide a valid answer. We report results from an eye-tracking study coupled with a customer satisfaction survey to explore the question how respondents interact with the survey instrument. Eye movements are an indicator of attention and the search for information. We review the eye tracking literature from various disciplines and discuss why eye tracking is relevant to survey-based marketing research. On the basis of our empirical results we discuss: (1) the distribution of attention of respondents across questions and instructions, (2) patterns of eye movements across respondents, (3) dynamics in attention across questions and (4) the relationship of eye movements to survey answers and structural response styles. Our analysis provides novel insights into the relationship of respondents' attention with the results of a survey.

4 - Scale Response Biases Induced by Eye Dominance

Joseph Lajos, Assistant Professor of Marketing, HEC Paris School of Management, 1 Rue de la Liberation, Jouy en Josas, 78351, France, lajos@hec.fr

Just as most people have a dominant hand, most have a dominant eye, and, interestingly, hand and eye dominance are not strongly correlated. Previous research in psychology has demonstrated that eye dominance affects the amount of attention paid to the left and right visual fields. This project demonstrates that when people are asked to provide a scale response to a question about which they are uninformed or do not have a strong opinion, they tend to favor the side of the scale that matches their eye dominance. This finding is important since a very large amount of research in marketing, as well as other social sciences, utilizes scales, but rarely are the endpoints of scales counterbalanced. This project demonstrates the effects of eye dominance on scale responses across a large number of business contexts. The project also demonstrates related effects with numerous types of choice tasks.

5 - Understanding DVD Purchase and Rental Decisions by College Students

Pilsik Choi, Clark University, 950 Main Street, GSOM, Worcester, MA, 01610, United States of America, pchoi@clarku.edu

Despite the increasing number of studies on movies, little attention has been paid to issues related to DVD purchase and rental behavior. The present study attempts to fill this gap by investigating factors that influence consumers' decisions to buy and rent DVDs. Based on a survey administered to college students, this study finds that box office performance, and advertising and promotions do not significantly affect college students' decisions to buy or rent DVDs, which is contrary to popular beliefs. For DVD purchases, college students are more likely to buy DVDs of the movies that they enjoyed watching previously. For DVD rentals, availability significantly influences what movies will be rented at rental outlets. This study also finds that price is a very important factor for DVD purchases but is a much less important factor for DVD rental decisions. As an emerging trend, college students are less likely to rely on reviews by professional reviewers for DVD purchases and rentals, but more college students allow reviews by nonprofessional reviewers (e.g., friends, online postings) to guide their purchase and rental decisions. Managerial implications for movie studios, DVD retailers, and DVD rental outlets are also discussed.

■ SC10

10- St. George D

Models for Enhancing Marketing Decisions

Contributed Session

Chair: Feray Adiguzel, Assistant Professor, Erasmus University, Burgemeester Oudlaan 50, Marketing department, H15-15, Rotterdam, 3000DR, Netherlands, adiguzel@ese.eur.nl

1 - Active Learning for Top Expected Profits in Target Marketing

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Few studies address proactive acquisition of information for target marketing. To enable firms to make effective data-driven targeting decisions with only limited training data in the beginning, we consider a situation where firms have the freedom to acquire additional training data at a specific cost per data point within a fixed data acquisition budget. Active learning is an important machine learning technique for information acquisition, where unlabeled training examples are carefully selected for labeling – acquiring the values for dependent variables - to most benefit a single learning model in a cost-effective way. In this paper, we focus on a scenario in which the response model and revenue model are required to inform the estimation of expected profits for a budget-constrained

target marketing campaign with the objective of profit-maximization. This setting posits new challenges to the active learning paradigm. We now ask which unlabeled training examples should be acquired in order to benefit the top-ranked expected profit estimation in the most cost-effective way. We propose a novel active learning approach and validate it empirically using direct marketing data, and sales-tax audit targeting data. The results show that this new approach allows us to use less training data to achieve significantly higher targeting profit than do alternative active learning approaches. Firms should expand the set of active learning approaches to include the proposed one, so as to facilitate the realization of a more complex target-marketing objective.

2 - Proactive Churn Management - Let Sleeping Dogs Lie

Dennis Fok, Erasmus School of Economics, H11-01, P.O. Box 1738, Rotterdam, NL-3000 DR, Netherlands, dfok@ese.eur.nl

Many academic papers consider customer churn, in contractual as well as in non-contractual settings. The two main applications of these models are selecting likely churners, and identifying the determinants of churn. The typical application in practice would consist of the following steps (1) run a churn model; (2) identify the most likely churners; (3) contact them to convince them to stay with the company. In many cases the final step will involve a certain offer, such as a discount. In this paper we show that the above strategy is sub-optimal. More specifically, we study the impact of pro-actively contacting customers on the likelihood of churn. We distinguish the following dimensions of this contact: the timing, the offer, and the communication channel. Next we allow the impact of the customer contact to differ across individuals. The results show that simply selecting the most likely churners has two major disadvantages. First, people are contacted who are not responsive to the offer. Second, some customers, so-called sleeping dogs, are actually reminded of the possibility of leaving the company. Contacting them leads to an increase in the churn rate. An alternative selection based on the results of our model improves the effectiveness of the customers contact.

3 - Electric-circuit Analysis for Marketing Science: An Application to Product Recommendation

Joonhyuk Yang, Doctoral student, Graduate School of Culture Technology, Kaist, #3326, Bldg. N25, Kaist, Daejeon, 305701, Korea, Republic of, joonhyukyang@gmail.com, Wonjoon Kim, Jinwook Kim, Young Hwan Kim

We propose a preliminary, but groundbreaking, network analysis methodology combining electric-circuit analysis (ECA) with collaborative filtering (CF). In the field of electrical engineering, ECA is used to measure the potential differences between nodes on an electric circuit. In this paper, we apply ECA to transaction networks of users and items, i.e., user–item matrices, instead of to electric circuits. This approach enables us to avoid using typical CF similarity calculation methods such as the Pearson correlation or vector cosine. We conduct a set of experiments to evaluate the proposed algorithm, and find that ECA can be successfully incorporated into recommender systems, especially when combined with CF. Our work can be extended to social network analysis, especially measuring the social distance between individuals.

4 - Identifying Lost Sales with Navigational Patterns

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Despite growing rate of e-commerce economy worldwide, still the average global conversion rate appears low, 2- 3%. The total amount of lost sales in the online industry is approximately 6,5 billion per year. Lost sales are described as the revenue missed by an online store, due to the consumers who had a purchase intention when entering the store but ultimately did not buy a product or service. Prior research has focused on mainly factors influencing online conversion rates. However, not many studies investigated to identify lost sale consumers. The online shopping process is described as the completion of certain tasks or activities required for purchase consists of tasks such as locate product, shopping cart placement, provide personal information and transaction completion. Several researchers have been focusing shopping cart abandonment in the purchase stage of the online shopping process. However, this theory does not address to potential buyers in the information search stage of the shopping process. Purchase intention can be observed through the visitor's search behavior. This study integrates pre-visit search behavior i.e. referral source, site content variables, and in-store navigation patterns to differentiate visitors based on their navigational patterns and its relationship towards lost sales. Navigational patterns are used to construct the typology of store visits (direct buying, knowledge building, hedonic browsing and search deliberation). After identifying four types of visits and looking in depth which factors influence actual conversion, we can identify lost sales. The click stream data has been generated by a Dutch online store and contains information of all kinds of pages visited during a session and before the session.

■ SC11

11- Empire

Marketing Strategy

Contributed Session

Chair: Marcel Goic, Assistant Professor, University of Chile, Republica 701, Santiago, RM, 8370439, Chile, mgoic@dii.uchile.cl

1 - Product Introduction, Cannibalization and Competition

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Existing literature on timing of product launches focuses either on the threat of cannibalization of sales of existing products or on the effects of competition. We argue that both, intrafirm and interfirm competition, are interlinked and should therefore be simultaneously included in models of product introduction timing. We explicitly look at whether firms pull forward or postpone the introduction of a similar product, conditional on ownership of an existing product and the degree of similarity. Our theoretical argumentation is build upon two assumptions. First, similar goods share a common market in which firms compete for market share. Second, consumers have a preference for novelty, i.e. once a newer product is introduced, it takes away a considerable amount of sales from existing products. Therefore firms will postpone the introduction of a similar product to not cannibalize own sales, whereas they prefer a timely response to a rivals product introduction. To test our theory, we use the music industry as the empirical context of our study. Our results show that, in general, higher similarity leads to shorter distance between releases. This would indicate that labels, once they observe the launch of a rival product, prefer to release music of a similar artist to steal market share. However, controlling for an interaction term of similarity and same label, the effect turns, suggesting that firms coordinate their own introductions to avoid cannibalization.

2 - Incorporating Competitive Promotional Information in Forecasting SKU Product Sales for Retailers

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Retailers have been struggling trying to reduce the case of under-stock and over-stock in inventory planning. Under-stocking dissatisfies customers, while over-stocking incurs huge inventory cost and reduces profit. One of the keys to resolving this dilemma is through accurate product sales forecasting at the SKU level. In this paper, we propose more effective forecasting methods by incorporating competitive promotional information which has been surprisingly overlooked by previous studies. The impact of competitive promotions on product sales has been well recognized in the marketing literature. A large number of studies have been devoted to measuring the proportion of the sales increase/loss owing to competitive promotions. However, it is not straightforward to incorporate competitive promotional information. At the SKU level, a single product typically has hundreds of competitors within the product category, which leads to hundreds of competitive promotional variables. Incorporating all these variables would easily over-fit the model. In this paper, we implement two alternatively ways to solve this initial problem. The first is to identify the most informative variables using variable selection methods. The second is to pool the information across all the variables to construct a handful number of new factor variables. We then build the Autoregressive Distributed Lag (ADL) model following a general to specific modelling strategy with the identified informative variables and the constructed factor variables. Our forecasting methods with variable selection method exhibit superior forecasting performance compared to industrial practice and the econometric benchmark model which exclusively utilizes promotional information of the focal product.

3 - The Role of Complementary Multi-homing in Two-sided Markets: Implications for B2B Electronic Market

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Recent research in two-sided markets has realized the implications of the multi-homing, it reflects the quality of platform markets. Most previous literatures focused in particular on competitive multi-homing decisions of users (sellers or buyers), the choice of an agent in a user network to use two or more competing platforms. However users would participate in more than one platform with complementary application or functions, there is a need for scholars to conduct further investigations in order to fully understand the role of complementary multi-homing in this domain, especially the different roles of complementary multi-homing at the seller or buyer level. Complementary multi-homing decisions are of great importance to firms in many contexts. For example, lot of

users in eBay.com prefer to join Facebook too, it leads to eBay.com cooperate with Facebook to attract and motivate more buyers and sellers. And the main purpose of this study is to examine complementary multi-homing and its importance role in two-sided markets. With time -series data from a worldwide B2B electronic market, we show that (1) complementary multi-homing on the aggregate level has no significant effect on platform performance. But, there would be quite different if we distinguish its effectiveness at the seller or buyer level, (2) the complementary multi-homing at the seller level will reduce its effectiveness on the performance of platform, and (3) the complementary multi-homing at the buyer level will strengthen its effectiveness on the performance of platform. The result suggests that the two different types of complementary multi-homing can act adversely on the performance of platform.

4 - Dynamic Assortment Planning for Penny Auctions Websites

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In recent years many websites such as Beezid.com, Bidstick.com or pennygrab.com have popularized a new form of auction called penny auctions or pay to bid auctions. Under this mechanism, each auction begins at a price of zero and participants pay a small amount to bid. When a bid occurs, the price of the products increases by a small amount and the auction is extended by a few seconds. The auction ends when a commonly-observable timer runs out of time before another bid is placed. The last bidder pays the current price and wins the product. Companies offering penny auctions base their value proposition to attract customers on two main attributes: the possibility of winning very attractive product at heavily discounted prices and the entertaining aspect of the shopping experience. Deciding what products to offer in each point in time is one of the most important decisions in the marketing mix for these companies. In this project we propose a simple model to decide on the optimal assortment for the website that considers simultaneously the entertaining and profitability components of the strategy. Based on bid histories we estimate an econometric model to describe website visits and bidding behavior and, conditional on them, we propose a simple mechanism to determine the next product to be made available in the website.

■ SC12

12- Parliament

Bayesian Choice II

Contributed Session

Chair: Christine Eckert, University of Technology, Sydney, P.O. Box 123, Broadway, 2007, Australia, christine.eckert@uts.edu.au

1 - Consumer Brand Choice & Experiential Quality Learning: Semantic versus Episodic Retrieval

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Consumers learn about the quality of a product through multiple consumption experiences from repeated purchases. In the traditional learning model, a consumer is assumed to make brand choice based on solely the overall quality evaluation (updated quality belief) that she has formed over her entire consumption history. However, the behavioral literature on information processing and memory-based judgment suggests that the consumer stores not just the overall quality information (in the semantic memory) but also context specific usage experiences (in the episodic memory) and while making a brand choice, she uses pieces of information from either of these memories, depending on idiosyncratic traits as well as situational factors. In this paper, we propose a structural econometric model with Bayesian learning that allows for a dual process model of memory-based judgment allowing for recall from either the semantic or episodic memories. Further, barring a few papers (Mehta, Rajiv and Srinivasan, 2004; Lovett, 2008; Ching and Ishihara, 2010), the extant quality-learning models assume that the consumer has perfect memory so that she can retrieve prior quality evaluations with no errors. In contrast, consumers in our model have imperfect memory i.e., memory retrieval occurs with errors. In fact, it is the explicit modeling of these errors that allow us to econometrically identify and distinguish between the alternative retrieval mechanisms. The paper also attempts to empirically test hypotheses based on prior findings (of both experimental and MRI-based studies) – about the factors that affect the recall from semantic versus episodic memory. We calibrate the proposed model using scanner panel data on laundry detergents and diaper dataset.

2 - Market Basket Analysis Using Bayesian Networks

Sanal Mazvancheryl, Assistant Professor, American University, 4400 Massachusetts Ave, Washington, DC, 20015, United States of America, sanal@american.edu, Srinivas Prasad, Pradeep Rau, Refik Soyer, Xiaojun Li

This paper addresses the question of how promotions work across categories. Promotions in one product category can affect sales of products in another category either directly or indirectly. Given a set of product categories and market basket data, we analyze the presence of cross category impacts using Bayesian Networks. We model the occurrence of a product category, and not the number of units (of a product category) in a basket. The data set we employ is an IRI market basket data set that contains transactions including 22 categories over 2 years for 500 panelists. Bayesian networks are learned from this data and are used to identify the underlying dependencies across product categories. Specifically, we study how the associations across categories vary based on marketing mix activities, and also based on demographics. The results from such an analysis can help in 1) identifying clusters of categories wherein associations exist primarily between categories within a cluster and not across clusters, and 2) in making predictions on basket choices given a set of specific marketing mix activities. The ability of Bayesian networks to learn based on new evidence also makes such an approach possible in an online context when customers' choices can be observed and marketing activities can be dynamically customized.

3 - Copula-based Simultaneous Approach to Multivariate Alternative Choice and Quantity Choice

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This paper aims to examine correlations in shopping situations. First, there is a certain amount of correlation between alternative choices. Specifically, the alternatives from different categories but from a same brand might be purchased together. Second, alternative choice and quantity choice could be correlated each other. A consumer tends to purchase tooth paste with large amount, but hand cream with small amount. Third, quantity choices could be correlated each other. The purchased quantity of fabric softener should depend on the purchased quantity of laundry detergent. To explain these correlations, the model must deal with multivariate incidence and quantity outcomes. Therefore, we developed a new copula-based approach to simultaneously deal with them, so that it could directly control and capture the correlations. Also, we found that if the copula function is a multivariate-FGM copula, then the likelihood is closed form that is easy to estimate. We apply this model to IRI scanner panel data and estimate the model by using Bayesian method. In this data set, we could find strong dependencies between alternative choices, between alternative choice and quantity choice, and between quantity choices. In addition, more efficient promotion strategy of two products from a same brand but different categories is drawn from our model.

4 - Incorporating Prior Information to Overcome Complete Separation Problems in Discrete Choice Models

Christine Eckert, University of Technology, Sydney, P.O. Box 123, Broadway, 2007, Australia, christine.eckert@uts.edu.au, Bart Frischknecht, John Geweke, Jordan J. Louviere

We describe a modified maximum likelihood method that overcomes the problem of complete or quasi-complete separation in multinomial logistic regression for discrete choice models with nite samples. The modification consists of augmenting the observed data set with artificial observations that reflect a prior distribution centred on equal choice probabilities. We demonstrate through Monte Carlo simulations of data sets as small the minimum degrees of freedom case that the modified maximum likelihood approach leads to superior parameter recovery and out of sample prediction compared to conventional maximum likelihood. We explore the role the prior weight plays on parameter recovery and out of sample prediction by varying the weight given to the prior versus the weight given to the data in the likelihood function. We demonstrate a numerical procedure to search for an appropriate weight for the prior. One application for the proposed approach is to estimate discrete choice models for single individuals using data from discrete choice experiments. We illustrate this approach with Monte Carlo simulations as well as four data sets collected using online discrete choice experiments.

■ SC13

13- North Star

Entertainment Marketing III

Contributed Session

Chair: Rui Huang, Assistant Professor, University of Connecticut, 1376 Storrs Rd U4021, Storrs, CT, 06269-4021, United States of America, rui.huang@uconn.edu

1 - Should Movie Producers Care? The Impact of Product Placement on Movie Performance

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This paper will examine the role of product placements in influencing movie performance. Product placements have become a firmly established practice in the movie industry. Despite the increasing investment directed to product placements, previous research has only examined the antecedents of product placement performance and no study has quantitatively examined the other side of the story, namely, the effect that placements may have on the performance of movies. This phenomenon is of critical importance to both film producers and to brand managers, since movies may reap the benefits of certain product placements or pay the price for others. This is because well-integrated placements may play a key role in developing the story or thematic elements, and may serve to enhance the realistic nature of scenes in movies. On the other hand, blatant or inappropriate placements may destroy the viewer's experience with the film. Both brand managers and producers wish to know the performance outcome of

a placement and the effect of the placement on movie performance so that they can select the appropriate placements and negotiate appropriate prices. In order to address this problem, we develop a model to simultaneously capture the effect that placement quality has on both movie and placement performance. This paper will utilize an event study to calibrate the proposed model in order to predict placement cumulative abnormal returns and box office revenue. Through a hierarchical linear model, unobserved heterogeneity will be captured while endogeneity that may exist between placement quality and movie quality will be accounted for using a latent instrumental variables approach. Our approach will provide insights that inform both managerial and producer decision-making.

2 - Continuity, Change and New Product Performance

Enrico Forti, Research Associate, University College London, Malet Place, Department of Management Science and Inn, London, WC1E 7JG, United Kingdom, e.forti@ucl.ac.uk, Andrea Vezzulli, Maurizio Sobrero

New product decisions present managers with trade-offs between continuity and change. How these trade-offs are resolved determines product performance, but systematic evidence documenting the outcomes of managing continuity and change within and across decision domains is lacking. We leverage unique data regarding the global music industry to tease apart the effect of continuity- and change-related decisions on the performance of new products. Different strategic profiles are evaluated across two domains theoretically modeled to articulate trade-offs in the strategic decision making space: product attributes and members of the production team. Results show that implementing continuity and change within and across decision domains increases new product performance. Our dataset combines numerous electronic sources to provide a comprehensive history of new product development (and subsequent introduction) in the music industry and, for the first time, reliable measures of product performance. Consequently, it offers a rare opportunity to test hypotheses about product continuity/change in contexts characterized by established incumbents that release series of products overtime controlling for potential confounding factors.

3 - Star Wars and Cereal Wars: Managerial and Policy Implications of Food Marketing with Movie Tie-ins

Rui Huang, Assistant Professor, University of Connecticut, 1376 Storrs Rd U4021, Storrs, CT, 06269-4021, United States of America, rui.huang@uconn.edu, Hongju Liu, Adam Rabinowitz, Joshua Berning

The past two decades have witnessed an explosion of movie tie-ins, i.e., featuring movie characters on product packages, as a way to market food and beverages to children. Little research has examined this phenomenon. This research takes the first step towards understanding the managerial and policy implications of movie tie-ins. Combining detailed data on household purchases, advertising, product packaging, and movie characteristics, we empirically investigate the effects of movie tie-ins in the children's breakfast cereal category and its interactions with other marketing mix variables including product characteristics, price, and advertising on consumer choices. We first estimate a state-of-the-art random coefficient discrete-choice model of cereal demand that allows movie tie-ins, product characteristics and the marketing mix to heterogeneously influence consumers' choices. The demand estimates provide insights to firms on how to choose the right combination of product, movie, and marketing mix to use movie tie-ins to increase profitability. As policy makers are considering restricting advertising of unhealthy products, we then simulate the likely market outcomes when movie tie-ins are limited to healthy products only. Thus our results are helpful for both managerial and policy making decisions.

■ SC14

14- Defender

Brands - General

Contributed Session

Chair: Dinesh Gauri, Syracuse University, 721 University Ave, Syracuse, NY, 13214, United States of America, dkgauri@syr.edu

1 - Consumer Risk Reduction Behavior of New Brand Purchase

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Consumers are faced with uncertainty when determining whether a new brand is of high quality. Risk is involved when consumers have the option to purchase a new brand because the brand quality may not fit their tastes. The objective of this study is to examine how consumers reduce such a risk on on their initial, or trial purchase of a new brand. Many authors demonstrate that consumer can reduce the risk of new product purchase by using quality signals including price and advertisement. However, very little is known about how consumers decide purchase quantity of a new brand as a risk reduction strategy. Suppose consumers are not satisfied with the new brand quality at a subsequent usage occasion. If consumers purchase a smaller quantity at a purchase occasion, they can minimize their risk of using this disappointing brand. This implies that if consumers face diminishing marginal utility for the brand, their utility function may become more concave rather than linear and satiation occurs at a smaller quantity when consumers purchase the new brand on a given purchase occasion. The hypothesis of this study is that satiation occurs at a smaller quantity when consumers purchase a new brand. In order to test this hypothesis, we use the multiple discrete continuous extreme value (MDCEV) model developed by Bhat (2005, 2008). With this approach, the model is able to test the degree of satiation which is the focus of this study. The estimation result shows that when consumers purchase a new brand, their utility function in this brand becomes more concave and satiation occurs at a smaller quantity, which supports the hypothesis of this study. This suggests that consumers reduce the risk of a new brand by purchasing a smaller than usual quantity on their trial purchase.

2 - A Latent Structure Model for Investigating the Disparity of PL Presence in the International Market

Mouna Sebri, PhD Student, HEC Montreal, 14-3760 St. Kevin, Montreal, H3T 1H7, Canada, mouna.sebri@hec.ca, Georges Zaccour

Private label products have revolutionized the grocery categories. In 36 countries studied by ACNielsen (2005) consumers spent 17% of total sales on PL packaged goods. Although popular internationally, PL market shares vary markedly ranging from 0.2% in India to 41% in Switzerland (2008). While PL brands have reached maturity stage in certain countries (France, USA.) they still struggle to enjoy a respectable position in others (Peru, Slovenia...). Someone can ask why PL enjoys a large market in some countries while it hardly penetrates others. What makes a market favourable to PL development? Are there any groups of countries that are differentiated by particular specificities in terms of PL presence? This study aims to address a relatively less-researched topic in the international marketing literature that is factors explaining the variation of PL penetration within an international context. This paper overcomes this absence and offers an understanding of international markets mechanisms by investigating empirically the factors behind these disparities using a large cross country, time-series dataset and following an encompassing approach including a number of relevant economic, social and cultural determinants. In deriving the model we suspect that countries belong to a finite number of groups and that, in addition to the available variables exist unobservable moderating factors that account for heterogeneity. By adopting a latent structure formulation we allow to create latent country segments in order to capture the potential heterogeneity among geographic markets and outline their underlying determinants in PL adoption. This approach is attractive because it combines market structure, countries segmentation and potential factors sensitivity in a unique framework.

3 - Bases of Power of Brand and its Impact on Consumers' Attitude and Behaviour in a Brand Consumer Relationship

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Recent insights from research in brand-consumer relationships (BCR) indicate that consumers form relationships with brands in the same way as they form relationships with other people in a social context (Aggarwal, 2004; Fournier, 2009). Social psychology and organizational behavior literature indicates that the concept of power is central to the dynamics of social and personal relationships (Oyamot, Fuglestad and Snyder, 2010). The concept of power has been examined in various domains of marketing activities, especially in the distribution and sales management contexts. Also in the BCR context, the emergence of power of brand, when it interacts with the consumers on a collective platform resulting in brand communities or when brands attain cult-like status, has been documented and studied. Despite this interest in brand and its power, literature that examines interpersonal power exerted by the brand in a BCR dyad is limited. Also how the power of a brand impacts consumer's behaviour and attitude towards the brand is not known. This study tries to address this gap. The study borrows the concept of power bases from the interpersonal relationship literature. It examines the presence of different power bases in a BCR through a set of qualitative interviews of 15 customers. The power typology given by French and Raven (1959) got confirmed in the BCR. Further an attempt is made to understand how different power bases of brand - positional legitimate, referent and expert, affect consumers' brand engagement and brand switching intention. It is also hypothesized that brand dissonance and brand forgiveness undertaken by consumers during a transgression in a BCR would also differ due to the power base of the brand.

4 - Composite Product Choice and its Effects on Partner Brands

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Ingredient branding research has examined "stated" factors that influence composite product attitudes. Using scanner panel data, we estimate a brand choice model investigating "revealed" choice of complements based composite products (e.g., Tide with Downy fabric softener) and find that despite high fit between the composite product and the host brand, distinct consumer segments have different choice likelihood of these products. While ingredient brand users are indifferent; joint loyal (and exclusive) users of both host and ingredient

brands are less attracted to these composite products compared to users of host brand. Also, our findings that choice of composite product does not provide positive feedback effect to the ingredient brand and that introduction of composite product benefits host brand more than the ingredient brand contributes to prior research which suggests similar positive feedback effects and symmetric benefit for both partner brands. Finally, our finding that introducing composite product does not cannibalize the sale of host brand extends the ingredient branding literature which has been silent on this issue.

■ SC15

15- Great Republic

Dynamic Empirical Models

Contributed Session

Chair: Ashwin Aravindakshan, University of California-Davis, Graduate School of Management, Davis, CA, United States of America, aaravind@ucdavis.edu

1 - New Product Introduction and Cannibalization for Multi-brand Companies

Xin-Yu Zou, PhD Candidate, University of Zurich, Institute of Business Administration, Chair for Marketing and Market Research, Plattenstrasse 14, Zurich, 8032, Switzerland, xin-yu.zou@uzh.ch, René Algesheimer, Florian Stahl

For a multi-brand company, a newly introduced product not only cannibalizes sales from fellow products belonging to the same brand, but also sales of products from other brands owned by the company. This research project aims to empirically identify and measure cannibalization effects within the focal brand and across all brands under the same multi-brand company. We adopt a multi-level time series model as the backbone of our project to decompose the sales. It helps to measure the cannibalization level during new product introduction and to identify influential factors on cannibalization. We collected data over a three-year horizon from 2005 to 2008. The 9328 observations are composed into 27 companies operating 50 brands. Although previous research in marketing literature has studied cannibalization, our research uniquely contributes to the current literature by featuring the following characteristics. We study cannibalization across brands, studying the cannibalization of baseline sales and promotional sales altogether. We also take into consideration how brand strength influences cannibalization. We choose the automobile industry as our research subject because the automobile industry has long being known as a mature and saturated market where creating niches are difficult yet easy to incur cannibalization. This research provides important managerial implications for the multi-brand company and its competitors by attributing the new product sales to different shares gained from competition, cannibalization or unique new demand and by illustrating how cannibalization is affected by promotional efforts and brand strength.

2 - Can We Curb Retail Sales Volatility Through Marketing Mix Actions?

Gokhan Yildirim, PhD Student, University Carlos III, Madrid, Calle Madrid, 126, Madrid, 28903, Spain, gyildiri@emp.uc3m.es, Mercedes Esteban-Bravo, Jose M. Vidal-Sanz

Sales uncertainty is a central problem for marketing management. Marketers tend to focus on expected sales rather than short-term time-varying oscillations. With long supply-chain streams, the Bullwhip effect can turn retail sales volatility into a major problem for upstream companies. While it has been recognized that conditional expected sales change through time (for a review see Dekimpe and Hanssens, 2000), marketers have not yet started modeling explicitly time variation of sales' conditional variances. In this paper, we focus on this issue, modeling and forecasting time-varying retail sales and marketing mix volatility and their crossed effects within brand, and between competitive brands. We analyze up to 6 product categories sold by Dominick's Finer Foods, finding volatility and co-volatilities in all of them. We discuss managerial implications for brand management and competitive strategy.

3 - Promotions and Popular Seasonal Events

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Promotions linked to seasonal events such as the Soccer World Cup or the Olympics are very popular. Yet, managers are unsure about the effectiveness of investing heavily in price promotions when large seasonal events take place. On the one hand, promotions may be more effective because demand is higher, and promotions can use the event 'hook' that captures consumers' attention (e.g., Soccer World Cup), especially for special target groups with high involvement in this event. On the other hand, the excessive number of promotions and advertisements concentrated in a short time period causes a 'cluttered' environment, such that the response of consumers to marketing efforts may decrease. Key words: price promotions, promotional clutter, seasonal events, promotional timing This study empirically examines to what extent manufacturers and retailers allocate their promotions towards large popular event, and whether promotions are more or less effective at these times. Moreover, we study the moderating effect of various category and brand characteristics on the use and effectiveness of promotions during seasonal events. We examine four years of weekly scanner panel data from 61 grocery categories and the 4 largest Dutch grocery stores. This data is combined with advertising data, and category and brand characteristics collected through a consumer survey. Preliminary results indicate that many brands and categories focus their promotions on event times, but not all of them benefit from promoting during large events. The findings result in important insights for managers on the opportunities of promoting when popular seasonal events take place.

4 - Impact of Consumer Memory in Advertising

Ashwin Aravindakshan, University of California-Davis, Graduate School of Management, Davis, CA, United States of America, aaravind@ucdavis.edu, Prasad A. Naik

Most advertising models posit that awareness declines immediately and gradually after advertising stops. However, several studies in the behavioral literature in marketing established that consumers remember ads for a certain period of time before forgetting occurs. Recent empirical work also illustrates this phenomenon of delayed forgetting of ads in the absence of advertising spending. This study augments the literature by investigating the issue of ad memorability in the presence of continued ad spending. We empirically corroborate the proposed model structure. The empirical results and managerial contributions will be discussed.

■ SC16

16- St. George A

Retailing: Game Theory

Contributed Session

Chair: Erik Bushey, University of Illinois at Urbana-Champaign, Urbana, IL, United States of America, bushey1@illinois.edu

1 - Competition in Shopping Experience

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This paper analyzes the competitive role of retail shopping experience in markets with consumer search costs. We examine how a retailer's advantage in providing consumer shopping experience affects its equilibrium pricing and price advertising strategies. We find that if the consumer value of shopping experience is sufficiently low, its effect on retailer strategy is similar to that of quality and then the retailer with the advantage in shopping experience also deploys higher levels of price advertising. On the other hand, when shopping experience is valuable enough for consumers, it acts akin to price advertising in that it makes it optimal for the retailer with the advantage in shopping experience to eschew price advertising. The optimal competitive investments in consumer shopping experience can be higher than that of a monopoly. The profit impact of shopping experience for a retailer depends on the level of the shopping experience variable: For low levels, it depends on the difference in the levels between the retailers, but for high enough levels it depends only on whether the retailer's shopping experience is higher than that of its rival. As a result, when the costs of investments in shopping experience are low enough, the equilibrium investment in shopping experience is in mixed strategies.

2 - Commodities Fleeing: Pricing Strategies for Manufacturer in the Dual-channel Supply Chain

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The phenomenon of commodities fleeing is very popular in many industries especially for the hot product of multinational firms in China, which is partially due to the imperfect law system. In essence, commodities fleeing is a kind of across-channel or trans-regional sale made by some intermediates (including retailers) who violate manufacturer's distribution channel policy to gain extra profit as speculators. While channel coordination has long been a key research issue in the field of marketing research, little attention has been paid to the channel conflict caused by commodities fleeing, which occurs mainly in China. To fill this gap, we examine the optimal pricing strategies for manufacturer by considering commodities fleeing in the framework of supply chain. We first study the price equilibria and the mechanism how the cost differential gives rise to retail price differential between two different regions under the normal channel structure without commodities fleeing. Then we propose four wholesale pricing strategies for manufacturers who confront with the commodities fleeing occurring in supply chain. And we derive the analytical forms of equilibrium prices under each pricing strategy. Finally, by numerical study, we explore the channel members' behavior under different parameters. The results of numerical study reveal that the manufacturer's optimal pricing strategy tends to tolerate or encourage the speculators to have the behavior of commodities fleeing and the situation of retailer quoting a higher price is worse off.

3 - Signaling Value Through Assortment

Yuanfang Lin, University of Alberta, 3-23L Business Building, Edmonton, AB, T6W 1K3, Canada, yuanfang.lin@ualberta.ca, Dmitri Kuksov

This paper addresses the retailer's decision in assortment and pricing by offering an explanation for when and how a retailer of high-end product can signal its profit margin due to different cost types to consumers who have the option of revolving uncertainty through searching. A vertically-differentiated two-product model is presented in which two retailers originally each carrying one product. The store carrying high-end product could have high or low marginal cost which is unknown to consumers. Having the concern that shopping at the high-end retailer might end up paying a price too high, consumers have the option of searching and finding out the true cost type of high-end product in a highly competitive second market. When the search in a second marketplace involves cost, an opportunity arises for the high-end retailer to signal its cost type and prevent consumer search using various marketing tools. We derive equilibrium under which different marketing mix(es) can be used by high-end retailer to signal its cost type. In particular, we distinguish situations where high-end retailer of high marginal cost can signal its type through (1) pricing alone, or (2) increasing assortment length by adding low end product, or (3) increasing assortment length and adjusting price of the high end product. Our paper thus shed light on the study on how retailer assortment affects consumer choice in a competitive context where consumers are heterogeneous and have uncertainties in their shopping process.

4 - A Game Theoretical Analysis of the Winners and Losers under a Category Captain Arrangement

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Traditionally retailers have assumed control over all of the category management decision making within their store. Recently some retailers have begun to assign part or all of their category management decisions to one of the manufacturers within the category. This process is referred to as category captainship. The manufacturer who assumes category management decision making responsibilities is referred to as the category captain and may make decisions including setting retail prices, assigning shelf space to each brand, arranging and displaying promotional materials and designing promotions. The consensus within the marketing and retailing literature is that manufacturers are eager to be chosen as category captains. When assigned control over additional category management decisions, the category captain is able to benefit at the expense of the other manufacturers. The retailer is also assumed to be in favor of this relationship, since fewer decision makers within a supply chain should result in greater supply chain efficiency. These assumptions have lead to many retailers adopting the practice of category captainship. As a result of category captainship increasing in popularity, concerns over potential anti-competitive actions taken on behalf of the category captain have been raised. In this paper we design a series of analytical models to further investigate these issues. In our model where we allow the category captain to only control pricing decisions, we find that while category captainship has the potential to benefit the manufacturer chosen to be the category captain, if the retailer acts strategically the practice of category captainship benefits the retailer at the expense of all of the manufacturers, including the category captain. Counterintuitively, we find that manufacturers, including the category captain, are even worse off when category captains are allowed to control other marketing variables in addition price. In all of our models we find that the retailer and consumers benefit the expense of the manufacturers.

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TB16 Game Theory in Marketing I

Thursday, 1:30pm - 3:00pm

TC01 Search Marketing - II
TC02 Promotion & Customer Response Analysis
TC03 Social Media's Impact on Firm Performance
TC04 Consumer Behavior I
TC05 Meet the Editors I
TC06 Health Marketing - Behavior
TC07 Social Influence and Profitability
TC08 Recent Developments in Structural Learning Models
TC09 Conjoint Analysis II
TC10 New Product Adoption II
TC11 Channel Governance and Contracting I
TC12 Sales Force Control Mechanisms
TC13 Research on Media-Platform Marketing and Two-sided Markets
TC14 Online Advertising
TC15 Top Management Processes and Marketing Investments: The Role of Strategic Flexibility Incentives, and Social Networks
TC16 Game Theory In Marketing II
TC17 Agent-Based Modeling

Thursday, 3:30pm - 5:00pm

TD01 Search Marketing - III
TD02 Modeling Online Behaviors
TD03 Spillover Effects of New Media
TD04 Consumer Behavior - Decision Making
TD05 Meet the Editors II
TD06 Pricing I
TD07 Mobile Marketing
TD08 Marketing in Emerging Markets
TD09 Multiattribute Choice Models
TD10 New Products Adoption III
TD11 Consumer Channel Choice
TD12 Bayesian Methods I
TD13 Bidding Strategies and Design in Quality Auctions
TD14 Global Branding
TD15 Marketing and Firm Performance I
TD16 Channels: Game Theory I
TD17 Consumer Promotion Response

Friday, 8:30am - 10:00am

FA01 Adoption & Diffusions in Social Networks
FA02 Online Customer Behavior - I
FA03 Online Pricing & Promotions
FA04 Consumer Behavior II
FA05 Uncovering Managerial Insights From Video Data
FA06 Consumer Health & Marketing: The Impact of External Cues & Internal Motivations on Consumers' Food Choices
FA07 Extant Research on Customer Management
FA08 The Dynamic Effects of Strategic Responses to Market Incentives I
FA09 Consumer Preference Elicitation: Insights and New Methods
FA10 New Product Development
FA11 New Product Development and the Marketing/Operations Interface
FA12 Bayesian Estimation of Structural Models in Marketing
FA13 Social Influence I
FA14 Measuring Brands
FA15 Marketing Metrics
FA16 Retailing and Operations: Analytic Models

Friday, 10:30am - 12:00pm

FB01 Relationships Among Social Media Actors
FB02 Online Customer Behavior - II
FB03 Social Media and WOM - I
FB04 Goals and Decision-Making
FB05 2011-12 Gary L Lilien ISMS-MSI Practice Prize Competition - Finalists Presentations
FB06 Pharmaceutical Marketing
FB07 Customer Relationship Management II
FB08 The Dynamic Effects of Strategic Responses to Market Incentives II
FB09 Choice Models I
FB10 Innovation I
FB11 Supply Chain Issues at the Marketing-Operations Interface
FB12 Bayesian Methods II
FB13 Entertainment Marketing I
FB14 Brand and Intellectual Property Management
FB15 Marketing Productivity and Customer Value II
FB16 Sales Force: Game Theory

Friday, 1:30pm - 3:00pm

FC01 Social Media and Brands
FC02 Customer Responses to Online Strategies - I
FC03 Social Media and WOM - II
FC04 Cross-Cultural Applications
FC05 Panel Session: Funding and Support for Marketing Scientists: An Overview of Relevant
FC06 Pricing: Bundling
FC07 Customer Relationship Management - Loyalty
FC08 Structural Models: General
FC09 Models for Heterogeneity
FC10 New Products Strategy
FC11 Panel: Research Opportunities at the Marketing/Operations Interface
FC12 Bayesian Methods III
FC13 Entertainment Marketing: Movies I
FC14 Marketing Strategy I
FC15 Marketing Strategy: Firm Performance
FC16 Game Theory Strategy II

Friday, 3:30pm - 5:00pm

FD01 Online Advertising & Promotion
FD02 Customer Responses to Online Strategies - II
FD03 Social Media and Product Development
FD04 Decision Making I
FD05 ISMS Doctoral Dissertation
FD06 Pricing II
FD07 Online Word-of-mouth Advertising and Market Outcomes
FD08 Empirical Projects from Young Marketing Researchers
FD09 Choice Models II
FD10 Innovation II
FD11 Competition
FD12 Bayesian Applications - CRM
FD13 Entertainment Marketing: Movies II
FD14 Advertising Response
FD15 Marketing and Firm Performance II
FD16 Game Theory: Applications

Saturday, 8:30am - 10:00am

SA01 Designing Interfaces for Dynamic Consumer Behavior
SA02 Effects of Online WOM
SA03 Churn and Customer Management
SA04 Emotions
SA05 Packaging Strategy
SA06 Health Marketing
SA07 Customer Relationship Management - Satisfaction
SA08 Dynamic Structural Models I
SA09 Choice Models III
SA10 New Product Diffusion II
SA11 Channel Governance and Contracting II
SA12 Bayesian Econometrics: Applications
SA13 Entertainment Marketing II
SA14 Marketing Strategy II
SA15 Innovations and Firm Performance
SA16 Channels: Game Theory II

Saturday, 10:30am - 12:00pm

SB01 Personalization and Customization
SB02 Customer Reviews/User-Generated Content
SB03 The Impacts of New Media - I
SB04 Aesthetics
SB05 International Topics
SB06 Pricing: B2B
SB07 Services Marketing
SB08 Dynamic Structural Models II
SB09 Survey Research: Improving Methods
SB10 Innovation III
SB11 Privacy and Marketing
SB12 Bayesian Choice I
SB13 Social Influence II
SB14 Advertising Strategy
SB15 Marketing and Firm Performance III
SB16 Game Theory In Marketing III

Saturday, 1:30pm - 3:00pm

SC01 Online Channel
SC02 Online Customer Behavior
SC03 The Impacts of New Media - II
SC04 Decision Making II
SC05 Marketing in Indian Subcontinent
SC06 Pricing Structures
SC07 Topics in Services
SC08 Structural Economic Models
SC09 Survey Research: Improving Measures
SC10 Models for Enhancing Marketing Decisions
SC11 Marketing Strategy
SC12 Bayesian Choice II
SC13 Entertainment Marketing III
SC14 Brands - General
SC15 Dynamic Empirical Models
SC16 Retailing: Game Theory


ATLANTA2014
2014 INFORMS Marketing Science Conference
June 12-14, 2014 (tentative)
Emory University's Goizueta Business School
Atlanta, GA
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2012 INFORMS Marketing Science Conference Summary Schedule

	Room	Essex South	Essex North Center	Essex North West	Courier	Essex Center	St. George B	St. George C	Adams	Helicon	St. George D	Empire	Parliament	North Star	Defender	Great Republic	St. George A	Essex North East
	Track	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17
THURSDAY	7:00 AM	Registration																
	7:30 AM	Continental Breakfast																
	8:30 AM	Valuing Online Activities and Businesses	Customer Analysis and CLV I	Social Media and the Facebook Effect	Market Segmentation	Invited: Consumer Search and its Impact on Choice	Cause Marketing	Customer Relationship Management I	Invited: Structural Models of Dynamic Oligopoly	Conjoint Analysis : Methods	New Products Diffusion I	Geographic Models	Retailing	Two-Sided Markets	Brand Equity	Invited: Marketing Productivity and Customer Value I	Game Theory Strategy I	
	10:00 AM	Morning Break																
	10:30 AM	Search Marketing I	Customer Analysis and CLV II	Social Media — Commerce & Context	Consumer Behavior — Preferences	Invited: Networks & Marketing: New Perspectives & Ideas	Consumer Response to Green Marketing	Invited: User-Generated Content and Word-of-Mouth	Invited: Structural Models of Sports Marketing	Conjoint Analysis I	New Product Adoption I	National Brands and Private Labels	Sales Force	Auctions	Advertising and Unique Topics	Invited: How the Stock Market Alters Company Strategies	Invited: Game Theory in Marketing I	
	Noon	Lunch																
	1:30 PM	Search Marketing II	Promotion & Customer Response Analysis	Social Media's Impact on Firm Performance	Consumer Behavior I	Meet the Editors I	Health Marketing — Behavior	Invited: Social Influence and Profitability	Invited: Recent Developments in Structural Learning Models	Conjoint Analysis II	New Product Adoption II	Channel Governance and Contracting I	Sales Force Control Mechanisms	Invited: Research on Media-Platform Marketing and Two-Sided Markets	Invited: Online Advertising	Invited: Top Management Processes & Marketing Investments	Game Theory in Marketing II	Agent-Based Modeling
	3:00 PM	Afternoon Break																
	3:30PM	Search Marketing III	Modeling Online Behaviors	Spillover Effects of New Media	Consumer Behavior — Decision Making	Meet the Editors II	Pricing I	Invited: Mobile Marketing	Invited: Marketing in Emerging Markets	Multiattribute Choice Models	New Products Adoption III	Consumer Channel Choice	Bayesian Methods I	Invited: Bidding Strategies and Design in Quality Auctions	Global Branding	Marketing and Firm Performance I	Channels: Game Theory I	Consumer Promotion Response
	5:30 - 7:30 PM	Reception																
FRIDAY	7:00 AM	Registration																
	7:30 AM	Continental Breakfast																
	8:30 AM	Adoption & Diffusion in Social Networks	Online Customer Behavior I	Online Pricing & Promotions	Consumer Behavior II	Invited: Uncovering Managerial Insights from Video Data	Invited: Consumer Health & Marketing: The Impact of External Cues & Internal Motivations on Consumers' Food Choices	Invited: Extant Research on Customer Management	Invited: The Dynamic Effects of Strategic Responses to Market Incentives I	Invited: Consumer Preference Elicitation: Insights and New Methods	New Product Development	Invited: New Product Development and the Marketing/ Operations Interface	Invited: Bayesian Estimation of Structural Models in Marketing	Social Influence I	Measuring Brands	Marketing Metrics	Invited: Retailing and Operations: Analytic Models	
	10:00 AM	Morning Break																
	10:30 AM	Relationships Among Social Media Actors	Online Customer Behavior II	Social Media and WOM I	Goals and Decision-Making	Invited: 2011-2012 Gary L. Lilien ISMS-MSI Practice Prize Competition—Finalists' Presentations	Invited: Pharmaceutical Marketing	Customer Relationship Management II	Invited: The Dynamic Effects of Strategic Responses to Market Incentives II	Choice Models I	Innovation I	Invited: Supply Chain Issues at the Marketing/ Operations Interface	Bayesian Method II	Invited: Entertainment Marketing I	Invited: Brand and Intellectual Property Management	Invited: Marketing Productivity and Customer Value II	Sales Force: Game Theory	
	Noon	Lunch																
	1:30 PM	Social Media and Brands	Customer Responses to Online Strategies I	Social Media and WOM II	Cross-Cultural Applications	Panel: Funding and Support for Marketing Scientists	Pricing: Bundling	Customer Relationship Management — Loyalty	Structural Models: General	Models for Heterogeneity	New Products Strategy	Panel: Research Opportunities at the Marketing/ Operations Interface	Bayesian Method III	Entertainment Marketing: Movies I	Marketing Strategy I	Marketing Strategy: Firm Performance	Game Theory Strategy II	
	3:00:00 PM	Afternoon Break																
	3:30PM	Online Advertising & Promotion	Customer Responses to Online Strategies II	Social Media and Product Development	Decision Making I	Invited: ISMS Doctoral Dissertation	Pricing II	Invited: Online Word-of-Mouth Advertising and Market Outcomes	Invited: Empirical Projects from Young Marketing Researchers	Choice Models II	Innovation II	Competition	Bayesian Applications — CRM	Entertainment Marketing: Movies II	Advertising Response	Marketing and Firm Performance II	Game Theory: Applications	
	6:00-10:00 PM	Gala Dinner																
SATURDAY	7:00 AM	Registration																
	7:30 AM	Continental Breakfast																
	8:30 AM	Designing Interfaces for Dynamic Consumer Behavior	Effects of Online WOM	Churn and Customer Management	Emotions	Packaging Strategy	Health Marketing	Customer Relationship Management — Satisfaction	Dynamic Structural Models I	Choice Models III	New Product Diffusion II	Channel Governance and Contracting II	Bayesian Econometrics: Applications	Entertainment Marketing II	Marketing Strategy II	Innovations and Firm Performance	Channels: Game Theory II	
	10:00 AM	Morning Break																
	10:30 AM	Personalization and Customization	Customer Reviews/ User-Generated Content	The Impacts of New Media I	Aesthetics	International Topics	Pricing: B2B	Services Marketing	Dynamic Structural Models II	Survey Research: Improving Methods	Innovation III	Invited: Privacy and Marketing	Bayesian Choice I	Social Influence II	Advertising Strategy	Marketing and Firm Performance III	Game Theory In Marketing III	
	Noon	Lunch																
	1:30 PM	Online Channel	Online Customer Behavior	The Impacts of New Media II	Decision Making II	Marketing in Indian Subcontinent	Pricing Structures	Topics in Services	Structural Economic Models	Survey Research: Improving Measures	Models for Enhancing Marketing Decisions	Marketing Strategy	Bayesian Choice II	Entertainment Marketing III	Brands — General	Dynamic Empirical Models	Retailing: Game Theory	
	3:00:00 PM	Conference Concludes																