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 100-105).
- 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 100) — 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

<table>
<thead>
<tr>
<th>TA01</th>
<th>Room number. Room locations are also indicated in the listing for each session.</th>
</tr>
</thead>
<tbody>
<tr>
<td>The day of the week</td>
<td>Time Block. Matches the time blocks shown in the Program Schedule.</td>
</tr>
</tbody>
</table>

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 — 1:00pm - 2:30pm

Thursday, 8:30am - 10:00am

**TA01**

3C, 3rd Floor

Advertising I

Contributed Session

Chair: John Roberts, University of New South Wales, 6/61 Kirribilli Avenue, Sydney NSW, Australia, johnr@agsm.edu.au

1 - Personalized Advertising in Public Environments — Perceptions and Consequences

Nicole Heß, University of Passau, Innstraße 27, Passau, 94032, Germany, nicole.hess@uni-passau.de, Jan H. Schumann, Maura L. Scott, Martin Mend
e

Although the concept of personalized advertising has been widely discussed among marketing academics, existing research does not account for the growing phenomenon of personalized advertising in public environments, such as retail stores or shopping malls. Grounded in theory on self-concept congruity and impression management, this research examines the perceptions and consequences of personalized advertising in public environments, where other people are present and can see the personalized content concurrently. An experiment shows that there is an indirect negative effect of presence of other shoppers on consumers’ attitudes and behavioral intentions. This effect is moderated by congruity between the personalized ad and the customer’s self-concept (ad-self-concept congruity), such that positive ad-self-concept congruity, individuals show lower attitudes and behavioral intention levels with other shoppers present (vs. no other shoppers present). This effect does not exist for ad-self-concept congruity or for negative ad-self-concept incongruity. Results show that embarrassment is the underlying mechanism as it mediates the negative effect of other shoppers’ presence on attitudes and behavioral intentions. Our findings expand research on personalized advertising by providing evidence of when and how the presence of others impacts individuals when they are exposed to personalized content. Further, we contribute to distinct types and conceptualizations of congruity between self-concept and advertising. Prior empirical research on self-concept congruity did not differentiate between different incongruity states, but our results demonstrate that it is important to examine the direction of the incongruity.

2 - Attention in Competitive Advertising Interference Can Unfamiliar Brands Do Better with More Creative Ads

Scott Koslow, Macquarie University, Building E4A, Room 639, North Ryde, 2109, Australia, scott.koslow@mq.edu.au, Ahmed Al Shuaili

Prior research on advertising clutter has used the memory interference paradigm to argue that when competing ads show up near each other in the same media, everyone loses, but the brand that advertises the most loses the least. This research, however, takes an attention-oriented perspective and therefore uses eye tracking techniques to explore what consumers actually do with print advertising embedded in an on-line magazine. In contrast to prior research that forced exposed consumer to ad for 30 seconds, the more realistic 3 or 4 second average exposures to ads used in a more natural media presentation suggests different dynamics. Overall, advertising interference has both positive and negative effects. Unfamiliar brands are sometimes harmed by clutter but familiar brands can be helped. Yet, unfamiliar brands have the option to use more creative advertising to compensate for lack attention, something that doesn’t work for familiar brands.

3 - The Role of Varying Expectation Benchmarks in Explaining Consumer Updating of Beliefs, Attitudes and Intentions

John Roberts, University of New South Wales, 6/61 Kirribilli Avenue, Sydney NSW, 2061, Australia, johnr@agsm.edu.au, Lian Tan, Pamela Morrison

The behavioral economics idea that new information is incorporated into existing beliefs depending on some anchor point has been well-accepted in marketing science, with numerous choice models incorporating reference points around which response is not symmetric. One common reference point is the use of expectations. For example, the disconfirmation model in customer satisfaction has attracted considerable attention. While expectations have been studied from both a normative perspective and a descriptive one (“should” expectations and “would” expectations respectively), little work has been devoted to the study of their antecedents and the manner in which they influence how new information is assimilated during the evaluation process. By studying the Australian airline industry, we look at the role of expectations in both the channel and with final consumers, probing their associated antecedents and calibrating their effect on beliefs, attitudes and intentions.
Determining the effective mix of incentives to enhance salesperson’s performance remains an elusive task for managers. While in a typical three layer distribution channel, manufacturer incentives directly to distributor sales force as they rely on downstream sales people to sell their products to end users. In this setting, this article investigates the impact of manufacturer’s cross corporate boundary incentives on distributor salespeople’s effort and performance. So this issue becomes more complex when managers from manufacturing firms aim to motivate the sales force working for distributors. This research examines the impact of monetary and non-monetary incentives given by manufacturer to distributor sales force. Building upon the contemporary motivational theories and aligning with the recent scholarly advancements in sales incentive literature, the focus is on the effort behaviors (task- and learning-oriented) that mediate the relationship between manufacturer provided incentives to distributor sales force performance. Specifically, cross corporate boundary monetary incentive has a positive influence on salespeople’s productive effort, and cross corporate boundary non-monetary incentive improves both salespeople’s productive effort and competence effort. We test the model using a sample of salespeople from distributor sales organization of a large auto manufacturer operating in China. Findings highlight the differential effects of monetary and non-monetary incentives on effort and performance. This paper outlines the implications for theory and practice, and offer future research directions.

2 - Uniform vs. Retailer-Specific Pricing Strategies in the Presence of a Store Brand
Yusong Wang, Assistant Professor, Southwest University of Political Science and Law, Chongqing, 401200, China, wangyusong@swupl.edu.cn

In this paper, we examine a distribution channel where a manufacturer sells its product to two downstream retailers who are not in direct competition with each other. The two retailers have potentially different levels of retailing efficiency. Hence, while one retailer carries a store brand that competes with the manufacturer’s product, the manufacturer uses one of two pricing strategies, i.e., a uniform wholesale price (UWP) versus a retailer-specific wholesale price (RSWP). We compare the two pricing strategies for the data from two periods and for two retailers, and the channel as whole. We find that, in the presence of store brand competition, RSWP is the preferred wholesale pricing strategy for the manufacturer, whereas UWP can still lead to higher channel efficiency, even when there is no retailing-efficiency difference between retailers. Moreover, the impact of the two pricing strategies on retailers and the critical role of the intensity of competition between the store brand and the manufacturer’s product are investigated, and the related managerial implications are further explored.

3 - Optimal Contract Designs under Information asymmetry, Competitive Interactions, Quality Differentiation and Heterogeneous Preferences
Shameek Sinha, IE Business School, IE University, Calle de Maria de Molina, 12, 5th Floor, Madrid, 28006, Spain, shameek.sinha@ie.edu

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

4 - Are Designer Recyclable Bags Appealing
Nevena T. Koukova, Associate Professor, Lehigh University, 621 Taylor Street, College of Business and Economics, Bethlehem, PA, 18015, United States, nkoukova@lehigh.edu, Reetika Gupta

Marketers are currently offering well designed and fashionable recyclable bags to encourage consumers to use them on a regular bases (e.g., Athleta, TJ Maxx, Whole Foods). In this research we examine whether “designer” recyclable bags are differentially likely to affect the perceptions and the usage of recyclable shopping bags compared to regular recyclable bags. We argue that a designer recyclable shopping bag is more likely to be seen as a self-enhancement product (as compared to a regular recyclable bag), and that consumers will be less likely to buy it and use it relative to the regular recyclable shopping bag. The reason is that consumers will perceive misfit or disfluency between the self-enhancement view of the designer bag and the view of recycling as protecting and helping the environment. Our results support our hypothesis that respondents are more likely to use and buy the regular recyclable bag than the designer recyclable bag. This is especially true when the reusable bag is described in concrete terms (e.g., how to use it, or feasibility considerations) - consumers are more likely to choose the regular bag relative to the designer bag. However, when the reusable bag is described in abstract terms (e.g., why to use it, desirability considerations), there is no difference in relative preferences for the two bags. We also investigate gender differences related to the attitudes towards and choice of designer and regular recyclable shopping bags.

2 - Strategic Power Shift by a Dominant Retailer with Manufacturer Learning
Guowei Liu, University of Illinois at Urbana-Champaign, 1206 South Sixth Street, Champaign, IL, 61820, United States, gwl1@uiuc.edu, Yunchuan Liu, Jianxiong Zhang

This paper studies how a dominant retailer uses its channel power over the long term in the presence of manufacturer cost learning. We formulate a two-period model of a supply chain wherein a manufacturer produces a product with benefits of learning curve on the production cost, and sells this product to end consumers through a dominant retailer. We compare two cases: One in which the retailer completely dominates the supply chain for the two periods; the other where the dominant retailer shifts its channel power to the manufacturer in the first period. Our analysis shows that the dominant retailer’s power shift decreases the manufacturer’s second-period production cost, and this cost advantage is beneficial to the manufacturer and the whole supply chain, and to the dominant retailer when the manufacturer learning rate is sufficiently high. Additionally, the dominant retailer’s power shift results in lower retail prices, which increases consumer and social welfare. In the model extensions, we show that these outcomes continue to hold when the dominant retailer shifts its channel power in the second period, but the complete power shift in both periods does not arise since it is not in the manufacturer’s profit. What’s more, we show that the dominant retailer chooses not to shift its channel power, to shift in the second period and to shift in the first period, when the learning rate is relatively low, medium and high respectively. We also show that the dominant retailer is more likely to occur when there exists a reference-price effect for consumers or competition.
3 - Understanding the Impact of Consumer-Retailer Relationship and Information States for In-Store Displays
Shibli Li, Indiana University, Kelley School of Business, 1309 East Tenth Street, Bloomington, IN, 47405, United States, shili@indiana.edu

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

3 - Multiple Complementarities and Indirect Network Effects between Hardware, Software and Accessories
Zhenfeng Ma, Wilfrid Laurier University, 75 University Ave W, Waterloo, ON, N2L3C5, Canada, zma@wlu.ca, Tripat Gill, Ping Zhao, Ken (Yongjian) Chen

Previous research on indirect network effects (INE) in a systems market has focused solely on the complementarity between the hardware and software components of a product system (e.g., the video-game consoles and game titles, respectively). We extend this research by empirically examining the complementary relationships between accessories and the hardware and software components of a product system. Using data from the seventh generation video-gaming market we provide evidence for significant complementarities between the three components of the system. Specifically, we find that (1) the availability of accessories has a significant effect on the sales of the console hardware (a demand-side INE of accessories); and conversely, (2) the hardware installed base has a significant effect on accessories availability (a supply-side INE on accessories) and (3) the availability of software (both number of titles and number of superstar introductions) have a significant effect on accessories availability (also a both supply-side INEs on accessories). As such, this research is the first to demonstrate that accessories can play a significantly role in enhancing the perceived quality of a product system. For academics, these findings suggest the need to incorporate accessories into the examination of INE, which has hitherto only focused on the hardware and software components of a system. For managers in system markets, we suggest an increased emphasis on accessories to enhance the perceived quality/utility of the basic product system. We also identify several avenues for future research on the role of accessories, which has hitherto been neglected in the literature.

TA04
3D, 3rd Floor
Marketing Strategy I
Contributed Session
Chair: Zhenfeng Ma, Wilfrid Laurier University, Waterloo, ON, Canada.
Contact: zma@wlu.ca

1 - Beyond Words: The Impact of Firms’ Customer-Targeted Communications on Product Recall Efficacy
Vivek Astvansh, Doctoral Candidate, Ivey Business School, 684 Platte's Lane, London, ON, N6G 3B2, Canada, vastvans@uwo.ca, Kersi Anila, Xing (Shang) Wang

Automobile product recalls have become increasingly common, affecting 64 million automobiles in 2014. They are, however, paid scant attention by the very stakeholders they are designed to protect. By some estimates, only about 20 per cent of customers respond to manufacturers’ recall notices, taking their unsafe vehicles to the dealers charged with undertaking the required repairs - what we refer to as product recall efficacy. The present study identifies relevant characteristics of product recall issuing manufacturers’ communications with impacted customers, and assesses their potential role in enhancing or hindering recall efficacy. We build a novel dataset comprising more than 1,000 recall notices issued in 2013 and 2014 by 20 automobile manufacturers to their customers, and the latter’s response to these recalls over the six quarters following the recall issue. Using a Latent Dirichlet Allocation-based machine learning approach, we extract the hidden topics underlying these notices. We then assess how the intra- and inter-manufacturer variations with respect to these topics impact product recall efficacy. Our research emphasizes the role of business-to-consumer (B2C) communications in ensuring that recalled products are returned and repaired in a timely manner.

2 - Exploring Blue Oceans of Uncontested Market Spaces: Toward a More Complete Strategy Formulation Process
Scott Dacko, Assoc. Prof. of Marketing and Strategic Mgmt., University of Warwick, Warwick Business School, Coventry, CV4 7AL, United Kingdom, s.dacko@warwick.ac.uk, Naseem Akhtar, Hanlu Zhu

As it is increasingly difficult for companies to sustain high performance by competing head-to-head in existing markets, firm managers have started to consider creating blue oceans of uncontested new market space which makes rivalry irrelevant (Kim and Mauborgne, 2005). However, much existing research about blue ocean strategy tends to be descriptive in terms of basic concepts and principles (Parvinen, Aspara, Heitanan and Kajalo, 2011). Blue ocean strategy lacks a systematic route to envisage product or service innovations (Biongianni, Cascini and Rotini, 2012). The purpose of this research is to establish a more complete and detailed process for blue ocean strategy formulation. In order to make the process more comprehensible, quantitative and qualitative research on a global automotive brand and the Chinese market for off-road vehicles provides context. Building on the literature, this research firstly proposes a four-stage process which integrates 1) the strategic canvas, 2) the six paths framework and the reperatory grid technique, 3) the four actions framework and the refined Kano model, and 4) the blue ocean strategy sequence to formulate blue ocean strategy. The four-stage process is then examined in relation to the global automotive brand to establish a new strategic canvas and a modified value curve. Finally, based on the new value curve, strategic implications are suggested for uncovering blue oceans relative to a given market. By combining the blue ocean strategy research with a global automotive brand’s marketing strategy, this research contributes to both theory building and business practice.

TA05
3E, 3rd Floor
Consumer Behavior I
Contributed Session
Chair: Lan Xia, Bentley University, 175 Forest St., Waltham, MA, 02452, United States, lxia@bentley.edu

1 - The Roles of Regulatory Focus and Attribute Value on Consumer Evaluation
Ying Ho, University of Macau, Macau, Macao, YingHo@umac.mo, Amy S. Y. So, Wing Chi Chow

This research examines how consumers’ regulatory orientation (i.e., promotion focus versus prevention focus) and the relative value of service attributes (i.e., core attributes versus peripheral attributes) may jointly influence consumer attitude and behavioral intention. Existing literature (e.g., Lee, Keller and Sternthal 2010) suggest that individuals’ regulatory focus influences how they mentally represent information. Promotion-focused people tend to construe information at high levels (i.e., more abstract levels) whereas their prevention-focused counterparts are inclined to mentally represent information at low levels (i.e., more concrete levels). In this study, we propose that prevention-focused and promotion-focused people may assign different weights to core attributes and peripheral attributes when making service evaluations. Specifically, since promotion-focused individuals tend to construe information at high levels, they may assign more weights to core attributes (i.e., higher-level construal). Thus, when the value of peripheral attributes is superior to core attributes, prevention-focused individuals should form a more positive evaluation than promotion-focused individuals. We have conducted an experiment with 68 university students and used hotel as the service category to test our hypothesis. The results showed that web evaluation is more positive when core attributes have higher ratings than peripheral attributes for promotion-focused individuals. In contrast, when peripheral attributes have higher ratings than core attributes, web evaluation is more positive for prevention-focused individuals.
2 - Relationships Between Sachet-Product Usage/Attitudes and Consumer Characteristics

Qiuling Li, University of Macau, Macau, liquling_2006@163.com, Chantihka Pornpipatkan, Joseph Sy-Changco, Junsong Chen

Purpose - This research hypothesizes and analyzes the correlation between sachet-product usage and personal characteristics (personality traits and demographic variables) of Chinese consumers in China.

Design/methodology/approach - A face-to-face survey is conducted with a convenience sample of 468 Chinese consumers in Shanghai and Zhuhai.

Findings - Many relationships between sachet-product usage/attitudes and consumer characteristics are significant. Variety seeking positively correlates with sachet usage frequency and attitudes toward products in sachet. Frugality positively correlates with sachet purchase frequency. Value consciousness positively correlates with sachet purchase frequency and sachet usage frequency, respectively. Price consciousness negatively correlates with attitudes toward products in sachet. Biological sex and age do not correlate with any of the dependent variables. Number of persons living in the household positively correlates with sachet purchase frequency, sachet usage frequency, sachet purchase intentions for home, and attitudes toward products in sachet. Education negatively correlates with sachet purchase intentions for home use. Finally, personal monthly income negatively correlates with sachet purchase frequency, sachet usage frequency, and sachet purchase intentions for home use.

Originality/value - Sachet marketing is an important way of doing business, yet there has been little systematic investigation of the relationships between sachet-product usage/attitudes and consumers' characteristics. This research fills this gap. In addition, it discusses implications for marketers. Keywords: China, Consumer goods, Marketing strategy, Sachet marketing, Pécenémal marketing, Package size.

3 - To Take-Back or Not: Examine Consumer Perception to Take-Back or Not: Examine Consumer Perception of Retailers' Product Disposal offers

Lan Xia, Associate Professor of Marketing, Bentley University, 175 Forest St., Waltham, MA, 02452, United States, lxia@bentley.edu

Product disposal is an important phase of consumption. In recent years, some retailers start offering to take back their products at the end of consumption. For example, Patagonia encourages their customers to bring back the jackets. The company then recycle and reuses some of the materials in new products. While significant research effort has been devoted to understand the impact of Corporate Social Responsibility (CSR), little research has examined consumers' response to retailer take-back offers in particular, especially its impact on upfront purchase intentions. We conducted two studies. Study 1 is a 3 (disposal offer: take-back, take-back and recycle, take-back and reuse) x 2 (with vs. without incentive) between-subject design (n = 212) and study 2 is a take-back vs. no take-back x 2 (price level: high vs. low) x 2 (reputation: well-known vs. new) between-subject design (n = 421). Results show that take-back strategy influences purchase intentions through two indirect routes. On one hand, it signals company's social responsibility, especially for consumers who are high in environmental concern. However, offering an incentive for take-back may actually reduce the effectiveness of the strategy because it dilutes perceived company's sincerity in socially responsible intentions. On the other hand, take-back strategy may lead to lower quality perceptions, especially when an incentive is offered, hence negatively influences purchase intentions. Overall, our research investigates a relatively novel retail phenomena and results of the study offer interesting practical implications.

TA06

INFORMS Marketing Science Conference – 2016

2 - Trust and Consumer Demand: Evidence from European Automobile Market

Wei Mao, National University of Singapore, 4B 2 Building, Basement B2-03, 1 Business Link, Singapore 117592, Singapore, 118425, Singapore, a0133554@nus.edu, Jinhong Chu

Previous studies have found that cultural similarity and trust play an important role in economic exchange and consumption. However, the mechanisms through which culture and trust influence consumer economic behaviors have not been investigated. Cultural similarity and trust may affect consumers’ preference for a country and its products; they may also affect consumers’ sensitivities to prices of products from that country. In this paper, we investigate whether intercountry cultural similarity has systematic influences on consumers’ intrinsic product preference and price sensitivities. Specifically, we utilize a unique dataset from Eurobarometer surveys and investigate how bilateral trust between European countries affects consumer choice of automobiles from different countries of origin. We collect automobile sales, price, dealers and attributes data from various sources and follow the oligopolistic market framework proposed by Berry, Levinsohn, and Pakes (1995). We pairwise country-specific product preferences as two-dimensional Euclidean distance, and project these dyadic preferences onto dyadic trust and other country-specific covariates. Our preliminary results show that after controlling for country level covariates, bilateral trust between European countries is significantly and positively correlated with consumer intrinsic product preference. Our research not only helps to deepen our understanding of cultural influence on demand and consumption, but also helps policy makers to take relevant measures to alleviate the possible negative impact of cultural biases in demand and consumption.

3 - Deal-Breakers or Deal-Makers?: Modeling Multi-Stage Mate Choice Behavior

Kee Yeun Lee, Assistant Professor, The Hong Kong Polytechnic University, 8/F Li Ka Shing Tower, MM Department, Hung Hom, Kowloon, Hong Kong, keeyeun.lee@polyu.edu.hk, Fred M Feinberg, Elizabeth Bruch

We develop a multi-stage choice model that can detect and accommodate potentially non-compensatory decision rules in each stage. The model is calibrated using data from a major online dating service company in the US, with two distinct stages: browsing (which profiles to see) and writing (what to respond to). The model provides a unified account of user behavior via hierarchical heterogeneity and by allowing error correlation between stages. We estimate user-specific parameters, specifically, a piecewise linear spline regression with multiple change points, to allow for identifying distinct decision rules across stages as well as individual heterogeneity in rule use across users. Most importantly, it allows us to identify and compare attribute-level decision rules (‘deal-breakers’ and ‘deal-makers’) across individual users and over the browsing and writing stages. Results suggest the existence of heterogeneous decision rules across both users and stages, as well as the existence of deal-breakers/makers across both discrete and continuous attributes.

4 - Recovering Consumer Dynamics from Aggregate Level Data

Yi Zhao, Marketing Department, Georgia State University, Suite 1300, 35 Broad Street, Atlanta, GA, 30303, United States, yzhao@gsu.edu, Ying Zhao

Scanner panel data at household level are typically used to analyze consumer dynamics in most of existing research. However, panel data are not always available for all product categories and geographic areas; meanwhile, they may not be stable and large enough to be representative of the brand's actual market share. In comparison, aggregate data are more representative of the brand's market share pattern, more readily available, and usually less costly to obtain than aggregate level panel data. In this paper, we develop a likelihood-based approach to recover consumer dynamics from aggregate brand-level data, which contribute to literature in following three ways. First, for discrete-type dynamics such as state dependence, we derive a closed-form likelihood function, which avoid the complicated and time-consuming data augmentation process for individual choice in Chen and Yang (2007). Second, for continuous-time dynamics such as loyalty and learning, we derive an efficient numerical solution through space discretization method. Third, we show that the proposed method for consumer demand dynamics is completely compatible with the flexible econometric methods such as BLKP(1995), Yang, Chen and Allenby (2003,QME), and Jiang, Manchanda and Rossi (2009,JE).
1 - Impact of Wealth Level on Over-Treatment in Expert Services
Xiaoyan Xu, current PhD student, National University of Singapore, 21 Lower Kent Ridge Rd, Singapore, 119077, Singapore, A0133851@nus.edu, Wei-Shi Lim
Credence goods refers to goods or services whereby the providers (experts) have more information about the needs of the consumers than the consumers themselves. This paper adopts a game-theoretic framework to assess the impact of consumer wealth on the strategic interaction between experts and consumers in a credence goods market. We find that when the probability of minor cases is sufficiently high and the proportion of selfish experts is comparatively low, the experts over-treat with a lower probability at the equilibrium. However, they are more likely to over-treat consumers with lower wealth levels than those with higher wealth levels. This is because of the relatively higher opportunity cost involved in seeking second opinions for the former. From the welfare-improving perspective, subsidizing access to second opinions (but not treatment) may mitigate over-treatment of expert services.

2 - Modeling the Impact of Digital Piracy on Quality Competition
Peng Wang, University of Arizona, 1130 E. Helen St. McClelland Hall 320, Tucson, AZ, 85721-0108, United States, pengw@email.arizona.edu, Yong Liu, Minral Ghosh
The prevalence of piracy is one of the key problems in an era of a digital economy and digital markets. This threat of piracy is severe due to low copying cost and easy access to the Internet. We develop an analytical model that examines the impact of end-user piracy on market structure in a vertically differentiated market for digital goods. To simultaneously examine the impact of end-user piracy and quality competition, our 2-stage duopoly model takes into account two types of consumer heterogeneity: namely, heterogeneity in pirating cost and the heterogeneity in quality preferences. Our key findings are threefold. First, we find an asymmetric impact of piracy on the vertically differentiated firms. In particular, even if the low-quality firm is not being directly pirated, the strategic reactions of the high-quality firm to piracy problems could make the low-quality firm worse off. Second, in contrast to the studies based on horizontal differentiation, the existence of end-user piracy in the vertically differentiated market intensifies quality competition and discourages price dispersion. Specifically, when it is easier for end-users to illegally copy the digital good, both the high- and low-quality firms move towards the higher end of the quality spectrum. Third, and surprisingly, we find that firms could be better off by being “naive” rather than being strategic under certain conditions. Specifically, when the threat of piracy is at relatively low levels, both firms end up with higher profits if they don’t take the piracy issue into strategic considerations.

Hyun Young Park, Assistant Professor of Marketing, CEIBS (China Europe International Business School), 699 Hongfeng Road, Shanghai, 201206, China, hpark@ceibs.edu, Boyoun (Grace) Chae, Katherine White
While prior research examined the impact of corporate social responsibility (CSR) on consumers’ attitude toward the company and its products, no extant research has investigated how CSR influences consumers’ risk-taking decisions. The current research explores the effect of CSR on consumers’ financial risk-taking, and demonstrates the underlying mechanism by identifying an important moderator for this effect, namely individual’s belief in a just world (BJW). In five experiments, we show that a pro-social cue, such as charitable giving, increases financial risk-tolerance among individuals who do not perceive the world as just, but not among those who believe in a just world. For instance, when participants saw an advertisement about a bank’s CSR activity (e.g., “0.1% of the investment return from all financial products of the bank is donated to children’s charities”), participants chronically low in BJW were willing to invest greater amount of money to a riskier financial option than to a safer option offered by the bank, compared to those chronically high in BJW. However, this difference in financial risk tolerance between those low versus those high in BJW was not observed when the pro-social cue was absent. These results were replicated when participants made an actual financial decision (i.e., purchasing real lotteries with different risk levels) and when BJW was situational primed. Our research contributes to prior literature by identifying a novel effect of CSR on consumer financial risk-taking and by offering its process evidence. It also provides important practical implications on how CSR can increase consumers’ risk preference.

4 - Third-Party Reviews and Quality Provision
Kevin Chung, University of Wisconsin-Madison, School of Business, 975 University Ave, Madison, WI, 53706, United States, kevin.chung@wisc.edu, Keeyung Kim, Noah Lim
This paper seeks to understand the relational factors that may affect the decision of both third-party raters and service providers. Specifically, we examine how removing anonymity and allowing for repeated interactions between the rater and the service provider impact both the ratings assigned by the rater and the service levels expended by the service provider. Using a laboratory economics experiment, we are able to observe the true-quality level chosen by a service provider, which allows us to accurately detect any bias in the assessment of the third-party rater. The experimental results show that the decisions of both the rater and the service provider are very sensitive to the relational factors that govern their interaction. We develop and estimate a model that captures the rater’s preference trade-off between remaining objective and helping the service provider compete, and the evolution of the service provider’s beliefs about the rater’s preferences.
3 - Strategic Intertemporal Pricing for Efficient Product Adoption when Buyers are Heterogeneous in Evaluation Costs
Xiaojuan Puyang, City University of Hong Kong, Hong Kong, Hong Kong,jspxuyang2@my.cityu.edu.hk, Wei-ju Kevin Chiang, Lu Qiang

When a new product is introduced, consumers are typically ex ante uncertain about how much they are willing to pay for it. To resolve this uncertainty before purchasing, they may engage in a costly evaluation to learn their product valuation. This study investigates a firm's strategic intertemporal pricing with regard to whether to induce or prevent the consumers to evaluate by taking into consideration their heterogeneous evaluation costs. Specifically, we propose a two-period model where a monopolistic firm launches its product at the beginning of the first period and sells it over two periods. In each period, the firm determines whether to induce or prevent evaluation by setting a price for this period that maximizes its expected profits. All consumers arrive at the outset and after observing the price in the first period, they strategically make trade-offs between the expected utility from evaluation versus that from purchasing with no information. While consumers differ in their search costs, they may act in different ways. If some consumers discover their true valuations in the first period through evaluation or purchase, they will reveal their information to the market. As a result, the consumers who have neither evaluated nor purchased in the first period may learn from the early adopters and make their purchase decisions accordingly in the second period. Our findings estimate the buyers' heterogeneity in evaluation cost influence the firm's intertemporal pricing strategies.

4 - Price Customization in Two-Sided Media Markets
Jinhao Du, Fuqua Business School, Apt 938, 900 Slateworth Drive, Durham, NC, 27703, United States, jinhao.du@duke.edu, Wilfred Amaldoss, Woonchoel Shin

Media platforms are characterized by significant and opposing cross-side network externalities from consumers and advertisers. In this paper, we investigate how cross-side network externalities and homing possibilities shape competing media platforms' pricing strategies and profits. Counter to our naive intuition, a platform's profits increase with consumers' dislike for advertising but decrease with advertisers' desire for consumers when agents on both sides of the market single-home. We obtain this result because the cross-side externalities moderate the intensity of competition between platforms. However, when agents on both sides can multi-home, the results are reversed because the cross-side externalities no longer moderate the competition between the two platforms. If agents only choose one side of the market, the homing effect is crucially hinged on the relative size of the two externalities. Turning attention to pricing strategies, we find that even when consumers are heterogeneous in their sensitivity to advertising, both platforms do not simultaneously adopt a customized pricing strategy for consumers and at least one platform pursues a uniform pricing strategy if agents single-home on both sides of the market. However, multi-homing agents turn the platforms to local monopolists and induce them to adopt a symmetric customized pricing strategy when the two segments of consumers are quite heterogeneous in their sensitivity to advertising, and a symmetric uniform pricing strategy otherwise. Finally, when only advertisers multi-home, we observe a symmetric customized pricing strategy, asymmetric pricing strategies, or a symmetric uniform pricing strategy depending on the relative size of the cross-side network effects.

TA09 INFORMS Marketing Science Conference – 2016

TA09
5B, 5th Floor
New Product I
Contributed Session
Chair: Lixian Qian, Xi’an Jiaotong-Liverpool University, International Business School Suzhou (IBSS), Xi’an Jiaotong-Liverpool University, Suzhou, 215123, China, lixian.qian@xjtu.edu.cn

1 - Relation Between Idea Quality and Idea Implementation and its Contingency Factors in Idea Crowdsourcing Context
Yiyian Li, City University of Hong Kong, Kowloon Tong, Hong Kong, China, liyiyian@cityu.edu.hk, Jianjun Zhu, Wa Chan

Idea crowdsourcing allows firms to reach the ideas from the crowd. However, emerging research shows that firms often fail to consider those novel ideas due to the uncertainty and risks involved in the innovation process. Meanwhile, the remarkable increase in crowdsourced ideas creates the crowding effect that further narrows firms’ attention and reduces their openness to the most novel ideas. This can be detrimental to the effectiveness of idea crowdsourcing that firms aim to achieve. Given these critical challenges, studies examining firms’ idea implementation decision in idea crowdsourcing context, in particular, the relations between idea novelty and idea implementation and idea implementation, are much needed. This study extends the literature by taking a new theoretical angle through adopting the Path-Of-Least-Resistance (POLR) theory to examine the role of idea feasibility as the key cue that firms use to filter novel ideas for their implementation. We further explore the factors that might amplify or mitigate the mediating effects of idea feasibility. Using data collected from a leading crowdsourcing community, and with the use of coded data by expert judges and text-mining techniques, this study reveals the mediating role of idea feasibility on the negative relation between idea novelty and a firm’s implementation decision.

Besides, such negative mediation effect becomes stronger when relevant ideators have greater ideation participation in the past, while is weaker when ideas are popular (i.e., receiving greater favorability of peer comments). Our findings provide firms with implications on how to effectively manage customer ideation crowdsourcing in achieving product and service innovation.

2 - Optimal Product Portfolio Management: How to Evaluate New Product Projects
Ying Bao, PhD Student, University of Toronto, 105 St George Street, Toronto, ON, M5S3E6, Canada, ying.bao14@rotman.utoronto.ca, Mengze She

Firms facing budget constraints often select a small number of high-potential new product projects to receive high investment priority. However, it is difficult to identify the high-potential projects in the early stage of development when the prospects are uncertain. Moreover, project managers may manipulate the reports in order to receive preferential treatment. This paper develops a model to study how a company’s selection mechanism and its incentive plan for project managers may affect the accuracy of project identification and firm’s resulting profit. Specifically, we consider two commonly used project evaluation systems - rating and ranking systems, and two types of incentive plans - uniform plan and investment-contingent compensation plans. Our results show that, first, both rating and ranking systems are superior to randomization. Second, when the project managers are engaged in manipulation, they would use more manipulation efforts when a firm uses the ranking than the rating mechanism. The rating mechanism can become more effective when the low-type project manager engages in manipulation efforts. Third, overall, the investment-contingent contract can diminish the low-type project manager’s incentive to manipulate. Interestingly, the manipulation effort of the high type project manager can increase the accuracy of identification. This may lead a firm to commit to a seemingly inferior uniform compensation contract for the project managers.

3 - How “Locality” Factors Affect the Participation Preferences to Electric Car Sharing Programs
Lixin Qian, Xi’an Jiaotong-Liverpool University, 111 Ren’ai Road, Suzhou Industrial Park, Suzhou, 215123, China, lixin.qian@xjtu.edu.cn, Zhan Pang, Didier Soopramanien

Car sharing is seen as one of the solutions for reducing car dependency of commuters. Electric car sharing (ECS), usually taking the business to consumer (B2C) business model, is generally considered to be more suitable in cities. An increasing number of Chinese firms are going to launch B2C electric car sharing services in major cities. For those firms that want to enter this market and especially those who wish to target specific local markets, it is important to understand how demand for car sharing program is shaped by the local contextual factors which we call here locality. This research is concerned with the study of how different types of local contextual factors explain the demand for ECS program. Based on conjoint analysis data collected in an economically developed city in China, this study employs discrete choice models to examine how the heterogeneity of different types of consumers and their heterogeneous transport needs influence the demand for driving shared electric cars, compared to the demand for other mobility options. This study contributes to the literature by offering new insights about consumer preferences to participate into such sharing program of innovative technologies and revealing characteristics of its early adopters.

TA10
5C, 5th Floor
Decision Making I
Contributed Session
Chair: Qiitan Ren, 435 W 119th Street, Apt 1H, New York, NY, 10027, United States, qjren17@gsb.columbia.edu

1. An Analysis of Menus of Multi-Part Tariffs
Taewan Kim, Lehigh University, Bethlehem, PA, 2Eastern Michigan University, Ypsilanti, MI, tak213@lehigh.edu, Ryan Ji-Hung Choi

It is a well-known fact that the more sophisticated tariff is more profitable than a simple pricing scheme. We theoretically study which characteristics of three-part tariffs (3P Ts) generate greater profit than two-part tariffs (2P Ts) and examine the optimal values of 3P Ts. The results show that, given a full extraction of low type segment’s surplus, the seller can extract more of high type surpluses, whose magnitude is dependent on both of the level of quantity allowances and the fixed fee for high type consumers. Literatures argue that when either the taste parameter or proportion of low type is small, offering high type contracts only will be more profitable for the firm since keeping the low type would result in too much information rent being given to the high type. However, by using 3P Ts, since the firm can charge greater rent from the high type (by adjusting the level of free allowance and fixed fee), offering both contracts for high and low segments will be more profitable regardless of the proportion of the low type.
In this paper, we investigate the key macroeconomic drivers of deceptive advertising. We use a unique data set on advertising complaints at the national level in the United States, and combine it with macroeconomic indicators to show that false or deceptive advertising is counter-cyclical. In other words, firms’ use of false advertising increases during periods of economic hardship. When we analyze the data after taking into account the durability of the products, we find that the counter cyclical relationship is significant only in the case of non-durable goods. More importantly, we show that within non-durable goods deceptive advertising is pro-cyclical in the case of non-durable search goods, and counter cyclical in the case of non-durable experience goods. We argue that the reason for the former finding is that consumers search more during bad economic times. The reason for the latter finding is that sellers of experience goods can increase profits by deception when bad times are expected since the cost of deception during these times is low. These findings suggest policy recommendations related to the type of industry and prevailing economic conditions in the context of deceptive advertising.
Many firms spend large amounts of money on advertising while relying on heuristics for deciding on how much money to spend and how to allocate a given budget over time. Conducting the effects of advertising remains challenging, even using field experiments. A second reason is that there is no canonical empirical model of consumer behavior that they can rely on for predicting longer-run effects of advertising, when it comes to choosing a dynamic advertising strategy. This paper uses a combination of TV and radio advertising data at the minute level and online sales data to empirically study the short-run effects of advertising. It then develops an empirical model of consumer behavior that is used to quantify the long-run effects. We think of consumers, at a given point in time, as either buying a ticket for the following draw, or postponing the decision to do so to a later point in time, with the possibility that they either forget to buy a ticket or consciously decide not to do so. This means that we think of advertisements as playing an informative role in the sense that they act as a reminder. From the perspective of the firm selling tickets, an important question is whether a given advertising budget could be used more effectively, for instance by shifting it to earlier or later times within a given time window. In terms of results, we find the effects of advertising to be strong and to last up to about 5 hours. Moreover, we find them to be bigger the less time there is until the draw. This means that on the one hand, if the firm allows all the advertising budget to be spent very early, then it may not reach certain consumers, for instance because they will not watch TV on these days; on the other hand, if it spreads advertising expenditures out over time in order to reach more consumers, then it may forego the possibility to effectively spend the money at later points in time. Our counterfactual experiments that are based on structural estimates of the model parameters indicate that shifting advertising expenditures to the days before the draw could be a means to increasing sales for a given advertising budget.

2 - How to Improve the Timing of Advertising
Tobias Klein, Associate Professor, Tilburg U, Buxusplaats 7, Tilburg, 5033HK, Netherlands, T.J.Klein@uvt.nl, Chen He

3 - The Impact of Consumer Objectives on Display Advertising Effectiveness
Paul Hohan, University of Wisconsin, paul.hohan@wisc.edu

The authors examine the intertemporal variation in online display advertising effectiveness resulting from shifts in consumer browsing objectives, specifically between goal and entertainment orientations. The data are provided by a display advertising buyer specializing in real-time bidding, and contain browsing information, advertiser bidding behavior, and display ad exposures for nearly one million individuals over a two month period from October through December 2014. Importantly, the data contain 2.8 billion pageviews from websites participating in the major US display advertising exchanges, providing information on browsing frequency and intensity. The data also include a sufficient statistic for the targeting algorithm, even in the absence of a submitted bid, allowing the authors to directly control for related selection effects. Initial results point to a significant increase in display advertising effectiveness when users are entertainment, versus goal, oriented, and that users frequently switch between these two states. These findings have major implications for online display advertisers, the most obvious of which is that the value derived from, and consequent willingness to pay for, targeting an individual can change significantly over time.

4 - Ghost Ads: Improving the Economics of Measuring Ad Effectiveness
Garrett Johnson, Simon Business School, Garrett.Johnson@Simons.Rochester.edu

To measure the effects of advertising, marketers must know how consumers would behave had they not seen the ads. We develop a methodology we call ‘Ghost Ads,’ which facilitates this comparison by identifying the control-group counterparts of the exposed consumers in a randomized experiment. We show that, relative to Public Service Announcement (PSA) and Intent-to-Treat A/B tests, ‘Ghost Ads’ can reduce the cost of experimentation, improve measurement precision, and work with modern ad platforms that optimize ad delivery in real-time. We also describe a variant ‘Predicted Ghost Ads’ methodology that is compatible with online display advertising, implementing randomized controlled experiments more than 100 million predicted ghost ads per day. We demonstrate the methodology with an online retailer’s display retargeting campaign, for which a PSA test would be severely biased. We show novel evidence that retargeting works as the ads lifted website visits by 17% and purchases by 11%. Compared to Intention-to-treat or PSA experiments, advertisers can measure ad lift just as precisely while spending at least an order of magnitude less.

Information Online I: Advertising, Search, and Reviews

2 - Improving E-commerce Margins by Adding Search Frictions
Donald Ngue, Harvard Business School, dngue@hbs.edu, Thales Santos Teixeira

Many e-commerce firms that sell well-known consumer brands are unprofitable. The internet has caused prices to become more transparent and has made price-based search a less efficient mechanism. Online retailers that sell well-known brands compete on price and ease of shopping. Many offer huge discounts, oftentimes higher than their gross margins, in order to attract customers. Most design their online stores for frictionless shopping by reducing any barriers to finding and purchasing deeply discounted products. We pose that deliberately adding frictions—obstacles to searching for and identifying discounts—can improve online retailers’ margins by allowing consumers to self-select into “paying with cash” (low discount) or “paying with effort” (high discount). In a field experiment conducted with a mass merchant for fashion and apparel goods, we show that making it harder for new customers to find highly discounted products reduces the average markdown of items purchased and increases the firm’s margins while not reducing the incidence of purchases. We then estimate a model that discriminates between high and low price sensitive customers and use a second field experiment for external validation by comparing their likelihood of clicking on discount-oriented email campaigns. Finally, we demonstrate via a third field experiment that price-sensitive shoppers (as predicted by our model) are more likely to exert effort in order to locate steeply discounted items. Together, these experiments show that adding search frictions can be used as a self-selecting price discrimination tool to provide high discounts to price sensitive consumers and reduce the incidence of subsidizing price insensitive consumers.

5F, 5th Floor

Information Online I: Advertising, Search, and Reviews

Content- Digital Marketing: General

General Session
Chair: Garrett A Johnson, University of Rochester, University of Rochester, Simon School – CS3-206, Rochester, NY, 14627, United States, garrett.johnson@simon.rochester.edu
Co-Chair: Paulo Albquerque, Professor, INSEAD, INSEAD, Fontainebleau, WY, France, paulo.albuquerque@insead.edu

1 - The Welfare Impact of Consumer Reviews: A Case Study of the Hotel Industry
Giorgos Zervas, Boston University, zg@bu.edu

Platforms such as Yelp and TripAdvisor aggregate crowd-sourced information about users’ experiences with products and services. We analyze their impact on the hotel industry using a panel of hotel prices, sales and reviews from five US states over a 10-year period from 2005-2014. Both hotel demand and prices are positively correlated with their average ratings on TripAdvisor, Expedia and Hotels.com, and such correlations have grown over our sample period from a statistical zero in the base year to a substantial level today: a hotel rated one star higher on all the platforms on average has 27% higher demand, and charges 10% more. A natural experiment in our data that caused abrupt changes in the ratings of some hotels but not others, suggests that these associations are causal. Building on this causal interpretation, we estimate a structural model of supply and demand with partially informed consumers, finding that in a counterfactual world without any review information, consumers surplus would fall by 65% per room night ($1.10m when extrapolating to the US hotel industry as a whole).
There is a growing interest in examining the dynamics of online reviews. First, newer reviews are ultimately affected by existing reviews, since newer reviews are written by consumers who may have consulted older reviews when purchasing products. Second, consumer reviews arrive at different time; hence, the composition of a product’s review pool changes over time. Although the relationship between product reviews and marketing outcomes (e.g. sales) bears non-static nature as a result, researchers have only focused on the evolution of review statistics such as volume and valence. So far, researchers have not conducted sufficient investigations into the dynamic aspects of review content. Our study strives to answer two questions: does the content of consumer online reviews evolve? How does review content affect product sales over time? We collected movie information, daily sales data, and online reviews of 28 movies released in 2012 from Box Office Mojo and IMDb. To analyze the content of the 12561 reviews in our dataset, we interpreted each review as a mixture over an underlying set of semantic topics using Latent Dirichlet Allocation (LDA). We analyzed the results of LDA to trace the evolution of review topics over time. We also incorporated these results in a dynamic model to study the impact of semantic content on movie sales. Our findings provide unique insights into the dynamic nature of online reviews.

We investigate whether a durable good’s age, i.e., the number of days since its launch to when it is rated, affects how it is rated by its owners. Additionally, we examine if age affects which of the good’s attributes have a bigger role in how it is rated. The specific focus of our investigation is online ratings of automobiles by owners and (a) whether ratings come down with age and (b) how the roles of design and quality in those ratings evolve over the age of the car. We assume that owner ratings are a function of the sum of the car’s attributes. Our approach is based on a Bayesian Ordinal Logit analysis of 21,328 individual ratings across 1,008 models of cars introduced between 2001 and 2008. We control for three mechanisms of dynamics of online ratings identified in the literature - temporal effects, order effects and macro-temporal trends - and the role of social influences on ratings in our analysis. Additionally, we account for heterogeneity across different models of cars and across owners. Our results suggest that the ratings of cars come down with age and that the relative influences of design and quality do evolve as cars age: while design has a larger effect on the ratings when cars are new, quality plays a bigger role as they age. Our research contributes to the growing literature on the dynamics of online ratings by demonstrating that the age of a product affects how it is rated and how consumers use product attributes in their ratings. We also discuss the managerial and research implications of our findings.

We conduct a questionnaire survey to investigate users’ attitudes to the fifteen types of annoying ads. The results reveal that subjects considered clickbait ads with fake links was the trickiest ads, and ads which cannot be skip are most intrusive and irritating ones.

Researchers have explored allocation algorithms based on cascade framework to schedule video ads in online videos. Those algorithms have the advantage that they can be implemented in real-time, and account for ad prices as well as ad quality to make the selection. However, they do not implicitly consider target number of impressions, popularity of the video, and are restricted to single session. In this paper, we propose a revenue-maximizing algorithm by considering ad prices and ad quality, also based on cascade framework, which decides allocation over multiple sessions, accounts for retention capacity of each video session, and imposes penalty when target impressions are not met. At first we propose a dynamic programming method, which controls for all the above factors, but suffers from the curse of dimensionality as the total number of sessions increases and the ad inventory becomes large, therefore making it unsuitable. To address this issue, we investigate several heuristic methods that use a reduced model of our computations. Our heuristics outperform the current industry practice in maximizing revenue and performs only slightly worse than the complete dynamic programming method. Further, we show that our heuristic method significantly reduces the runtime compared to the complete dynamic programming, making it better suited for advertisement allocation over a large inventory of ads and a large number of videos.
Personalized recommendation system has become a ubiquitous tool for the online firms to offer personalized service and unique experience to the consumers who are searching their websites. While this advanced tool enhances firms’ profit by encouraging consumers’ purchase intention, the traditional recommendation system’s performance is constrained by the limited data sources the firm can access. Some third-party agent seized the opportunities by collecting data from different firms, including competing firms, and providing them personalized recommendation services using multi-source data. In this dissertation, we conducted a field experiment to explore the influence of the internal and external data on the effectiveness of the online recommender. Estimation biases in previous work are controlled and highly dynamic covariates from internal and external websites are extracted to explain the crucial question, the mechanisms why the effectiveness of recommendation system based on different data sources change in parallel with consumers’ heterogeneous characteristics. Meanwhile, the influence of the advanced personalization service on both the local firm and its external firms are explored to provide more empirical implications. We find that recommender system indeed improves consumers’ click-through rate, but the order of using internal and external impacts the effectiveness of the recommender system for different consumers. Moreover, consumers’ purchase stage moderates the outcome of the recommender system.

2 - Personalized Recommendations Targeting Upper and Lower Purchase Funnel

Takeshi Moriguchi, Proфессор, Waseda University, 1-6-1 Nishiwaseda, Shinjuku-ku, Tokyo, 169-8050, Japan, mortoguchi@waseda.jp, Guiyang Xiong, Xueming Luo

This study aims to test the effectiveness of personalized recommendations for consumers at particular stages of the purchase funnel. Especially for the online retailers, the concept of purchase funnel would be very important because they can easily understand a particular customer’s stage at the purchase funnel. There are several stages in the purchase funnel. However, in this study, we would like to consider product browsing at online stores as the upper stage and products abandonment in shopping carts as the lower stage. Then, we focus on the behavior and the personalized recommendation for consumers at these two stages and measure their effectiveness. The results will provide rich, heterogeneous effects contingent on various product and consumer characteristics. Managerial insights will be revealed on how to target customer wish list and shopping cart abandonment with personalized recommendations.

3 - Stochastic Variational Bayesian Estimation for Big Data Recommendation Models

Yang Li, Cheung Kong Graduate School of Business, Room 211, Tower E2, Oriental Plaza, 1 East Chang An Avenue, Beijing, 100738, China, yangli@ckgsb.edu.cn, Asim Ansari, Jonathan Zhang

Recommendation systems are an integral part of e-commerce as they are widely used for recommending products to consumers. Marketing scholars have developed different approaches for model-based recommendation that incorporate product attributes and preference heterogeneity. Such content-based recommendation algorithms, however, are hampered by the lack of ready availability of product covariates in many contexts. We show how to overcome this bottleneck by leveraging natural language processing on widely available user generated tags that describe products. We develop a new hierarchical supervised latent Dirichlet allocation model that associates tags with movie ratings, while accounting for heterogeneity in preferences. In our model, every document (movie) consists of multiple user tags and has multiple user ratings, and each user rates multiple documents, representing a realistic cross-structured typical of most e-commerce settings. Implementing such a hybrid recommendation system requires processing data with massive volume and high dimensionality. We therefore develop a state-of-the-art stochastic variational Bayesian (SVB) method to handle this Big Data situation. We demonstrate that SVB provides significant speed and scalability advantages and yields accurate model estimates and preference predictions, at a fraction of the computational cost associated with the popular MCMC methods. The successful application of SVB on UGC data shows that it is an effective new methodology to simultaneously address the Volume, Velocity, Variety, and Veracity (4V’s) challenges of Big Data, all at once, in marketing situations.
3 - Why Doesn’t a Firm Tout Brand Content in its Advertisement?

Michelle Yi Lu, Assistant Professor, McGill University, 1001 Rue Sherbrooke O, Montreal, QC, H3A 1G5, Canada, yilu@yale.edu

It is widely recognized that a firm should conduct category education when introducing a new product concept. Even so, our lay intuition suggests that an advertiser’s best communication strategy is to include both educational and brand content in the advertisement so that the advertiser can achieve the dual purposes of educating consumers and enhancing brand preference. However, in practice, many firms intentionally refrain from touting brand content in the advertisement. This research provides one explanation for this puzzling behavior from the perspective of a firm’s motive to construct credible signal for its product potential. When a firm introduces a novel product that belongs to the new category, consumers are uncertain as to whether and how the product potentially matches their needs. Therefore, product acceptance depends on consumer effort in assimilating advertisement content and deliberating their needs. The substantial cost of doing so would be reduced through advertising of the product potential in matching their needs. Nevertheless, a firm’s incentive for claiming the high potential of its product in matching consumer needs is dubious. The misalignment between the expenditures of consumer learning and the failure in product acceptance. We argue that a firm with a higher potential product can credibly signal the product type by adopting educational advertising. Educational advertising that refrains from touting brand content forgoes the opportunity of shaping consumer brand preference, thereby reducing the firm’s retail market share. The retail profit loss, in turn, serves as a signaling cost of the high potential product because only the high potential product can compensate the retail profit loss through an increased market share. We also derive conditions under which the choice of advertising content can informatively distinguish between the product types.

4 - Timing and Effects of New Advertisement Creatives

André Bonfrer, The University of Queensland, St Lucia, 4067, Australia, a.bonfrer@business.uq.edu.au, Michael H Braum, Michael H Braun

In an environment with substantial noise caused by competing brands advertising in close proximity, new creatives offer a chance for firms to rejuvenate or refresh campaigns. In this study we document how competing brands launch new advertising creatives over time. We then examine evidence of the long-run effect of different creatives run for television advertising. Our model builds on past work in marketing on the dynamics of advertising response and extends this framework to a competitive context. A particular feature of our empirical application is that advertising is run at a national level, whilst the sales response is at a more disaggregate (e.g. city) level. This makes it necessary to look at a hierarchical dynamic model of advertising response. We examine how multiple competitors’ decisions to advertise learning another and how this translates into each brand’s advertising response. These results are used in a dynamic model of advertising response to examine the tradeoff between the cost of implementing new creatives, versus reusing older media creatives. This work will help guide companies toward more efficient allocation of their marketing resources.

3A, 3rd Floor

Channel II

Contributed Session

Chair: Ruhai Wu, McMaster University, DeGroote School of Business, 1280 Main Street W, Hamilton, ON, L8S 4M4, Canada, wruhai@mcmaster.ca

1 - The Air War Versus the Ground Game: An Analysis of Multi-Channel Marketing in U.S. Presidential Elections

Lingling Zhang, Harvard Business School, Wyss House, Soldiers Field Road, Boston, MA, 02163, United States, ljiang@hbs.edu

Firms increasingly use both mass-media advertising and targeted personal selling to promote products and brands. In this study, we jointly examine the effects of mass-media advertising and personal selling in the context of U.S. presidential elections, where the former is referred to as the “air war” and the latter as the “ground game”. We look at how different types of advertising—the candidate’s own advertising versus outside advertising—and personal selling in the form of field office operations affect voter preferences. Furthermore, we ask how these campaign activities affect voting decisions through their diverse effects on various types of people. We compiled a unique and comprehensive dataset from multiple sources that record vote outcomes and campaign activities for the 2004-2012 U.S. presidential elections. Individuals’ voting preference is modeled via a random-coefficient aggregate discrete-choice model, in which we incorporate individual heterogeneity and use instruments to account for the endogeneity concern associated with campaign resource allocation. Among the many results, we find that field operations have a stronger effect on partisan voters than nonpartisans, while a candidate’s own advertising is better received by nonpartisans. Interestingly, outside ads behave differently from a candidate’s own ads by primarily affecting partisan voters. Therefore, our estimates can help allocate resources between different channels and within a channel across customer segments, especially if the support from particular types of customers is weak.

2 - How Does the Manufacturer Undercut the Collusive Retailers? The Strategic Role of Direct Channel Entry

Luping Sun, Assistant Professor of Marketing, Central University of Finance and Economics, Beijing, 100081, China, sumlingup@gsm.pku.edu.cn, Xiaona Zheng, Andy A. Tsay

Previous literature suggests that without regulations firms have incentives to collude by fixing price or reducing quantity. This paper sets up an infinitely repeated game to examine the strategic role of the upstream manufacturer’s channel strategy in hindering the downstream retailers’ collusive behaviour. The results show that the manufacturer can deter downstream collusion strategically restraining from direct selling. The deterrence effect occurs only when the discount factor (used to calculate the present value of future profits) is relatively large. This is then used to design a social channels strategy in terms of high (i.e., its variable cost in direct selling is relatively low). With the deterrence of the manufacturer’s dual channel strategy, retailers abandon collusion and “no collusion” becomes a win-win situation for both parties in the supply chain. However, when the manufacturer is not efficient in direct selling or the discount factor is small, the dual channel strategy will not induce the retailers to give up collusion and the manufacturer is worse off. These findings provide insights into the channel structure and vertical interaction between the manufacturer and retailers in a supply chain.

3 - Reshaping Bank Branch Networks Due to Mobile Banking

Francisco Orlando Cisternas Vera, Carnegie Mellon University, 5000 Forbes Ave, Tepper, Pittsburgh, PA, 15213, United States, fcisternas@cmu.edu, Alan Montgomery, Willen-Jan Van Hoeve

The proportion of US bank customers using mobile banking has grown from 20% in 2011 to 35% in 2014. This dramatic growth is likely to increase given that an estimated 71% of US adults in 2013 have smartphones, and this proportion continues to grow. As a consequence some banks have reported that they may reduce the number of their branch locations by half over the next decade. The adoption of mobile banking displaces many, but not all banking functions done through other channels like: automated teller machines (ATM), telephone banking, and online banking. Using geo-coded transaction data from a large consumer bank, we develop a structural model that represents consumers’ preferences for online and physical channels and consider how the bank should change its physical branch strategy into an optimal strategy that maximizes the overall channel profit. The model is estimated using historical transaction data. The model allows consumers to choose their preferred channels and the bank to actually change the number of branches, banks should aim to adjust current branch capacities specializing on transactions that cannot be served with digital channels. We predict that digital channels will diminish but not replace physical channels and they need to be designed correspondingly.

4 - Quantity Discount Policy with Resale among Competing Retailers

Ruhai Wu, Associate Professor, McMaster University, DeGroote School of Business, 1280 Main Street W, Hamilton, ON, L8S 4M4, Canada, wruhai@mcmaster.ca, Kaifan Liu, Jie Jan

Manufacturers often provide quantity discounts to their retailers. Quantity discount policy has been well explored as a channel coordination mechanism. However, existing literature precludes resale activities between retailers, which are frequently observed in business practices. On one hand, a quantity discount policy provides retailers an incentive to overbook inventories, as the lower wholesale prices will bring them an advantage in the subsequent competition with other retailers. On the other hand, the quantity discount policy also motivates some retailers to arbitrage inventories between the manufacturer and other retailers. That leads to a spontaneous collaboration among competing retailers in inventory booking, and consequently may significantly impede the channel coordination effect of quantity discount policy and reduce the manufacturer’s profit. In this paper, we examine a monopoly manufacturer’s quantity discount policy when retailers with heterogeneous retalging costs compete with each other and resale activities are not forbidden. Retailer collaboration happens when the retailer with high retailing cost resells inventories to the retailer with low retailing cost. We show that the collaboration between the retailers increase the total surplus of the supply chain and it does not always run the manufacturer’s quantity discount strategy. The manufacturer’s optimal quantity discount policy can lead to either the equilibrium outcome of retailers’ overbooking, or the outcome of retailer collaboration. We derive the market condition under which quantity discount policy and retailer collaboration coexist.
still in existence, and study the differential impact on consumers in areas where show the impact on consumers when Walmart closes stores. Using consumer assessed the impact of a new Walmart store on the community from various matrices. With these matrices, dynamics within consumption adjustment recession and subsequent to its ending. Separately running these analyses for predefined time periods (i.e., pre-recession, further allow to incorporate unobserved heterogeneity among households. Our approach comports with a growing literature in Marketing and Economics that investigates the micro processes that determine the market

2 - Investigating the Persistent Consequences of an Economic Downturn on Consumer Shopping Behavior

Thomas Scholdra, University of Bremen, Hochschulring 4, Bremen, 28359, Germany, scholdra@uni-bremen.de, Maik Eisenbeis, Werner J Reinitz, Julian Wichmann

In times of an economic downturn, consumers often reduce their consumption expenditures and keep them at a base level until clear signs of economic recovery appear. Lessening or completely ceasing purchases of certain products is one possibility to effectuate monetary savings. However, for fast moving consumer goods (FMCG), quantity adjustments are only feasible up to a certain degree. Instead, consumers focus increasingly on the prices of their desired products. In this way, some consumers may shift their purchases from non-discount formats to discount stores, whereas others substitute expensive manufacturer brands with low-priced private labels or turn towards temporarily discounted items. For retailers and manufacturers, a recession causes demand not only to change quantitatively but also structurally. In this study, we try to identify short- and long-term adjustment strategies of individual household consumption across changing economic conditions. We draw on panel data of around 20,000 German households with purchases in 39 FMCG categories over 11 years to capture the influence of different economical states on major consumer decisions. In particular, a three-stage nested logit approach is used to simultaneously model store choice, category purchase incidence, and brand choice on an individual level. Extending our model with a latent choice further allows to incorporate unobserved heterogeneity among households. Separately running these analyses for predefined time periods (i.e., pre-recession, recession, and post-recession) finally enables the development of transition matrices. With these matrices, dynamics within consumption adjustment strategies of individual households can be explained after the beginning of the recession and subsequent to its ending.

3 - When Walmart Leaves Town: The Impact of Walmart Closures on Consumer Spending Patterns

Jeff Inman, Albert Wesley Frey Professor of Marketing, University of Pittsburgh, 372M Mervis Hall, Pittsburgh, PA, 15260, United States, jinman@katz.pitt.edu, Mark Bender, Ryan John Luchs

In January 2016, Walmart closed an unprecedented number of retail outlets in an effort to refine its portfolio. Walmart closed more than 150 stores in the US, including 125 Walmart Express stores and Neighborhood Markets, 12 Supercenters, 6 regular Walmarts, and 4 Sams Club stores. Previous research has assessed the impact of a new Walmart store on the community from various perspectives (consumer purchasing behavior, retail sales, and the entry of other retailers). However, there is no prior research that shows the impact on consumers when Walmart closes stores. Using consumer panel data, we investigate the effects of Walmart’s customer purchasing behavior. We use propensity scores to match stores that are closing with stores still in existence, and study the differential impact on consumers in areas where stores close to consumers in areas where they remain open. Specifically, we identify how consumers reallocated their purchases to other retail formats, chains and stores following the Walmart closures. We also assess the effect of the closures on the affected households’ cost of goods. Implications for research and practice will be discussed. Key Words: Walmart Closures, Consumer Purchase Behavior, Retailing

2 - Developing Sustainable Innovation Capability: The Roles of Innovation Assets, Top Management Commitment and Marketing Department Power

Xinchun Wang, Assistant Professor of Marketing, University of North Dakota, 293 Centennial Drive, Stop 8366, Grand Forks, ND, 58201, United States, xinchun.wang@und.edu, Wesley Friske

The fact that innovation capabilities contribute to firm performance has been well documented in the academic literature. Consequently, both managers and researchers strive to find ways to build sustainable innovation capability, which enables firms to maintain their competitive advantage in the dynamic competitive environment. In this paper, we identify the distinctive organizational assets underlying a firm’s sustainable innovation capability. In addition, we examine the moderating effects of top management innovation commitment and marketing department power on a firm’s sustainable innovation developing process. The proposed model enriches the existing literature in innovation and dynamic capability and provides insights for managers who are interested in building sustainable innovation capability.

3 - The Relationship between Chief Information Officer’s Presence in Top Management Team and Company Performance: A Mediated Moderation Study

Li Wang, School of Economics & Management, Tongji University, Shanghai, China, wangli2008@tongji.edu

Almost 30 years after the introduction of the Chief Information Officers (CIO) position, it has been debated that whether the CIOs should be present in Top Management Team (TMT) or not, because little is known about the relationship between CIO’s presence in TMT and company performance and how CIO’s presence in TMT promotes company performance. This study develops a model in which CIO’s presence in TMT affects product innovation performance and company performance through the use of Virtual Customer Environments (VCE). VCE is a website platform provided by company to facilitate customer involvement in product development and supplies services ranging from online discussion forums to virtual design toolkits and customization and so on. Based on the longitudinal data of China’s top 500 enterprises, the results supported the reasoning that CIO’s presence in TMT promotes product innovation performance and thereby company performance by using VCE. Moreover, grounded in contingency theory, this research found that product-market profile moderated the relationship between CIO’s presence in TMT and the use of VCE, such that CIO’s presence in TMT was positively related to the use of VCE in B2C markets, but not in B2B markets. On the basis of this research, the researchers concluded that the effects of CIO’s presence on company performance are complex which yielding a pattern of mediated moderation. This research not only has some implications for aiding and supplementing to ‘upper echelon’ theory, but also directs enterprises to promote company performance.

3 - The Long-Term Impact of Service Empathy and Responsiveness on Profitability: A Frontline Employee Learning Perspective

Belbe Dong, Assistant Professor of Marketing, Lehigh University, 621 Taylor St, Bethlehem, PA, 18015, United States, bdong@lehigh.edu, Jun Ye

In these increased competitive markets, organizations are facing greater pressures to improve productivity. In response, many organizations downgraded the importance of service empathy and responsiveness, and reduce resource allocation in these quality dimensions to contain costs. However, the sustainability of this strategy, and its long-term impact on profitability, is unknown. Since empathy and responsiveness are important quality dimensions that stimulate service employees a sense of autonomy and flexibility, which could enhance commitment to new knowledge development. Frontline employee learning provides an interesting mediating perspective to study the links among service attributes (empathy/responsiveness), learning capability and financial performance. Hence, drawing on deliberate learning theories, this research examines how downgrading empathy and responsiveness would affect learning capability, an important organizational capability, which would affect organizations’ profitability. A large U.S. physician group has provided the research context for this study, and multiple sources of data were collected. Patient survey responses were used to measure the performance of empathy and responsiveness; employee responses were used to evaluate the physician unit’s learning capability; and four-year monthly archival financial data were obtained to measure profitability. We believe the use of multiple sources of data with both primary and secondary survey and secondary archival data provides high quality data that avoids common method bias. The findings suggest that empathy and responsiveness positively affect employee’s learning capability, which in turn affects organization’s probability, indicating the short-term cost benefits of downgrading service performance may hurt an organization’s learning capability, and ultimately compromise future profitability.
Psychologists have long argued the importance of emotions in evaluation and choice processes. Marketing scientists have been slow to recognize this phenomenon in their models, but with the advent of improved physiological, direct and indirect methods of eliciting emotions, we are seeing more work in this area. There is a strong body of literature considering the relationship between cognitions and utility (and hence choice) including, for example, linear models and ideal point ones. However, we know of no work that examines the appropriate functional form of the relationship between emotions and choice. Using emotions elicited using a series of avatars, we empirically test store visit response to emotional reactions for non-linearity. In particular, we identify differences in behavioral intentions, depending on the positive and negative feelings evoked by a brand. We close by identifying managerial implications for positioning and branding strategies.

2 - Do Parents Spend More on Boys: An Empirical Examination on Gender Discrimination in China
Chen Lin, Assistant Professor of Marketing, China Europe International Business School, 699 Hong Feng Rd, Shanghai, China, linc@ceibs.edu, Yuxin Chen, Jeongwen Chiang

Angus Deaton (1989) noted the ability to test of discrimination in the allocation of goods between of boys and girls is hampered by the lack of intrahousehold distribution. While previous literature on gender inequality has largely focused on workforce participation and performance issues, this research provides the first empirical evidence of gender discrimination in parents’ purchase decisions using a rich individual-specific dataset that consists of 2 million households in China from 2012-2014. We find that significant effect of higher spending on boys. Furthermore, the localization level is correlated with the regional social-economic conditions, birth rates and sex ratios. Implications on the sex ratio imbalance and the relaxation of one-child policy in China are discussed. Insights from these findings also offer children clothing companies useful suggestions on distribution, pricing, and product designs.

3 - The Effect of Money on Consumption and Consumption Enjoyment
Min Zhao, Associate Professor, University of Toronto, 105 St George Street, Toronto, ON, M5S 3E6, Canada, min.zhao@rotman.utoronto.ca, Kelly Kieyoon Lee, Ying Zhao

Consumers often engage in activities where the service providers charge a flat fee for their consumptions (e.g., having buffet dinner at a fixed price, taking rides at an amusement park with a day pass). Would the salience of money impact how much they consume and how much they enjoy their consumption? Drawing on recent research that suggested that the concept of money increases consumers’ consideration of what to receive in exchange for what they provide (Fiske 1991) and enhances their tendency to seek value maximization or good deals (Lee and Zhao 2014; Liu and Aaker 2008; Okada and Hoch 2004; Shampaener, Mazur, and Arzely 2007; Thaler 2004; Yols, Mead, and Goode 2006), we propose that when consumers are merely exposed to money, they will increase their tendency to maximize economic value, which leads to overconsumption and ultimately decrease their consumption enjoyment. In four experiments, we demonstrate the effect of money on overconsumption across various consumption contexts (e.g., food consumption, amusement park, and music). We prime money by either showing the price of a product or using more subtle ways of evoking thoughts about money through different tasks (e.g., song search, sentence-descrambling). Interestingly, we also show that consumers are not able to accurately predict their decreased enjoyment associated with overconsumption as a result of being primed with money; however, in actual consumption, choosing more items after being primed with money substantially reduces consumers’ enjoyment. Our findings contribute to previous literatures on money, mental accounting, and affective forecasting.
3 - Modeling the Price Signaling Effect in Consumer Demand for Luxury Goods
Yao Yao, University of Southern California, Marshall School of Business, 3660 Trousdale Parkway, Los Angeles, CA, 90089-0443, United States, yangyao.chn@gmail.com, Yang Sha, K. Sudhir

The price signaling effect is a key aspect that differentiates luxury goods from necessity goods. An expensive purchase of a luxury product helps individual consumers signal their social status, going beyond the quality premium inferred from a higher price. On the other hand, price is a monetary cost that could restrain consumer demand and lead to the standard substitution effect of price. Our paper puts out to fill a gap in the marketing literature by proposing a modeling framework to capture the signaling effect in consumer demand for luxury goods. We propose a model built upon the utility-maximization framework with two novel extensions. First, unlike the classic demand model where price only enters the budget constraint, we allow price to affect the marginal utility of a product as well to capture the signaling effect. This extension is supported by the economic theory, which suggests that price can be an important attribute an individual would “consume” and derive benefit or utility from the consumption experience. Second, we jointly model which brand and at what price version are chosen by an individual consumer. We apply our model to a unique survey-based dataset on Chinese consumer purchase of luxury watches. We detect strong signaling effect and substitution effect in consumer demand for luxury watches. We also find that family income has a U-shape relationship with the positive signaling effect, suggesting that low or high-income consumers are more likely to use price to signal their status than their counterpart of the middle-income group. Managerial implications are derived from several what-if simulations regarding price versioning and income expansion.

4 - Satiation and Habit Formation in the Video Game Industry
Nan Li, PhD Candidate, University of Rochester, 500 Joseph C. Wilson Blvd, 4-322 Carol Simon Hall, Rochester, NY, 14627, United States, nan.li@simon.rochester.edu, Avery Haviv, Yufeng Huang

The demand for a new product and its optimal release timing may depend on other recently released products. If high adoption rate of one product crowds out future sales of others, early release will produce a first mover advantage. However, if adoption is habit forming, the release of a product will expand markets for the followers, creating a last mover advantage. Focusing on the video game industry, we exploit variations in sales of games that are exclusive to a console platform using a difference-in-difference approach. We find that the time spent on one game affects future sales of other games. This effect is moderated by the similarity between the games: A major release cannibalizes future sales for games within the same genre but expands market size for games in other genres. We quantify the impact of these spillover effects on the full market using a random coefficient demand model.

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3B, 3rd Floor
Conjoint Analysis
Contributed Session
Chair: Fred M Feinberg, University of Michigan, Ross School of Business, 701 Tappan Street, Ann Arbor, MI, 48109, United States, feinf@umich.edu

1 - The Role of Discriminability in Conjoint Analysis
Anocha Anilbarg, Associate Professor, University of Michigan, Ross School of Business, 701 Tappan Street, R5478, Ann Arbor, MI, 48109-1234, United States, anocha@umich.edu, Katherine Burson, Richard Larrick

Choice-based Conjoint analysis is a widely used method for determining how certain attributes matter to consumers by observing a series of their choices. However, how those attributes are expressed has important consequences for their choices and thus conclusions drawn by market researchers about how important the attributes are. In the consumer behavior literature, researchers have shown that the numerosity of a scale impacts consumers’ perceptions of information presented on that scale. In multiattribute choice, consumers are likely to be influenced in part by the magnitude of the perceived difference between options described on a scale, leading to the term discriminability effect. Specially, expanded attribute scales (e.g. expressing exercise time in minutes) leads consumers to perceive greater differences between times than contracted scales (e.g. expressing exercise time in hours). We show in two product domains that simply expanding an attribute’s scale can shift choice toward alternatives that perform well on a scale that is expanded and thus impact conjoint results such as attribute importance and screening propensities. We also find the limit of the discriminability effect, where scale expansion from moderate to large magnitude does not further shift consumer choice, as well as derived measures from conjoint analysis. Both academic researchers and practitioners should be cautious when they choose precisely how to elicit preferences or how to describe their products—the extent of the scale’s expansion will determine researchers’ inferences about the importance of the attribute it describes.

2 - Attention, Information Processing and Choice in Incentive-Aligned Choice Experiments
Cathy (Liu) Yang, Assistant Professor, HEC Paris, 1 rue de la Libération, Marketing Department, Jouy-en-Josas, 78351, France, yang@hec.fr, Olivier Toubia, Martijn G. de Jong

A perennial problem in choice experiments is that consumers may not behave as they would in real life. Incentive alignment, whereby each decision is realized with some probability, is often seen as a solution to this problem. However, if information processing is costly, incentive-alignment should not be enough to motivate participants to process choice-relevant information as carefully as they would if the decision was to be realized with certainty. Moreover, the probability that a choice will be realized influences its psychological distance, which should have a systematic impact on the type of alternatives chosen by consumers. We empirically investigate how incentives impact attention, information processing, and choice. We vary the probability that the respondent’s choice will be realized from 0 (hypothetical) to 0.01, 0.50, 0.99, and 1 (deterministic). Based on response time and eye tracking data, we find a positive correlation between the probability that the choice will be realized and the level of attention. Respondents for whom choices are more likely to be realized also tend to choose more familiar products, and tend to be more price sensitive. The latter effect is driven by respondents who care more about the product category.

3 - A Low-Dimension Learning Approach to Estimating Heterogeneous Preferences in Choice-Based Conjoint Analysis
Yupeng Chen, Doctoral Candidate, The Wharton School, University of Pennsylvania, 700 Jon M. Huntsman Hall, 3730 Walnut Street, Philadelphia, PA, 19104, United States, yupeng@wharton.upenn.edu

Estimating consumers’ heterogeneous preferences using conjoint data is challenging since the amount of information elicited from each customer is often limited. Consequently, effective pooling of information across customers becomes critical for accurate conjoint estimation. We propose a low-dimension learning approach to estimate customers’ heterogeneous preferences and apply it to choice-based conjoint analysis. The intuition behind our approach is that, by restricting the individual-level partworth vectors to a low-dimensional space, we are able to focus on a small number of “important” directions along which most of preference variations across customers take place and effectively utilize data to recover preference variations along such directions. We develop a convex optimization problem to operationalize this intuition that builds on recent advances in rank minimization and machine learning. We compare our proposed approach to benchmark methods using both simulation experiments and field data sets.

4 - Preference in the Eye of the Beholder: Visual Design Assessment Via Real-Time, Geometrized Adaptive Conjoint
Fred M Feinberg, Handleman Professor of Marketing, University of Michigan, Ross School of Business, 701 Tappan Street R5324, Ann Arbor, MI, 48109, United States, feinf@umich.edu

Product designers must decide on appropriate levels of “attributes”, but some are notoriously elusive. Conjoint preference models shine in calibrating the importance of concrete attributes like price, MPG, and warranty length, but struggle with perceptual ones like style and design. These visually-conveyed attributes trade-off against traditional nuts-and-bolts attributes in consumers’ minds, and are thereby critical to their eventual market choices. Although getting them right consumes vast R&D and market research resources, current preference elicitation methods cannot reliably accommodate such trade-offs. Here, we leverage real-time, adaptive rendering - based on a parameterized geometric model - to assess exactly this interplay for key design and traditional attributes in the passenger vehicle market. The proposed ‘bi-level adaptive conjoint’ method uses crowd-sourced data to both assess vehicle style preferences based on 3D geometrization, and reveal tradeoffs between design/style attributes and functional ones (e.g., price and fuel efficiency). Bayesian partial-worth estimation, online training via ranking SVM, and a crowd-based experiment allow the proposed method to elicit more accurate individual-level preferences than conventional conjoint, and also pinpoint which styling elements differentially drive (heterogeneous) consumer reaction.
A m azon w ish  list). Managerially, our findings h ave key im plications for firm s' pricing and product susceptibility to purch asing purpose (gift-giving vs. self-use) and learning. s sensitivity literature by sh ow ing th at consum er's attitude tow ard price is receiver, w hich  receives m ore w eigh t w h en th e giver h as m ore uncertainty about gift com pared to w h en they are purch asing for self-use. Interestingly, th is gap increases w ith  uncertainty, w h ich  supports a B ayesian learning m ech anism . W e h B ayes tech niques to decom pose th ese data into part-prices and assess th e fit and collect price data longitudinally from B estB uy, W alm art, and A m azon. (Data th e price of th e non-selected option th at w ould create preference indifference. a) th e retail price only or b) th e retail price and attribute part-prices. U sing a database of attribute-level inform ation for h undreds of tablet com puters and choose th e option w ith  low er total price (F (1,50)=4.53; p< 0.04). W e also build a Preliminary results sh ow  th at th e m ean indifference price is low er w h en part- prices can be recovered using large-scale data m ining. In th e lab studies, (M azum dar et al 2005). In th is paper w e decom pose retail prices to reflect a Modeling II th at consum ers w ill use part-prices to decide if th e m arginal why hypoth esize th at consum ers w ill use part-prices to decide if th e m arginal willingness-to-pay of revealing inform ation to consum ers about product prices and costs. These approaches provide unique reference inform ation for consum ers (Mazum dar et al 2005). In this paper we decompose retail prices to reflect a product's relative price components, which we call part-prices (vs. partition). We hypothesize that consumers will use part-prices to decide if the marginal value of (say, a larger screen on a tablet computer) is worth the screen's price premium. We test hypotheses using lab studies and provide “proof of concept” that part-prices can be recovered using large-scale data mining. In the lab studies, respondents see tablet computers varying in selected attributes along with either a) the retail price only or b) the retail price and attribute part-prices. Using a discrete-choice approach, Ss select one of two tablets (per pair) and then reveal the price of the non-selected option that would create preference indifference. Preliminary results sh ow  th at th e m ean indifference price is lower when part-prices are revealed (F(1, 50)=4.80, p<0.01) and respondents are less likely to choose the option with lower total price (F(1, 50)=4.53, p<0.04). We also build a database of attribute-level inform ation for hundreds of tablet computers and collect price data longitudinally from BestBuy, Walmart, and Amazon. (Data collection: 10-5-15 to 3-1-1, twice per day at 6:00 and 12:00 UTC.) We use MBayes techniques to decompose these data into part-prices and assess the fit and predictive performance of alternative models.

3 - Modeling Gift Choice: The Effect of Uncertainty on Price Sensitivity
Shi Wang, PhD Candidate in Marketing, Hong Kong University of Science and Technology-HKUST, Clear Water Bay, Kowloon, Hong Kong, Hong Kong, shi.wang@connect.ust.hk, Ralf Van der Lans
This paper studies why consumers overspend on gifts. Besides a mismatch in preferences of the gift giver and the recipient, we show that a decrease in price sensitivity is another important reason. In order to disentangle these two different sources of consumer welfare loss, we adopted a two-stage choice-based conjoint experiment for gift giving in which uncertainty about the receiver's preference was systematically manipulated. Using a hierarchical Bayesian model for gift choices, we found that the mismatch between gift and receiver's preferences increases with uncertainty, which supports a Bayesian learning mechanism. We also found that consumers were less price-sensitive when they are purchasing a gift compared to when they are purchasing for self-use. Interestingly, this gap decreased as the giver received more information about the receiver's preference. This is because price is used as a signaling device of the giver's care about the receiver, which receives more weight when the giver has more uncertainty about the receiver's preference. Theoretically, our findings contribute to the price sensitivity literature by showing that consumer's attitude toward price is susceptible to purchasing purpose (gift-giving vs. self-use) and learning. Managerially, our findings have key implications for firms’ pricing and product design decisions in the gift market and provide insights into short-term and long-term profits of firms’ strategies to disclose receiver's preference information (e.g., Amazon wish list).

4 - Market Power and Marketing Practices the Case of Product Line Pricing
Steven Mark Shugan, McKethan-Matherly Eminent Scholar and Professor, University of Florida, 2030 NW 24th Avenue, Gainesville, FL, 32605, United States, steven.shugan@warrington.ufl.edu
Hailing Gao
Past empirical research, with conflicting findings, examines how market power affects marketing practices by comparing different products from different firms in different markets in different periods. Despite interesting findings, that research stream usually compares market power across markets with different numbers of competitors (a cross-sectional analysis), so any differences found could be partially attributable to differences between markets not involving market power. Hence, when exogenous longitudinal demand shifts cause market power to vary over time, periods with higher average prices (relative to marginal cost) should reflect periods when firms have greater market power. Although there are still differences between periods, we can still use longitudinal variation in demand to study market power and m anipulate with related control variables (e.g. firm effects). We apply a cross-section approach. Our empirical analysis compares the same product at the same firm in the same market across periods to measure market power. We focus on marketing practices involving feature-based price discrimination (PD). To measure PD we employ a case-control approach to compare the prices of exactly the same prod-uct in the same period (from the firm's viewpoint) except for a desirable costless feature. We find that the products without the costless feature show no significant increase in price as market power increases but the price of the product with the desirable costless feature does increase in price. Hence, firms use market power to extract surplus from high-end consumers who desire additional features but not low-end consumers. Moreover, we find high-end prices have a non-linear relationship with quality of the common base product that varies across firms.
This paper develops new methods of the customer decision-making process regarding a preannounced new product and tests it to estimate the aggregate market demand for it. In particular, we are interested in the question of what and how many customers will wait for the availability of a new product, based on its prior announcement, as opposed to purchasing the best alternative. To achieve this, we propose two methods: 1) Theoretic model based on von Neumann-Morgenstern utility function, and 2) Dynamic choice-based conjoint analysis. First, the theoretic model considers three major factors to capture customer heterogeneity: risk aversion, perception of performance of the new and old products, and uncertainty regarding the availability of the new product. Analysis of the model yielded face valid results for scenarios of new product preannouncements. Second, we develop a dynamic choice model when consumers are forward looking. We apply it to conduct conjoint experiments wherein respondents choose to adopt old products now and wait for the new product (described in terms of the attribute levels). The model has been tested empirically using three product categories (smartphone, movie and game). Given the preannouncement, the customer now has to decide between purchasing the chosen existing product now versus purchasing the new (preannounced) product later. The results provide insights into the drivers of the likelihood of waiting for the new preannounced product as well as the likelihood of the announcement being perceived as credible by the consumers. We also consider to inquire about their "actual purchases" of the preannounced products. The predictions for the two models are compared against actuals with results.

3 - An Exploratory Investigation of Barriers to University-Originated, Technology-Based Product Commercialization

Priyanka Sharma, Doctoral student, IIT Kanpur, New IME Building, Indian Institute of Technology, Kanpur, Kanpur, 208016, India, psharma@iitk.ac.in, Shashi Shekhar Mishra

Recognizing the importance of university originated research, many emerging economies like India have made conscious effort to improve upon University-Industry (UI) collaboration for technology-based product commercialization. However, the relatively fewer examples of such ventures in India highlight the presence of barriers to university originated technology-based product commercialization. Interestingly, there is visible dearth of any comprehensive prior study that might have identified the barriers to the same. Our research is aimed to fill the present void in the extant marketing literature by identifying and categorizing barriers to university originated technology-based product commercialization. The methodology for the study is exploratory in nature. In the first phase of the study, we performed an extensive literature review that resulted in identifying possible barriers and in the second phase of the study, expert survey helped in addition of important contextual barriers to consolidate the findings of literature review. A group of three researchers categorized these barriers into two types as (1) entity based and (2) flow based and further sub-divided to develop the complete taxonomy of barriers. Findings of the study suggest that different structure and routines of university and industry lead to incongruities in the presence of barriers to technology-based product commercialization. Secondly, socio-cultural environment in India has a huge impact on the technology based product commercialization. Other barriers are related to the transfer channels, and value appreciation. The paper concludes with the important implications of these findings that can enable policy design to facilitate university-industry linkages in India.


Elina Tang, University of Illinois-Chicago, College of Business Administration, 2225 University Hall, Chicago, IL, 60607, United States, elinatang@gmail.com, Detelina Marinova

Despite the recognition that market learning in new product development (NPD) teams takes place during a continuous reshaping of cognitions, research has not addressed the process that underlies sharing of market knowledge within teams over time. We map the process through which NPD team members share their knowledge about customers and competitors over time and link it to subsequent team performance. Specifically, we study the role of perceived market knowledge diagnosticity, perceived valence of market information, and satisfaction with team past performance in shaping the market knowledge sharing behavior within the team. To test the proposed hypotheses, we take a multi-method approach: a longitudinal quasi-experiment study and a field survey of NPD teams in multiple firms in a knowledge intensive industry. The results indicate that customer and competitor knowledge perceived as diagnostic or indicative of team performance promotes market knowledge sharing within the NPD team. Customer knowledge perceived as diagnostic promotes both customer knowledge sharing behavior and the extent of shared accurate customer knowledge. In contrast, competitor knowledge perceived as positive reduces the extent of shared accurate knowledge within the team. Finally, customer and competitor knowledge sharing both exhibit an inverted U-shaped relationship, cautioning against constant efforts to promote market knowledge sharing in a team.
4 - Extended Warranty Information Availability Formats: Impact on Consumer Purchase Decisions
Paul R Messinger, University of Alberta, Faculty of Business, 3-20E Faculty Of Business Bldg, Edmonton, AB, T6G 2R6, Canada, paul.messinger@ualberta.ca, Moein Khanlari Larimi

Information about extended service contracts, mainly price, is generally offered to buyers subsequent to their product purchase decision during the checkout. However, extended service contract (ESC) information has also been made available alongside product attribute information. In this research, we ask whether and how the mere availability of ESC information during the product choice phase might affect consumers’ product and ESC purchase decisions. To answer this question, we pit the simultaneous vs. delayed ESC information availability strategy against one another in choice experiments. We find that the simultaneous availability of ESC information can influence the risk reduction strategies adopted by consumers due to potentially heightened perceptions of risk, loss, or need for insurance. In our results, we observe lower sensitivity to ESC prices combined with buying ESCs for higher quality products (i.e., a reparative ESC-focused risk reduction strategy). We also observe a lower ESC purchase likelihood along with lower sensitivity to product prices (i.e., a preventative product-focused risk reduction strategy). These effects are consistent with expected patterns of behavior for consumers with high vs. low levels of risk or loss aversion. These patterns suggest that in the simultaneous ESC information availability condition, people might respond to a heightened need for insurance by undergoing a reparative ESC-focused or a preventative product-focused mind-set or possibly adopt a combination of both mindsets.

TB11
5D, 5th Floor
Working Paper III
Contributed Session
Chair: Peren Ozurtan, VU University Amsterdam, FEWEB, De Boelelaan 1105, Amsterdam, 1081 HV, Netherlands, p.ozurtan@vu.nl

1 - Advertising: Past, Present and Future
Dr. Shaphali Gupta, Assistant Professor, Management Development Institute-Gurgaon, Mehrauli Road, Gurgaon, 122007, India, shaphali.gupta@mdi.ac.in, V Kumar

The influx of technology and the vast amount of data has changed the way the marketing climate is perceived. Geographical boundaries between markets are blurring, and ‘selling’ has been replaced by ‘engaging’. Consumers are more connected, more informed, more empowered, and more spoil for choice than ever before. The former one-way broadcast of the nascent years of advertising has given way to a two-way conversation between brands and consumers. The objective of this paper is to look into the future of advertising. What it would be? Which vehicle will be the most impactful and effective in next decade? Which medium would consumers trust the most and why? Where should the large chunk of marketing resources go and on what basis should they be allocated? What exactly influences our consumers today? The framework presented in this study expounds all the factors related to customer, firms, technology and information and offers a blueprint for marketing managers to take into account while designing their marketing and advertising plans. In future, the effectiveness of advertising will depend upon the extent to which marketers imbibe and act upon the shifts in consumer and market trends. The future will belong to those advertisers that empower and engage consumers through relevant, reliable, and targeted communications that treat the consumer as not a statistical data point, but an equal relationship partner.

2 - The Pollyanna Effect in Marketing-R&D Integration
Peren Ozurtan, Assistant Professor, VU University Amsterdam, FEWEB, De Boelelaan 1105, Amsterdam, 1081 HV, Netherlands, p.ozurtan@vu.nl

This study addresses the issues related to how marketing and R&D departments’ proficiency and influence impact the two departments’ perceptions of integration in the new product development process. We examine relative proficiency as a driver of the Marketing-R&D integration, while accounting for the moderation effects of relative influence of marketing department and appraisal error committed by R&D department regarding the relative influence of marketing. Using a unique database with paired responses from marketing and R&D executives, we find that: 1) each department’s self-appraised relative proficiency has a direct effect on respective perceived departmental integration, 2) interestingly this effect, which we call the Pollyanna effect, is positive for marketing, but negative for R&D, 3) the moderation effect of appraised relative influence of marketing department exists only for the marketing department, but not for the R&D department, and 4) R&D department’s appraisal error (overestimation/underestimation) of marketing department’s relative influence strengthens the relationship between marketing department’s self-appraised relative proficiency and perceived integration. These asymmetric effects of appraisal errors provide valuable insights on how marketing and R&D managers can build on their own and each other’s appraisals in order to enhance cooperation in new product development contexts.
The authors explore effects of online/offline media exposure and price promotion on trial and repeat purchase of new CPG products. In addition, they examine differences of these effects across new product types (new brands vs. revitalized brands). The authors employ a binomial logistic regression modeling for trial purchase and a negative binomial regression modeling for repeat purchase to test their hypotheses. We estimate a structural model of advertising through (potentially wasteful) advertising. Because the network operator captures purchase history, TV watching history, and web browsing history. The results reveal that the effects of online/offline media exposure and price promotion vary across purchase stage and new product types. Specifically, the analysis reveals four key findings. First, website browsing of new brands promotes trial and repeat purchase, but does not affect trial or repeat purchase of revitalized brands. Second, the timing of website browsing about new brands (before or after trial or repeat purchase of revitalized brands). Third, promotional price cut elasticity of revitalized brands is stronger than that of new brands for trial purchase. Finally, the interplay between media exposure and price promotion provides a structural model of new brands, but not for revitalized brands. The results point to the role of TV commercials, company websites, and pricing in promoting trial and repeat purchase of new products.

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4 - Impact of Self-disclosure on Effectiveness of Online Reviews
Natasha Zhang Foutz, Associate Professor of Commerce, University of Virginia, 340 Rouss B & Robertson Hall, University of Virginia, Charlottesville, VA, 22904, United States, njfoutz@virginia.edu, Xinyue Zhou, Xia Angela Liu

Consumer share opinions about products or services. Ubiquitous online reviews drive diffusion, motivate innovation, and critically determine product success and firm profitability. Executives are therefore keenly interested in harnessing the power of online reviews in identifying opinion leaders and most effective marketing communications. This research specifically examines how perceived effectiveness of online reviews is linked to the degree of self-disclosure, or revelation of personal information to others, by the reviewers; and how such self-disclosure is driven by important socioecological factors such as residential mobility. The empirical analysis is conducted on more than 200,000 reviews from an online product review site on 4,600 businesses across 15 states in the U.S. over an 8-year span. Two metrics of self-disclosure are used: one of whether the reviewer discloses hometown upon website registration and the other a constructed self-disclosure language index based on text analysis of review contents. We employ a hierarchical linear model while using control function to account for potential endogeneity of the self-disclosure metrics. The study reveals positive link between review effectiveness and self-disclosure, which is further driven by key factors such as residential mobility. We further discuss managerial implications of the findings.

TB16

Emerging Online Technologies
Contributed Session
Chair: D Sudharsan, University of Kentucky, 119B Mandrell Hall, Business and Economics, Lexington, KY, 40506, United States, sudharsan@uky.edu
1 - Competitiveness of Social Interactions as a Marketing Variable in Social Gaming
Huazhong Zhao, University of Florida, Stuzin Hall 249A, Gainesville, FL, 32611-7135, United States, huazhong@ufl.edu, Haibing Gao, Jinhong Xie

Advances in social networking and mobile technology have significantly increased game developers’ ability to actively initiate and manage social interactions among game players. This paper introduces competitiveness as a new attribute of social interactions. We empirically investigate how providing players the opportunity to pursue competitive (win-lose) vs. cooperative (win-win) social interactions differentially affects both their individual spending and their social network building. Our analysis of real-time logs of a popular social game uncovers an interesting stage-dependent pattern: in the early stage of a social game launch, competitive interactions encourage high consumption (spending more virtual currency), and cooperative interactions lead to a larger network size (interacting with more players). However, as the social game evolves, the opposite holds: cooperative interactions become more important in motivating consumption, and competitive interactions contribute more to social network size. These findings demonstrate that competitiveness of social interactions can be used as a strategic marketing variable. This paper contributes to the literature on consumer social interaction in general and the literature on game design in particular.

2 - Online Reviews: Some Empirical Generalizations
Jeremy Yang, Massachusetts Institute of Technology, Cambridge, MA, United States, zheny@mit.edu, Vishal Singh

Online consumer reviews (OCR) provide opportunities for consumers to share their experiences and opinions about products/services and are regarded among potential buyers as one of the most trusted sources of information. In this article we analyze the information content in over 80 million reviews from Amazon.com. The database is a universe of all reviews at amazon (books, electronics, music, etc.) and spans over 15 years (1997-2014). Building on previous literature, we construct a wide array of attributes to quantify the information content of reviews: length and timing of review, its syntactic and semantic features, star rating, price and characteristic of the product. Our analysis focuses on analyzing the helpfulness of review based on votes by readers. Although theory suggests that consumers perceive negative information as more diagnostic and persuasive, we find helpfulness of a review to increase monotonically with star rating. With minor exceptions (e.g. sub-category ‘electronic warranties’), this pattern is consistent across all product categories at Amazon. In addition, we use information on the top 100K reviewers at amazon that provides us information on reviewer name (used for coding gender), location (city/state) and their reviews for all other products at amazon. We find systematic differences between heavy vs. occasional reviewers and between males vs. females in their language use, and length of reviews based on their star ratings of the product. Implications for online retailers and service providers are discussed.
3 - The Internet of Everything: A Conceptualization, Normative Propositions, and Agenda for Marketing Research

D. Sudharshan, University of Kentucky, 119B Mandrell Hall, Business and Economics, Lexington, KY, 40506, United States, sudharsahn@uky.edu, R. Venkatesh

Our society lives on the cusp of an environment in which the emerging fabric of information architecture and things will change the way we live, buy, sell, consume and conduct our lives. Organizations such as Cisco, Deloitte and Pew Research provide white papers that place a value for new opportunities in the range of trillions of US dollars. The new environment will be the result of what Cisco terms the emergence of the Internet of Everything (IoE) with significant consequences for society at large and, in particular, on marketing and academic marketing research. To draw out the normative and research implications of an IoE world our paper lays a foundation by first providing a conceptualization of IoE from a Marketing perspective. Three broad conceptual lenses underpin our normative propositions. They are (1) the nature of networks that connect things, people, and places; (2) the complexity that managers and consumers face in managing and using IoE technology and theory of affordances. We illustrate our conceptualization using the ecosystem of sensing, analysis, interpretation and action that is centered around smart phones presently. We rely on our conceptualization to: (a) Argue in favor of a series of propositions of the consequences of the emergence of IoE on marketing decisions such as new product development, diffusion of innovations, pricing, and bundling; and (b) Identify a set of open research questions regarding intra- and inter-organizational marketing governance and actions.

Thursday, 1:30pm - 3:00pm

TC01

3C, 3rd Floor

Advertising III

Contributed Session

Chair: Praveen K Kopalle, Dartmouth College, 100 Tuck Hall, Tuck School of Business, Hanover, NH, 03755, United States, kopalle@dartmouth.edu

1 - Turning Prospects into Valuable Customers

Nico Neumann, University of South Australia, 101 Currie St, Adelaide, Australia, nico.neumann@unisa.edu.au, Andre Bonfret, Arun Gopalakrishnan, Pradeep Chintagunta

Every business has either a formal or informal ‘lead generation’ process to grow their customer base. Previous research has shown that the marketing communications during this ‘prospecting’ phase can be critical (Finnestad and Anderson 2004, Datta, Poubert and van Heerde 2015). Our study builds on this research stream: Firstly, we study time-varying effects of dynamic covariates (marketing actions) on each of the acquisition, cultivation, and duration processes of prospects (Schnitman et al. 1987). Specifically, we center this discussion on customers who have not yet generated revenue for the firm, and are not reacquired customers who have previously left the firm (e.g., Thomas 2001). Secondly, we examine how the communication efforts at pre-acquisition affect customer behavior as well as the effectiveness of marketing actions post-acquisition. Our findings reveal that customer responsiveness in terms of revenue lifting and retention varies across different prospect groups, such as new customers, who experience a learning phase before product adoption, and those who buy immediately. Moreover, we find that both email and direct mail exposures have a significant effect on the likelihood to become a purchasing customer, albeit with varying temporal patterns in these effects. We conclude with a discussion of managerial implications for sales conversions, communication strategies, and customer lifetime value (CLV) strategies.

2 - An Intelligent Ad Display System

Li Xiao, Fudan University, Shanghai, China, lixiao@fudan.edu.cn, Min Ding

It has gradually become common practice in marketing to use LED screens to display ads on many occasions, e.g. the digital POS systems in retail stores, digital billboards at bus stops, and video screens installed on the seatbacks in taxis and airplanes, etc. This video ad display system usually shows a set of ads to the viewers, one after another in a predetermined sequence, and then loop back to start from the first ad. Such system has an obvious advantage of playing multiple ads but using only one space. However, its performance is questionable since it ignores the substantial heterogeneity among people’s preferences toward various ads. In this paper, we propose an intelligent video ad display system, which tracks viewer’s (1) facial expression and (2) eye gaze when s/he is viewing an ad. For each frame, the recognized facial expression and detected eye gazes are matched to the corresponding frame on the video ad shown at the exactly the same time. In this way, the system knows what facial expression is in response to what specific component in the ad. By doing this in real time, the system can estimate and update a viewer’s preferences toward ads, then search the ad database, and select and play a new ad next that is more likely to attract this viewer’s attention and result in positive attitudinal and behavioral consequences. We tested the proposed system in an empirical study, and demonstrated that our proposed system is able to make reasonably accurate inferences of viewers’ preferences toward video ads.

3 - Differential Impact of Price Promotions on Consumer Segmentation During Economic Cycles: Comparing across Durable vs. Non-Durable Goods

Abhishek Nayak, Doctoral Candidate, IE Business School, Instituto de Empresa, B-82334119, Maria de Molina, 13, Madrid, 28006, Spain, anayak.phd2016@student.ie.edu, Shameek Sinha

Consumers’ behavioral processes differ while making durable goods vs non-durable goods purchases. Given the long term effects of the choices for durables, consumers are more thoughtful about their durable goods purchases compared to non-durable goods. This also leads to a differential response towards price promotions for each type of goods. Moreover, price promotion sensitivity variations are augmented during economic cycles when consumers become more price conscious which impacts their spending on durables. Overall, spending on durables tend to be more cyclical compared to non-durables. Using consumer level transactions data spanning roughly 4 years for a single product category under durable goods (TV) and non-durable goods (Milk) respectively, and considering the early 2000’s economic fluctuations as the observation window, we estimate the price promotion sensitivities for both durable and non-durable goods and examine how they evolve with the economic cycle. We contribute to the existing research on endogenous consumer segmentation based on brand preference & price sensitivities by identifying consumer segments for both durables and non-durables. We further characterize the identified consumer segments using their demographic and socio-economic characteristics. We demonstrate how the profiles of these consumer segments differ between durable and non-durable goods even when they have similar price promotion sensitivities and investigate how they change over the economic cycle. Insights from this research can help marketers to identify relevant consumer segments for targeting their price promotion strategies. Specifically during economic fluctuations, these insights could be useful for providing differential price promotions across consumers for both durable and non-durable goods.

4 - The Effects of Advertised Quality Emphasis and Objective Quality on Automotive Sales

Praveen K Kopalle, Dartmouth College, 100 Tuck Hall, Tuck School of Business, Hanover, NH, 03755, United States, kopalle@dartmouth.edu, Robert Fisher, Kersi Antia, Bharat Sud

We examine the effects of quality-based advertising messages and a brand’s objective quality and their interplay on automotive sales over a 21-year period. We find that brands with high objective quality benefit significantly from emphasizing quality in their advertising, whereas brands with low objective quality do not. This finding is independent of the level or magnitude of advertising spending. We also find evidence that consumers recognize and respond to improvements in objective quality in the same-period in which they occur, which is contrary to prior longitudinal research. Our field study is based on a unique dataset that includes: 1) a measure of advertised quality based on a coding of 1,876 print ads in national magazines, 2) an overall quality measure of objective quality based on Consumer Reports ratings, and 3) marketing variables including price, promotional discounts, distribution intensity, and advertising spending across all media. We also test our theory with an analytical model and an experiment that examines consumers’ responses to a new electric car. The results have important implications for marketing theory and practice.
significant relationship with procedural justice. Contract has a positive impact on test the hypotheses proposed. The results show that manufacturer's transactional pairs of manufacturer-distributor sample, structural equation modeling is used to procedural justice) and knowledge transfer. Through the survey data from 216 pairs of manufacturer - distributor, structural equation modeling is used to test the hypotheses proposed. The results show that manufacturer's transactional specific investments will increase distributor's distributive justice and has no significant relationship with procedural justice. Contract has a positive impact on distributive justice and an inverted U-shaped effect on procedural justice. Trust will impact two kinds of justice positively. Distributor's perception of justice will increase its knowledge transfer to manufacturers. With the increasing of distributor's dependence, the effect of distributive justice will be weakened while the effect of procedural justice will be strengthened. This study provides a perspective on determinants of justice and the contingent effect of justice on knowledge transfer with considering dependence. It provides implications for manufacturers to improve distributors' justice to acquire knowledge.

4 - Retailer Buyer-Supplier Relationships
Brenda Sternquist, Professor, Michigan State University, 10260 Red Bud Drive, Haslett, MI, 48840. United States, sternqui@msu.edu

In one year, the number of food and beverage new products introduced to US retailers was 21,528 (USDA 2014). Channel power has shifted from the manufacturer to the retailer (Kadiyali, Chintagunta and Vlasic, 2000). Retailers act as active gatekeepers rather than a submissive intermediary in selecting products. They determine consumer's access to the product offerings. Early studies of retailer adoption of new products focused on price and margin, however more recent studies (Everdingen, Sloot, Nierop and Verhoef, 2011) expand understanding of retailer new product adoption by investigating relationship variables and category considerations. Data for this study come from randomly selected national samples of retail (commercial) buyers in the US (n=150) and Japan (n=175). A two-group structural equation model was used to test buyer-supplier relationships.


TC03

3H, 3rd Floor
Retailing III
Contributed Session
Chair: Woochoel Shin, University of Florida, Department of Marketing, 212 BRY, P.O. Box 117153, Gainesville, FL, 32611, United States, wshin@ufl.edu

1 - Intra and Inter Tier Private Label and National Brand Competition Across Retailers
Gizem Hokelekli, PhD student, University of Leuven, Naamsestraat 69, Leuven, 3000, Belgium, gizemhokelekli@gmail.com, Lien Laney, Frank Verboven

Whereas national brands (NBs) are available in all retailers' assortments, private labels (PLs) have restricted distribution that is unique to retailer itself. Because of increasing competition among retailers, PL tiers are now set to become the new battleground for retailers. The study examines the role of PL competition (economy, standard and premium PLs) on the competition between retailers. More specifically, we explore both intra tier and inter tier competition. Intra tier competition refers to competition between retailers within the same tier, while inter tier competition refers to competition between the different tiers both within and across retailers. We use a representative U. K. household panel dataset (2009-2010) for the ready to eat cereal and soup categories, and estimate a demand model for the choice between NBs and PL tiers across the top 10 U.K. retailers. We use the estimates to conduct several counterfactual experiments that predict consumer responses to alternative policy changes of traditional retailers and discounters. In particular, we compare the effectiveness of two PLs introduced by traditional retailers to fight discounters: economy PLs versus standard PLs. We find that economy PLs are not a very effective strategy for traditional retailers to fight discounters. Although they steal some market share from discounters, they cannibalize the traditional retailers' standard PLs and their NBs. Standard PLs are more effective to fight discounters since they steal most market share from discounters. We also look at effectiveness of discounters' strategy and find that discounters benefit from a further increase in their NB offerings.

2 - Impact of Gamified Training on Salesperson Performance
Siddharth S. Singh, Associate Professor of Marketing, Indian School of Business, ISB, SAS Nagar, Mohali, 140306, India, siddharth_singh@isb.edu

Companies traditionally provide product and skills training to their salespersons in classrooms. They bring a group of salespersons to a site where instructors train them. This form of training poses challenges. Due to fast product development cycles and shortened product life-cycles, companies are launching new products at short intervals. In addition, the sales environment has become more complex. Therefore, providing ongoing training to salespersons and increasing retention of learning is a significant challenge. In response, a gamified sales training environment is being adopted by some companies. In this environment, trainings on various products and skills are distributed online in modules to be consumed by salespersons per their need. Also, a reward system is built into the training such that higher number of training modules taken and better performance on these modules result in higher rewards—thus the gamification of training. It is believed that such training is more effective due to higher (1) engagement of employees with the training program, (2) retention of lessons, and (3) effectiveness due to learning typically being closer to the point of application. In this research, we use data from an India-based company that uses its proprietary online platform to provide gamified sales and skills training to salespersons of global organizations. The company produces short training modules that salespersons can learn from as and when they wish. Therefore, not all the salespersons take training and the number of training modules used varies across salespersons. The data represents a self-paced training by choice—a fundamentally different learning environment than the traditional training method. Using this data, we investigate the impact of gamified training on salesperson performance in India. To our knowledge, this is the first study that looks into the last emerging field of gamified training.

3 - The Relationships Among Relational Investments, Governance, Justice and Knowledge Transfer: The Moderating Role of Dependence
Ting Liu, Associate Professor, Shanghai University, No. 99 Shangda Road, Baoshan, Shanghai, 200444, China, tingliu@shu.edu.cn, Zhen Wang

Justice is a foundation for all types of social and economic exchanges and relationships. However, little is actually known about what determines the justice perception in channel relationships. And the impact of different dimensions of justice needs more investigation. Based on equity theory, transaction costs theory and social exchange theory, this paper build a conceptual framework describing the impact of manufacturer's relational investments and governance mechanisms (contract and trust) on distributor's perception of justice (distributive and procedural justice) and knowledge transfer. Through the survey data from 216 pairs of manufacturer - distributor sample, structural equation modeling is used to test the hypotheses proposed. The results show that manufacturers' transactional specific investments will increase distributor's distributive justice and has no significant relationship with procedural justice. Contract has a positive impact on
2 - Complementary Relationship Between Private Brands and National Brands
Zhen Li, Kansai University, 3-3-3 Yamate-cho, Suita-shi, Osaka, 564-8680, Japan, zhenli0209@gmail.com, Katsutoshi Yada

Traditional marketing theory suggests that there is a competitive relationship between private brands (PBs) and national brands (NBs). Prior research has presented a theoretical possibility that the existence of PBs may help NBs by proposing economic models; however, this conclusion still lacks the support of empirical studies because its forming condition is almost impossible to achieve in real markets. Building on this idea, our study tries to explore that whether PBs introductions may benefit NBs in the actual marketing. We use point-of-sales data from a Japan’s supermarket. In this study, although the results show that there is a negative correlation between the demands for PBs and NBs on the whole, sales volume of PBs is positively correlated with the variance of NBs demand. Using quantitative regressions, we find that the sales of PBs have a positive impact on demand for a part of popular NB to some extent but a negative impact for other NBs. In addition, through the analysis on customers’ purchase records, the finding suggests that the existence of PBs benefits NBs by providing potential customers. The major contribution of this study is to demonstrate the complementary relationship between PBs and NBs from the angle of empirical evidence. This paper can help retailers to further understand the relationship between relative sales outcomes of PBs and NBs, and improve the rationality and efficiency of product assortments.

3 - Store Brands and Category Captanivity
Woohoe Shim, Assistant Professor, University of Florida, Department of Marketing, 267 Stuzin, Po Box 117155, Gainesville, FL, 32611, United States, wshin@ufl.edu, Wilfred Amaldos

In several product categories, retailers have launched store brands to compete with national brands on both price and quality. Yet in some of these categories, retailers have appointed a national brand manufacturer to serve as the category captain to help expand category sales and better manage all the products in the category, including the store brand and the competing national brand that may be of different quality levels. Using a model of vertical differentiation, we theoretically examine the conditions under which a category captain will be observed, and its strategic implications for the competing manufacturer, consumer welfare, and the store brand. In the presence of a store brand, a retailer will designate a national brand manufacturer to play the role of a category captain only if the manufacturer is sufficiently more efficient than the retailer in expanding category sales. In such circumstances, category captaincy improves the welfare of all participating manufacturers, the competing manufacturer, the category captain and the retailer. In the absence of a store brand, however, category captaincy hurts the competing national brand’s profits. Moreover, the category captain can make it attractive for the retailer to drop the competing national brand but not the store brand. We obtain different results when we consider a new product category. In the presence of a store brand, category captaincy reduces the competing national brand’s profits, but not so in the absence of the store brand. Furthermore, in this case, the category captain can motivate the retailer to eliminate not only the competing national brand but also the store brand.

2 - Who to Call? Predictive Modeling of Potential Customers Based on Customer Behavior Data
Tian Sun, Baising Inc., suntian@baising.com

To operate a telemarketing campaign in a classified advertisements website Baising.com, a model is needed to predict the possibility of customers order and then those with highest possibility can be selected. The paper designed and implemented a practical decision support system which could generate and distribute customer lists to sale representatives. In the paper, four techniques: logistic regression, supporting vector machine, decision tree and random forest have been used to compare the prediction performance. Random forest gives the best result both in area under ROC curve and lift chart. The final dynamic model integrates customers online behavior data, which is also called click-stream data as indicators of willingness to pay. The result from field study inspired that in the future work, we may push dynamic modeling for more robust and precise prediction.

3 - Split Questionnaires and Response Styles
Feray Adiguzel, Assistant Professor of Marketing, LUISS Guido Carli University, Viale Romania, 32, Roma, 00197, Italy, fadiguzel@luiiss.it

Split questionnaires are recommended to reduce undesired response styles. Its relationship with various response styles remains unclear, however. To address this gap, we examine empirically whether split designs reduce what type of response styles. The findings indicate that split questionnaires reduce acquiescence balance, and acquiescence relative to full ones. Stylistic responding is also influenced by questionnaire satisfaction, attitude, length and mood. Disacquiescence is negatively correlated to mood, questionnaire length and attitude. Midpoint is positively correlated to length, but negatively to questionnaire satisfaction, while acquiescence is opposite for both.

TC04
3D, 3rd Floor
Marketing Strategy III
Contributed Session
Chair: Yijun Chen, Washington University in St. Louis, 1 Brookings Drive, St. Louis, MO, 63130, United States, yijun.chen@wustl.edu

1 - From Maximising to Satisficing: The Interplay between Time Constraints and Choice Overload
Boshuo Guo, PhD Student, Imperial College Business school, Imperial College London, Imperial College Business School, South Kensington Campus, London, SW7 2AZ, United Kingdom, boshuo.guo12@imperial.ac.uk, Ammara Mahmood, Catarina Sismeiro

Previous research has identified choice overload as a potential cause for purchase deferral. Researchers suggest that the frustration consumers experience when processing significant amounts of information can lead to decision avoidance and have also found that, consistent with such explanation, that time constraints act as a moderator: approaching deadlines seems to amplify choice overload due to an increased cognitive burden. With this study, we investigate the relation between number of choices and deadlines using observational and experimental data on the purchase and search of airline tickets, an ideal context with large number of options and in which deadlines and time pressure play an important role. Our results are consistent with the presence of choice overload: we find a negative relationship between number of options and purchase probability. Due to nature and detail of the data, we are also able to exclude alternative explanations including option filtering as consumers go through the purchase funnel. However, our results suggest an alternative mechanism behind the choice-overload phenomenon. We find evidence that choice overload can also be the result of consumers shifting between maximising and satisficing decision strategies which can occur as a result of time constraints or deadlines. We find also that consumers’ sense of urgency has a greater impact on this shift than the number of options to be evaluated. We suggest that sense of urgency and psychological time play a significant role both in the decision strategies used and in the impact of choice overload on purchase deferral. Our experiments provided further support for the psychological mechanisms behind the effect we found.

This study provides novel insights for assortment studies and we further discuss the managerial implications of our findings.

TC05
3E, 3rd Floor
Consumer Behavior III
Contributed Session
Chair: Yijun Chen, Washington University in St. Louis, 1 Brookings Drive, St. Louis, MO, 63130, United States, yijun.chen@wustl.edu

1 - From Maximising to Satisficing: The Interplay between Time Constraints and Choice Overload
Boshuo Guo, PhD Student, Imperial College Business school, Imperial College London, Imperial College Business School, South Kensington Campus, London, SW7 2AZ, United Kingdom, boshuo.guo12@imperial.ac.uk, Ammara Mahmood, Catarina Sismeiro

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This study provides novel insights for assortment studies and we further discuss the managerial implications of our findings.
2 - Uncertainty Increases the Reliance on Affect in Decisions
Ali Faraji-Rad, Nanyang Technological University, Singapore, Singapore; afaraji-rad@ntu.edu.sg, Michel Tuan Pham

Uncertainty is an unavoidable part of human life. How do states of uncertainty influence the way people make decisions? We advance the proposition that states of uncertainty increase the reliance on affective inputs in judgments and decisions. In accord with this proposition, results from six studies show that the priming of uncertainty (vs. certainty) consistently increases the effects of a variety of affective inputs on consumers’ judgments and decisions. Primed uncertainty is shown to amplify the effects of the pleasantness of a musical soundtrack (study 1), the attractiveness of a picture (study 2), the appeal of affective attributes (studies 3 and 4), incidental mood states (study 6), and even incidental states of disgust (study 5). Moreover, both negative and positive uncertainty increase the influence of affect in decisions (study 4). The results additionally show that the increased reliance on affective inputs under uncertainty does not necessarily come at the expense of a reliance on descriptive attribute information (studies 2 and 5), and that the increased reliance on affect under uncertainty is distinct from a general reliance on heuristic or peripheral cues (study 6).

3 - Risk-Taking Behaviors under Gain and Loss Domains: An Empirical Analysis of World Cup Gambling
Yijun Chen, Washington University in St. Louis, 1 Brookings Drive, St. Louis, MO 63130, United States, yijun.chen@wustl.edu, Tat Y. Chan, Chunhua Wu, Steve Nowlis

Sports betting is a big industry across the world. For many gamblers, sports betting can be addictive, exhibited by their increasingly risk-taking behaviors over time. In this paper, we study gamblers’ betting decisions and their risk preferences using a novel data set that records the betting history of a panel of gamblers during the 2010 World Cup. By investigating how previous betting outcomes affect the betting amount and odds ratio in a game, we show that gamblers’ risk-taking behaviors dynamically change depending on whether they are in the gain or in the loss domain, measured by the net gain in last game, the accumulated gains, and the number of consecutive wins or losses. This provides insight on how gambling will become increasingly addictive for individuals. We also show how gamblers are heterogeneous in the risk-taking behaviors, and how their overall performances are related with these behaviors.

2 - Design and Analysis of Discrete Choice Experiments in the Presence of Profile Order Effects
Robert Mee, Professor, University of Tennessee, 916 Volunteer Blvd., SMC 244, Knoxville, TN, 37996-0525, United States, rmee@utk.edu, Roselinde Kessels

Past stated choice experiments provide clear evidence that profile position order can impact the choice probabilities, with the first profiles in a choice set being selected more often than the subsequent profiles. Some algorithms that create choice designs fail to randomize the order of profiles within choice sets and often produce designs where the first level of the attributes appears more often that the other levels in the first profile of the choice sets. This can produce severely biased part-worth estimates, as we will illustrate using data from a product packaging choice experiment performed for P&G in Mexico. Another common, and often unwise, practice is to randomize the order of profiles within choice sets for each respondent. While randomizing profile orders for each subject ensures near balance on average across all subjects, the randomizations for many individual subjects can be quite unbalanced with respect to profile order; hence, any tendency to prefer the early profiles will result in bias for those subjects. As a consequence, this bias will produce heterogeneity in hierarchical Bayesian estimates for subjects, even when the subjects have identical true preferences. For discrete choice design construction, we recommend using profile randomizations that are constrained to achieve sufficient order balance. For the analysis, we recommend including a profile order covariate to account for any order preference in the responses.

3 - Assessing Unintended Consequences of Optimal Designs in Stated Choice Models
Kyuseop Kwak, University of Technology Sydney, Marketing DG, UTS Business School, PO Box 123, Broadway NSW, 2007, Australia, kyuseop.kwak@uts.edu.au, Paul Wang

Stated choice models are based on discrete choice experiments (DCE; Louviere et al. 2000; Hensher et al. 2005). To design real-world DCEs, we often require a large number of product attributes and levels, leading to a big DCE design. As a result, optimal designs based on the statistical criterion of D-optimality (Kuhfeld et al. 1994) have been developed to deal with the problem (Street et al. 2005; Street and Burgess 2007). However, such optimal designs may have unintended consequences such as increased choice task complexity and biased model estimation. Ideally, the overall efficiency of a design should take account of respondent efficiency as well as statistical efficiency. Respondent efficiency relates to the extent to which a design minimizes possible design-induced human artifacts. Therefore, the primary purpose of this study is to assess those unintended consequences of optimal designs in stated choice models. To achieve this goal, we compare two optimal designs based on Street & Burgess (2007) and SAS routine (Kuhfeld 2010) with random designs and balanced and incomplete block designs (Green 1974; Raghavaro et al. 2005). We use data from real world DCEs for two categories of societal interest (emissions trading plans and roof-mounted solar panels) to make the comparisons. We have found significant differences in attribute effects across the designs. Based on our findings, we discuss the relative merits of each design and suggest avenues for future research.

4 - Modeling Consumer Spatial Sequential Choice Based on an Experimental Trip Scheduling Task
Harmon Oppewal, Professor, Monash Business School, 26 Sir John Monash Drive, Box 197 Caulfield Campus, Caulfield East, VIC 3145, Australia, harmon.oppewal@monash.edu, Ari Pramono

This paper presents a model of how destination quality and location influence choice when consumers schedule a trip. The trip includes one or more options from a set of geographically distributed set of options. The context is tourism and concerns the planning of a day trip to a city that offers various attractions including shopping, museums, and nature park options. The paper builds on and extends existing spatial choice models to not only account for the options’ quality ratings and their spatial location relative to each other, but also accommodate the choice sequence in which the options are scheduled and the variation of complexity in choice sets. The model is estimated from an experimentally designed choice task in which respondents plan and schedule a day visit to a new city destination that offers attractions from different categories. Participants evaluate various attraction location configurations as presented in an interactive map and indicate which options they consider and intend to visit. They also rate aspects of their expected experience. The model findings allow new insights regarding how spatial information impacts consumer choice behavior and how spatial destinations compete.
when there are multiple segments of consumers with different search costs. The cash back site decreases with the search cost of consumers. In the second, we ask if it were without a cash back site. This result occurs when some loyal consumers do not use the cash back site. We also show that the optimal discount is proportional rather than a flat sum. We consider two extensions. In the first we assume that retailers must reimburse the cash back site. In this case, the profitability of using a cash back site decreases with search cost of consumers. In the second, we ask if it would be profitable to prevent search by some but not all searching consumers when there are multiple segments of consumers with different search cost. The answer is that it can be profitable to prevent search by some of the segments.

This paper empirically studies the selling efficiency of multiunit uniform-price ascending auctions. It points out that uniform-price ascending auctions can be very inefficient when used to sell goods of common values. It provides empirical evidence showing that part of the inefficiency is driven by large bidders’ strategic responses to competition and the herding by smaller bidders. The paper then empirically estimates a structural model of multiunit ascending auctions. Counterfactual experiments show that multiunit ascending auction can be much less efficient than the fixed-price selling mechanism when using the same reserve prices. Implications for designing the mechanisms for selling multiple units of goods are discussed.

Oligopolistic competition is often modelled as a Salop circle, with equally spaced retailers and uniformly distributed customers with a sufficiently high reservation price that aggregate demand is constant. The marketing literature has examined introducing an online retailer, located equidistant from all customers. In this standard model, distance is a barrier to competition, so an increase in transport cost raises equilibrium price and profits. We modify the standard Salop model by introducing linear demand (a > bP); P is the retail price plus transport cost T. The reservation price is distributed from 0 to the price ceiling a/b. We consider two cases: (1) only local retailers and (2) local retailers plus an online retailer situated at the center of the circle. Our Nash equilibrium solution shows: (1) Only local retailers. • If a/b is low, retailers are spatial monopolists. The entire market is not served. A higher T lowers price, demand and profit. • Above a critical a/b value the entire market is served and retailers compete. An increase in T acts as barrier to competition, so price and profit rise, but remain less than with constant demand. In competitive equilibrium the number of retailers is less than what is suggested by the extant literature. The difference is significant if a/b is low, but our results asymptotically approach the constant demand results if a/b is very high. Overall, our model reduces to spatial monopoly when a/b is low, and to a constant demand model when a/b is high. (2) Adding an online retailer: • A local retailers’ price drops when an online retailer enters the market. • Entrance of online retailer reduces any retailer’s highest margin. • Unless the online retailer has a significant cost or reputation advantage, local retailers have non-zero market shares.
2 - How a Mismatched Ad Drives Early Adoption of Co-Created Innovations

Helen Sl Wang, The University of Hong Kong, Hong Kong, Hong Kong. helenws@hku.hk, Charles Noble, Sara Kim, Sungho Park

Innovation co-creation has contributed to some of the most creative inventions and significantly transformed innovation strategies. However, persuading the market into the early adoption of co-created innovations challenges many co-creating businesses and dampsens customer-inventors’ enthusiasm to participate—the very core that fuels the success and sustainability of the co-creation model. In innovation research, beyond our understanding of macro-level determinants for aggregation of takeoff or “action” factors, the process of adoption of co-created innovations over firm-designed innovations, it is unclear what unique micro-level marketing communication strategies may drive early adoption of co-created innovations at both individual and aggregated levels. This research examines how ads of co-created innovations may strategically incorporate mixed non-narrative and narrative messages to influence early adoption. In particular, we suggest that presenting a mismatched (vs. matched) motivational orientations between pro-narrative and anti-narrative elements of customer innovation (narratives) increases adoption of newly introduced co-created innovations. This happens because a motivational mismatch in mixed advocacy-narrative messages is more likely to activate adopters’ narrative self-referencing of their own motivations for the innovation. This mismatch effect is stronger for follower-adopters than innovator-adopters at the innovation introduction stage, and hence triggers aggregated takeoff. We conducted three studies using mixed methods to validate the hypotheses. In experimental study 1 and study 2, we demonstrated the mismatched effect on adoption of newly introduced co-created innovation, its underlying mechanism and the boundary condition by adopter types. In study 3, we analyzed actual adoption (sales) data of nearly one hundred real-world co-created innovations and found that mismatched (vs. matched) ads leads to early takeoff.

3 - Social and Institutional Impact on Product Diffusion

Sotaro Katsumata, Associate Professor, Osaka University, 1-7 Machikaneyama, Toyonaka, Osaka, 5600043, Japan, katsumata@econ.osaka-u.ac.jp, Akihiro Nishimoto

This study focuses on the process of market generation and product diffusion. In particular, we examine the relationship between market attractiveness and legitimacy of the product market from the institutional view. To this end, we propose a theoretical framework to analyze the transition of the market from the “formation stage” to the “stabilized stage” by applying existing sociocognitive and neoinstitutional theories. Second, to apply the hypothecated model, we conduct a market transition experiment and propose a method to measure the legitimacy of the market. By changing the market expansion, from published newspaper articles and Internet search indexes. In general, as it is difficult to observe the transition of the market from the social outcomes—such as sales amounts and advertising rates, this study tries to measure the latent market change from the words used in the newspaper and the internet search. Third, we develop a quantitative model to examine the relationship between the observed degree of legitimacy and market performance. Our empirical model is based on the Bass diffusion model, which enables us to estimate the product diffusion rate and examine the impact of the legitimacy on the diffusion rate and profitability. As a result, we find that market size and profitably increase at the “formation stage” of legitimacy, while decreasing at the “stabilized stage.” Based on these findings, we also discuss strategies for optimal market entry and desirable new product development.

4 - Ubiquitous Model for Dynamic Diffusion of Information Technology

Hirokazu Takada, Baruch College/CUNY, 73 Abbey Close, Scarsdale, NY, 10583, United States, hirokazu.takada@baruch.cuny.edu

IT products with multiple functions, such as smartphones with fast internet connection along with PCs, provide ubiquitous access to the Internet. The comprehensive framework was developed to model diffusion processes of accessing to the Internet, and we consider consumer heterogeneity and segmentation defined by adoption processes, a need for more generalized than the successive substitution model, an identification of adoption processes based on sequences of adopting different technologies, and network externalities. We propose a comprehensive Bass model capable of identifying the market potential for each segment with an application of the simultaneous hierarchical Bayesian estimation. Empirical analysis using the data of Internet subscriptions via PCs and digital cell phones in the U.S. and Japan shows the significant interactive effects between PC and cell subscription processes, and the model provides an excellent fit to the data. The majority of hypotheses developed within the theoretical framework are supported, and contributions and managerial implications of the study are discussed.

3 - CEO Characteristics and Marketing Decision Making – An Empirical Investigation

Amit M Joshi, University of Central Florida, Dept of Marketing College of Bus Admin, PO Box 161400, Orlando, FL, 32816-1400, United States, amit.joshi@ucf.edu, Gautham Vadakkepatt, JK Aker

CEOs are widely recognized as the drivers behind key decisions made by organizations. Thus, all critical strategic as well as tactical choices are eventually attributed to the CEOs. In this research, we study how CEO characteristics may affect specific marketing-related choices. We identify levels of advertising and R&D expenditures as the dependent variables, since drastic changes to these variables can have adverse long-run effects, even if short-run effects are positive (Myopic Marketing). We hypothesize that factors such as CEO salary structure, planning horizon, optimism, background and our other personal characteristics drive their choices in relation to the dependent variables. We test our hypotheses using a large dataset of S&P 500 firms, finding broad support for our claims. We further extend our analysis to include Board of Directors and calculate the direct as well as interactive effects of their characteristics on changes in advertising and R&D budgets.
Consideration set than the A B. Thus a strong brand gets a second chance, whereas other hand, under a similar positive brand experience, the F B will receive a
Under a similar negative brand experience, the favorite brand (F B) will receive a attribution. We also show that attribution is biased toward the stronger brand.

We model consumer brand learning as a Bayes belief network, which can accommodate features such as "assigning attribution" and "explaining away" unexpected brand experiences. A simple Bayesian updating model is modified to accommodate the possibility of interpreting unexpected outcome as a result of an accidental event that is not repeatable. In this way consumers give meaning to their brand experience by the degree to which they attribute the experience to the inherent quality of the brand or to some fluke event. We then show, through consumer experiments, that speed of brand learning is indeed moderated by attribution. We also show that attribution is biased toward the stronger brand. Under a similar negative brand experience, the favorite brand (FB) will receive a higher level of stable attribution than just an acceptable brand (AB). On the other hand, under a similar positive brand experience, the FB will receive a higher level of stable attribution than the AB. It is also shown that, after a poor brand performance, the FB is more likely to remain in the consumer’s consideration set than the AB. Thus a strong brand gets a second chance, whereas a weaker brand is out on one strike. However, the silver lining for the weaker brand is that with consecutive positive experiences, the quality gap between the FB and the AB is narrowed.
3 - Does Offering No Incentives Work? Incentives, Participation, and Design Quality in Crowdsourcing Contests

Gerard T Tellis, University of Southern California, tellis@usc.edu

Crowdsourcing is an increasing phenomenon for the design and marketing of new products through crowdsourcing contests. However, research is scarce on the effective design of incentives with which to encourage ideators to actively participate and make high-quality contributions. This study seeks to evaluate ideators' performance in such a contest, under various self-selected monetary and non-monetary incentives. The authors use a field experiment of a crowdsourcing contest in which 1,205 ideators self-select their preferred extrinsic incentive from a cash prize and four non-cash prizes or remain indifference (expressed no preference). The analysis is by Heckman's Selection Model that separates self-selection effects from testing effects. The main results are the following. First, strong selection effects prevail with ideators who are indifferent to extrinsic incentives producing ideas of higher quality than those who choose an incentive, presumably because the former are intrinsically motivated. In fact, all contest winners are among the indifferent ones. Second, ideators who choose a cash prize perform significantly worse than similar ideators who choose a non-cash prize (32%). Third, after controlling for selection, significant positive treatment effects exist, where the choice of prizes and the option to remain indifferent improves contest performance by 16%. Fourth, greater activity in the contest has a significantly positive effect on quality of submissions. Fifth, demographics affect incentive preferences and level of participation but not quality of ideas. Ideators from all socio-economic backgrounds make high-quality submissions thus indicating the importance of diversity in consumer innovation contests. The authors discuss implications.

4 - Customer-Centric Innovation from the Grassroots: Determinants of Success

Stulan Stermersch, Erasmus School of Economics, Rotterdam, Netherlands, sttermersch@ese.eur.nl, Ello Keko, Isabel Verniers, Nuno Camacho

Grassroots innovation enables employees, irrespective of their function, to come up with innovative ideas and develop them into a commercial offering. The authors examine the process design choices that determine its success in developing customer-centric innovations, contingent on the firm's controlling context. Using a survey of 2,176 managers in 14 countries, the authors find, among others, that: (1) increasing employer autonomy typically increases success, especially in contexts high in enabling control and low in coercive control; and (2) increasing competence development of participating employees increases success, especially in contexts low in enabling control and high in coercive control. The authors discuss the implications of these findings to firms on the successful design of grassroots processes. For instance, firms should secure that coercive control does not break the positive consequences of autonomy, e.g. by creating anxiety or fear of evaluation. Firms should also ensure that enabling control does not make employees overconfident, making employees less sensitive to input of others.

27
Paid Search Advertising
Contributed Session
Chair: Hyun Shin, Hanyang University, Room 612, School of Business, Wang-sin-ni-ro 222, Hanyang University, Seoul, Korea, Republic of, hyunsangshin@gmail.com

1 - To Click or Not to Click: The Interaction between Organic and Paid Search Results
Chongyu Lu, University of Houston, 4700 Calhoun Rd, Houston, TX, 77004, United States, chongyu0307@gmail.com, Rex Yuxing Du

The focus of the paper is on modeling consumer click behavior on a search engine results page (SERP). In particular, when a focal firm's link is shown in both the organic and paid sections, how do consumers decide which link to click on: the focal firm in the organic section, the focal firm in the paid section, or neither? The authors quantify 1) how the focal firm's organic position affects its paid click-through rates, and 2) how the focal firm's paid position affects its organic click-through rates. Addressing these questions help firms better understand the interaction between organic and paid search results, which in turn can help them better coordinate their efforts in search engine optimization (SEO) versus pay per click (PPC). By analyzing Google AdWords data from multiple advertisers, the authors find that organic and paid search results can interact both positively (i.e., serving as complements to each other) and negatively (i.e., serving as substitutes to each other), depending on the nature of the underlying search query (generic vs. brand).

2 - An Empirical Analysis of Keyword Attributes, Search Displays and Clicking Behaviors in Paid Search Advertising
Mengzhou Zhuang, Doctoral Student, University of Illinois at Urbana-Champaign, Urbana, IL, 61801, United States, mengzhouzhuang@gmail.com

The authors study the impacts of keyword attributes and displayed information of sponsored links on the consumers' clicking behaviors after a keyword search on an online shopping website. Using a unique data set, we incorporate the attributes of keywords and displayed advertiser information to investigate how these features influence consumers' clicking behaviors. We found that consumer clicking behaviors are affected by both the choice of keywords and the competition within the display. Specifically, we found that 1) displayed ranking, seller reputation would positively affect the total clicks of a sponsored link, and product price has a U-shape influence (i.e., favor high and low product price) on consumer clicking behaviors, and 2) keyword specificity and keyword popularity would moderate the influences of displayed information on clicking behaviors, where specificity reduces the effect of ranking but enhance the effect of seller reputation, while popularity enhances the effects of ranking, seller reputation and product price. Our findings indicate that the keyword attributes and displayed information would jointly influence the search advertising performance. In addition, other than displayed ranking, product price and seller reputation are also crucial displayed information that significantly influence consumers clicking behaviors.

3 - Understanding the Efficiency of Keywords in Search Engine Marketing via a Comparison Study Using Data Envelopment Analysis
Pingjun Jiang, Professor, La Salle University, Marketing Dept., La Salle University, 1900 West Olney Avenue, Philadelphia, PA, 19141, United States,jiang@lasalle.edu

Apparel retailing is characterized by extensive use of digital technology with high competition in the electronic marketplace and heavy spending in Search Engine Marketing. We use Data Envelopment Analysis to examine and compare the pricing efficiency of keywords in Google and Bing sponsored search markets. Two totally different sets of efficiency scores are obtained from Google and Bing by using extensive data from a company in the online apparel retailing industry. It is found that keyword efficiency scores are not significantly different between Google and Bing search markets. We also evaluate the effectiveness of the Google Adgroup recommendation system that suggests the keywords in a campaign being grouped by each of the apparel attributes: generic, fabric, sex, price promotion, color, and size. One of the key findings is that the efficiency scores significantly vary across the Adgroups categorized via google's recommendation. Results show that Size and Color key phrases are more efficient than generic and promotion/sale related keywords. In addition, efficiency scores and Google's “quality scores” for keywords are found positively correlated. Evidently, Google's keyword quality score indicates the keyword efficiency, supporting the future use of “efficiency score” as an alternative metric to the “quality score” system provided by major search engines. When comparing efficiency by Match type, Broad terms are more efficient than Modified Broad terms, indicating that broader phases can be a lucrative advertising segment for sponsored search campaigns.

4 - An Empirical Analysis of Multi-Keyword Management in Search Advertising
Byun Shin, Associate Professor, Hanyang University Business School, Seoul, Korea, Republic of, hyunsangshin@gmail.com, Alex J Kim, Sungha Jang

Search advertising, which refers to the paid listings on a search engine's website based on consumers' keyword search, has become one of the most important advertising vehicles for firms. The performance of search advertising, which is usually measured by the number of consumers' clicks it receives, is heavily influenced by the ranking (i.e., position) of advertising, and the ranking is determined by the search engine, based on the advertiser's bid and the ad quality. While most academic literature focuses on one keyword or multiple keywords of a single firm, in practice, advertisers, competing against each other in the search advertising auction, utilize a set of multiple keywords in the search advertising campaign to maximize the performance of their campaign and they would want to find the best combination of keywords to maximize an overall efficiency of their advertising campaign, considering its benefits and costs together. At the same time, a search engine, deciding the advertisers' rankings for each keyword, would like to maximize its revenue (the total payments it collects from advertisers over the set of keywords). Moreover, consumers make decisions of which keywords to search and which advertising to click. In this study, we examine the interrelationship among competing advertisers' keyword preference, a search engine's ranking decision, and consumers' click behavior across multiple keywords by analyzing a unique dataset that comprises of a set of related keywords in a running shoes category. Our findings provide implications on multiple keyword management, which would help marketers develop and implement e-marketing strategy in a more efficient way.

Product Returns in e-Commerce
Contributed Session
Chair: Alec Minnema, University of Groningen, Nettelbosje 2, Groningen, Netherlands, a.minnema@rug.nl

1 - Managing Product Returns for Multinational Online Retailers
Christian Schulze, Associate Professor, Frankfurt School of Finance & Management, gGmbH, Sonnenmannstr. 9-11, Frankfurt am Main, 60314, Germany, email@christian-schulze.de, Shuba Srinivasan

What drives differences in consumers’ product return behavior in a multinational setting? Or, put differently: Why are German online buyers three times more likely to return a product than their French, Italian, or Spanish counterparts? In an extensive empirical study with a multinational online fashion retailer, we analyze the buying and return behavior of more than 750,000 customers in different countries and across 8 years. We evaluate the importance of (1) product characteristics, such as price, category, size and color availability, (2) customer order characteristics, such as payment method, shipping time, purchases in new categories, and (3) country characteristics, such as GDP growth, unemployment, internet penetration, e-commerce market share as drivers of product returns. To our knowledge, this is the first study focusing on differences in product return rates in a multinational setting, investigating the direct (traditional economic and technological indicators) and indirect (via customer order characteristics) effect of country characteristics on returns. The richness of the dataset also allows us to include and extend insights about known drivers of product returns investigated in prior studies (e.g., Anderson, Hansen, and Simester 2009; Petersen and Kumar 2009; 2015).
2 - Product Returns - A Double-Edged Sword in E-commerce. The Role of Product Returns in the Two-Step Decision Process in Online-Shopping

Jingnan Zhu, Research Associate, RWTH Aachen University, Kackertstr. 7, Aachen, 52072, Germany, zhu@time.rwth-aachen.de

E-commerce and online fashion retailers in particular have experienced a decade of unrivaled growth. Since experience goods - such as apparel - especially need for physical inspections after delivery, online purchases of these are best described as two-step processes consisting of 1) the purchase decision and 2) the keep-or-return decision. As product returns (PR) are - despite potential negative consequences for the environment and the retailer - usually associated with some effort (time and maybe even costs) for the customer, it is likely for the purchase decision to already be influenced by how customers view PR. Some customers might e.g. prefer to avoid PR and hence, refrain from shopping online. A better understanding of the role of PR in this context might thus be the key to adequate PR-related managerial decisions to maximize sales. While PR has been found to increase sales on a firm level, no study has examined the effect of PR on purchase behavior on a customer level. We attempt to fill this gap by investigating the effect of customers’ attitudes, subjective norms, perceived behavioral control (PBC) and intentions towards PR on their purchasing behavior. For this, we gathered a unique dataset with a large online fashion retailer by surveying real customers and matching the survey data with actual sales data. We use structural equation modelling for our analyses, and control for customers’ age, gender and level of urbanization. Our results suggest a positive influence of PBC on sales. In other words: sales tend to be higher, when customers perceive PR as easy and not as a high level of hassle. We thus contribute to the research on the role of PR in the firm-customer relationship, as we 1) confirm the firm-level influence of PR on sales on a customer-level and 2) expand this research into the role of PR in the customer's two-step decision process. Moreover, despite the costs and net sales reductions due to PR, we provide arguments for lenient PR-policies, simple PR processes and an active communication of these; as these measures would likely increase customers’ PBC and sales.

3 - Free Shipping and Product Returns

Edllra Shelu, University of Southern Denmark, Odense, DK-5230, Denmark, edsl@sam.sdu.dk, Dominik Papes, Scott Andrew Neslin

Many online companies use free shipping promotions to increase their sales. Extant research has emphasized the positive impact of free shipping on incidence and sales, leaving the relationship between free shipping and returns underexplored, although it is an issue of concern to especially online retailers. We address this gap and investigate the impact of free shipping promotions on product returns. We predict that free shipping increases sales, but also product returns because free shipping promotions encourage the customer to explore more. Consequently, a disproportionate fraction of free-shipping induced purchases represent products that are unfamiliar to the customer, leading to more returns. Our work contributes to the literature on shipping costs and product returns by providing the missing link between these two streams of research. We explain the mechanism behind the relations impact on free shipping and returns, and measure this effect in the short and the long run. We examine data from a leading online retailer that engages in free shipping promotional campaigns. Ranging on a random sample of 10,000 customers and their monthly purchase history over three years, we analyze the influence of free shipping on incidence, exploration, and returns. We find that free shipping promotions increase incidence, but also exploration, and that exploration leads to more returns. These results are confirmed in a large-scale field study of the same company. Our results provide implications for companies engaging in free shipping promotional campaigns.Keywords: product returns, free shipping, shipping strategies.

4 - Browsing to the Point of No Return: The Effect of In-Store Browsing on Product Returns

Alec Minnema, Doctoral student, University of Groningen, Nettelboosje 2, Groningen, Netherlands, a.minnema@rug.nl, Tammo Bijmolt, Sonja Gensler

In Internet marketplaces, customers browse through the retailer’s website to seek information and to make a more satisfying purchase decision. Less well-informed or less-satisfying purchases may lead to subsequent return of the product, where product returns are an expensive problem for retailers with substantial profit impact. Customer in-store browsing may affect both the decision to purchase products and the decision to keep or return these purchased products. In line with prior research, we conceptualize and summarize customer in-store browsing in breadth (i.e., number of products browsed) and depth (i.e., focus of browsing) of browsing. In this study, the authors formulate hypotheses about the effects of in-store browsing on purchases and returns, and then test them with a rich click-stream database from a major online retailer that features in-store browsing behavior and transactions in the electronics product category. The authors use a bivariate probit model with endogenous sample selection to model both the customer’s purchase decision and the decision to return a purchased product. As this article demonstrates, customer in-store browsing effects go beyond the moment of purchase and also affect the post-purchase decision to return or keep products. Furthermore, our study suggests that likely returners can be identified by their information processing prior to purchase which is an important step in targeting customers.

Thursday, 3:30pm - 5:00pm

TD01

3C, 3rd Floor

Advertising IV

Contributed Session

Chair: Samuel Staebler, University of Cologne, Albertus-Magbus-Platz, 50923, Germany, staebler@wiso.uni-koeln.de

1 - Cultivate Consumer Engagement with Mobile Advertising and Gamification

Lei Wang, Pennsylvania State University, University Park, PA, Pittsburgh, PA, sx68@psu.edu, Siyuan Liu, Ramayya Krishnan

How to engage customers and motivate them to actively make purchases and adopt services has been a puzzle for businesses for a long time. The gamification aspects of location-based service provide a great tool for businesses to maintain awareness and ride the wave of social and location-based media. Game-like elements, such as badges and mayorships, provide consumers a fun and playful way to keep track of their shopping activity and shopping experience, enjoying the sense of accomplishment and also create a friendly competition among friends. Despite the growing popularity of gamification and its potentials on customer engagement, we still have very little knowledge about gamification and its impact on customer engagement. In this research, customer engagement is being captured by three different ways: mobile coupon redemption rate, total money spent in the venue, and the time length stayed in the venue. We conduct a randomized field experiment in a large shopping mall in Asia to investigate the impact of gamification on cultivating customer engagement. Gamification elements that have been tested in previous research include points, leaderboards, rewards and badges. In this research, we focus on two gamification elements, badges and leaderboards. We aim to explore (1) which one is the most effective gamification feature of location-based games in terms of motivating them to actively make purchases and redeeming coupon? (2) How do gamification elements affect consumer behavior? Our results from the large-scale randomized field experiments will allow us to effectively measure the causal impact of gamification and mobile campaigns for businesses. It can also provide insights on quantifying and improving the impacts of gamification on customer engagement and mobile advertising. This study provides important implications for the ongoing research on the impact of gamification and also suggests ways for firms to benefit from gamification.

2 - Competing for Limited Attention on Social Media

Xinyu Cao, PhD candidate, MIT, 100 Main St E62-382, Cambridge, MA, 02142, United States, xinyucao@mit.edu, T. Tony Ke, Jon R Haisie, Jianniu Zhang

Advertising on social media faces a new challenge as consumers can actively choose which advertisers to follow. Tracking company accounts, owned by 93 TV shows on the most popular tweeting website in China, provides evidence that firms advertise intensively, although doing so appears to drive followers away. An analytical model suggests that consumers with limited attention may rationally choose to unfollow a firm. This happens if consumers already know enough about the firm’s quality if the firm advertises too intensely. However, firms might still find intensive advertising the optimal strategy - if a firm is perceived as having a lesser quality offering, it wants to advertise aggressively to change consumers’ beliefs about its quality; if a firm is perceived as having a higher quality offering, it also wants to advertise intensively, but in an effort to crowd-out advertising messages from its competitors.
News about unethical corporate behavior is spread across the world. Volkswagen's pollution crisis is just one exemplary crisis out of many that is covered in public media. Such negative coverage can severely harm the trust people place in brands and detrimentally impact financial performance. In line with these real world developments, there has been extensive research on the effects of crises on customer and firm-related variables. However, research has mostly ignored how journalists select potential crisis news. Media outlets are restricted in the number of articles they can publish and are hence not able to report everything that happens in the world. In order to mitigate the negative consequences of bad press it is essential to understand what factors drive bias of brand crisis coverage in public media. Based on a unique dataset of more than 1,000 crises across 80 media outlets from 6 countries, we analyze how country, media, crises and brand-specific variables drive the selection process of newspaper outlets. Our results show that brand awareness and brand reputation increase the likelihood of a brand to be covered in the news. Furthermore, we identify how advertising spending of brands in specific media outlets decreases the probability of negative coverage. Moreover, we point out country-specific differences. Whereas in some countries especially right wing outlets report crises, in others left wing outlets do. Also, some countries are more likely to report human-right issues, others unfair practices such as corruption, price-fixing, and fraud. Our findings help companies better understand when and how their crises make it into the news in different countries.

### 3 - When Do Journalists Report Negative News About a Brand? An Investigation Across Six Countries

Samuel Staebler, Doctoral Student, University of Cologne, Albertus-Magnus-Platz, Cologne, 50923, Germany, staebler@wiso.uni-koeln.de, Marc Fischer

News about unethical corporate behavior is spread across the world. Volkswagen's pollution crisis is just one exemplary crisis out of many that is covered in public media. Such negative coverage can severely harm the trust people place in brands and detrimentally impact financial performance. In line with these real world developments, there has been extensive research on the effects of crises on customer and firm-related variables. However, research has mostly ignored how journalists select potential crisis news. Media outlets are restricted in the number of articles they can publish and are hence not able to report everything that happens in the world. In order to mitigate the negative consequences of bad press it is essential to understand what factors drive bias of brand crisis coverage in public media. Based on a unique dataset of more than 1,000 crises across 80 media outlets from 6 countries, we analyze how country, media, crises and brand-specific variables drive the selection process of newspaper outlets. Our results show that brand awareness and brand reputation increase the likelihood of a brand to be covered in the news. Furthermore, we identify how advertising spending of brands in specific media outlets decreases the probability of negative coverage. Moreover, we point out country-specific differences. Whereas in some countries especially right wing outlets report crises, in others left wing outlets do. Also, some countries are more likely to report human-right issues, others unfair practices such as corruption, price-fixing, and fraud. Our findings help companies better understand when and how their crises make it into the news in different countries.

### 2 - Effects of Product Sharing on Production Capacity in a Distribution Channel

Baojun Jiang, Washington University in St. Louis, Olin Business School, Campus Box 1156, St. Louis, MO, 63130, United States, baojunjiang@wustl.edu

Consumers often buy or own products but do not fully utilize them. It is publicized and widely believed that collaborative consumption or product sharing among consumers is environmental friendly since it can reduce production due to more efficient use of products. We develop an analytical framework to examine the strategic and economic impact of consumers' collaborative consumption in a distribution channel, where the upstream manufacturer needs to decide its production capacity. A consumer who purchased the product may have different usage values across different usage periods. In a period with low self-use value, the consumer may rent out her purchased product. We find that, interestingly, product sharing may increase the production of the product. The retailer will get a higher percentage of channel profit when consumers can share the product. In addition, product sharing among consumers can be lose-lose, lose-win, or win-win for the manufacturer and the retailer, depending on the manufacturer's capacity cost. These findings hold qualitatively the same when there is demand uncertainty in the market.

### 1 - Building Trust in Marketing Channels

Yu Wang, Associate Professor of Marketing, California State University, Long Beach, Long Beach, CA, United States, yu.wang@csub.edu, Ozalp Ozer, Upender Subramanian

We investigate trust and cooperation in the context of marketing channels, where the retailer repeatedly solicit manufacture assistance to make better retail level decisions. We develop behavioral theory to study whether, when, and to what extent repeated interactions help in building trust. We also explore the underlying drivers for uncovered differences across different forms of manufacturer assistance. We test our behavioral predictions through incentivized laboratory experiments.

### 3D, 3rd Floor

**Retailing IV**

**Contributed Session**

**Chair:** Janghee Cho, Jeju National University, Seoul, Korea, Republic of Jh.cho04@jejunu.ac.kr, Hailey Hayeon Joo, JinHwa Chung

**In this research we investigate the link between retailers’ assortment and pricing strategies at the category level. Particularly, we study the effect of category comparability on retailers’ price levels. The basic idea is that category comparability determines the strength of price competition between rivaling retailers. If two retailers have comparable categories, it becomes harder for either of them to justify higher prices. Our empirical study builds on a unique dataset covering 7 categories and 17 retailers (4 discounters and 13 supermarkets) that operate in the 56 most populated towns in Spain. The dataset includes information on quarterly category-specific price data, together with store characteristics (e.g., location and square meters). We have further augmented our dataset with economic data (e.g., gross domestic income) and a representative survey using a Spanish panel to capture customers’ perception of the retailers (e.g., comparability of categories). Our key finding is that category comparability provides a valid link to retailers’ category price levels in competitive settings. Discounters and supermarkets, however, are distinguishingly affected by category comparability. Supermarkets lower their price levels when perceived as more comparable, whereas discounters increase them. The results further suggest that higher price levels cannot be realized in all categories. Hence, retailers who want to charge higher price levels than competitors should analyze their degree of comparability in each category and then choose those categories that are more difficult to compare; most likely the fresh food categories.**

### 2 - Small Format Chain Stores and the Neighborhood Grocery Market

Janghee Cho, Assistant Professor, Jeju national university, 102 Jejudaehakno, Jeju-si, Jeju, Korea, Republic of, jh.cho04@jejunu.ac.kr, Hailey Hayeon Joo, JinHwa Chung

In last two decades, the big-box retailers rapidly penetrated into the downtown areas of many Asian cities and, more recently, began to enter again as a small format. Particularly, these retail environments in the Asian countries are distinguished from those in the U.S. or European countries, because big-box stores are located not on the city border but inside of the central cities. Thus, this paper investigates the entry effect of small-format chain stores on the neighborhood grocery market in Korea, by exploiting Consumer Panel Data in Korea. Results show that if a small format chain store is located within 500m distance from the consumer’s residence, the shopping expenditure at the big box stores decreases by about 6% point, but otherwise, it does not. Specifically, this reduction effect at the big box stores is almost constant regardless of food types. On the other hand, if the small format is located within 1,000m distance, the shopping expenditure at the incumbent store increases by 3% point. However, the increasing effect disappears in case of processed food. Moreover, these opposite effects get even stronger in a more congested area (e.g., Seoul metropolitan area). Our empirical findings support that incumbents and small-formats are complementary and that such complementarity is induced by the product differentiation among the store types. This paper contributes the literature by providing the evidence that the entry of a small format chain store can generate a positive spillover in the Asian countries.
2 - Why Do Firms Change Competitive Reactions Over Time
Jimi Park, Korea University, Business School LG-POSOC 404, Anam-Dong, Seoul, 136-701, Korea, Republic of, jimipark@korea.ac.kr, Shijin Yoo

Although research has emphasized the unpredictable indicators of competition such as conjecture variation, blind spots and actions’ inconsistency, no research to date has explicitly unfolded why and how a stream of competitive reaction unpredictably changes over time. Despite the significant findings of antecedents and conditions regarding static competitive reactions (CR hereafter), researchers have yet to test them on dynamic CR. This paper aims to capture which internal and external drivers influence the volatile competitive reaction over time. We adopt AMC components of awareness, motivation and capability to explain why firms show unpredictable competitive movement, in particular, reasons for CRV. IRI data includes the national sales in US across 30 consumer product categories over a 7-year period and covers both price and promotion activities. The time-varying CRs derived from rolling window provide estimates to determine the degree of CR movement. We confirm that CR is predominantly volatile from retaliation to accommodation, either skewed or evenly distributed. As main findings we suggest that a firm’s volatile competitive reaction is significantly influenced by 1) firm-specific factors such as, power, power asymmetry and attitude toward competitor and 2) industry factors such as concentration and industry growth. In sum, we expect that CR swings over time in the firms with high power, high power asymmetry and aggressive competition-orientation and in industries with low concentration and steady growth.

3 - Value Creation in Key Account Relationship Formation – A Matching Approach
Shaojun Qin, University of Minnesota, 4-351 Carl School of Management, 321 - 19th Avenue South, Minneapolis, MN, 55454, United States, qinxx113@umn.edu, George John

Suppliers often form key account relationships with their most important customers in order to exploit greater opportunities for collaboration. In the extant work, the two-sided nature of key accounts is acknowledged, but not modeled empirically. This paper seeks to close this gap. Using a two-sided matching model setup, we describe a framework to predict the relationship as driven by firms’ resources, account strategy as well as their network positions. I assemble SEC filing data about new key account relationships from SIC 334 over the years 2001-2012 to estimate the model. The main findings indicate that matching in key account relationship is multidimensional: suppliers and customers complement each other in marketing and R&D resources. However, counterintuitively, suppliers that specialize more in a key account strategy are less attractive to buyers, and vice versa. Suppliers with greater value is created when suppliers match customers with customers in open networks (structural holes). With estimated results I run counterfactual analyses in which we assess the effect of destroying the key account relationship as driven by firms’ resources. We find that a buyer leaves the market, it is those suppliers with low R&D resources and high account sales reliance who are most likely to be adversely affected.

2 - Do I Donate More or Not? Influence of Calamities on Donation Behavior
Suman Arun Thomas, Assistant Professor, Indian School of Business Office: 2126, AC2 Level 01, Gachibowli., Hyderabad, 500 032, India, sumanmann@gmail.com, Trichy V Krishnan, Shanfei Feng

Behavioral literature in the field of donation has shown that sympathy drives donations especially when the donors are related to victim or if victims are perceived socially similar to the donors (Small & Simonsen 2007; Galak et. al. 2011; Lin-Healy & Small 2012). But these studies explore donation to the victims or to charities helping these victims. However, do the donors behave the same way when there is a calamity/disaster/epidemic in the interest of which the proximity of the donors to the victims are high but the focal charity is supporting an unrelated cause i.e. the donation may or may not go directly to the victims? Do they donate more or do they donate less? Do more people join the cause or people who are already donating regularly stop donation and divert the funds elsewhere? In this paper we empirically investigate the above questions.

Our unique dataset of donors who donates money regularly to a charity by allowing direct debit from their bank account/credit card allows us to look at donation behavior of these regular donors before, during and after an epidemic. We use time series analysis to find the short and run effect of this epidemic on donation. Our preliminary analysis show that donation increases during and immediately after the calamity. This is partly driven by increase in donation by existing donors. But surprisingly, we also see increased acquisition of new donors into the donation pool.

3 - Panelist Attribute Estimation using Media Consumption Behaviors
Hongming Zhou, Research Scientist, GroupM Singapore Pte Ltd, 18 Cross Street #04-01/03, Singapore, 048423, Singapore, hongming.zhou@groupm.com, Saeed Bagheri

Panelists’ attributes such as audience socio, demographic, behavioral and purchase attributes often reveal important information about panelists’ preferences and responsiveness to various marketing strategies. However, it is not always easy to collect such information especially from online panelists whom we may have minimal knowledge and interactions with. In this paper, we propose a framework that enables estimation of these attributes based on panelist’s digital media consumption behaviors. Under the proposed framework, firstly we build a web crawler using natural language processing (NLP) to crawl websites that a panelist has visited, and rate the websites’ contents with a weighting system; secondly, we implement two different machine learning algorithms: support vector regression (SVR) and extreme learning machine (ELM) to construct predictive regression models. Based on the website’s contents, the regression models are able to estimate attributes of the website’s visitors; thirdly we aggregate all the websites that a panelist has visited based on the Bayesian theory and estimate that particular panelist’s attributes. We have validated our approach by testing its accuracy in estimation of two kinds of attributes (binary and quaternion attributes). Our results show that both regression models yield similar accuracy, with ELM performing slightly better than SVR. When using ELM, we can achieve 65% accuracy for prediction of binary attributes, and 38% - 55% accuracy for prediction of various quaternion attributes.

4 - The Effect of Involvement on Fundraising a Field Experiment
Peter T Popkowski Leszczyc, University of Alberta, 4-30 F Faculty of Business Bld, Edmonton, AB, T6G 2R6, Canada, ppopkov@ualberta.ca, Ernan E Harivy

We investigate the effect of fundraiser incentives and orientations on effort and outcomes in a fundraising drive. We report results of a field experiment consisting of over 350 volunteers participating in a fundraiser over a period of two months. A unique feature of this study is that we observe effort by fundraisers in terms of communication and creative activity and input on their own personal fundraising website, quantity and quality of input, and social connections pursued. Each fundraiser is tasked with maintaining a personal website, creating content, including an essay about personal connection to the charity and why people should donate to this charity, and establishing social connections in an effort to raise money. Incentive treatments include a control with no incentives, tournaments rewards, and piece rate rewards. We find that funds raised are driven by both creative and communication efforts and that communication effort mediates the impact of piece rate incentives and charitable orientation on funds raised. Incentives creative effort mediates charitable orientation only. While creative activity is less critical than communication activity in raising short term funds, it is more sensitive to orientations than communication activity and is driven positively by trust and charitable orientations. Intent to volunteer in future period is shown to be increasing in current efforts and negatively impacted by current payments, without significant mediation.
4 - Inferring Multiple Preferences? A Joint Map of Brand Locations and Consumption Contexts

Minki Kim, Assistant Professor, KAIST College of Business, SUPEX Hall 304, 85 Hoegi-ro, Dongdae mun-gu, Seoul, 130-722, Korea, Republic of, minki.kim@kaist.ac.kr

Both behavioral and quantitative marketers have long been interested in studying how and the extent to which consumer choices may be influenced by the “context” within which the product is consumed (e.g., Berk 1974, 1975; Carlson & Bond 2006, Dickson 1982; Lee et al. 2002; Yang et al. 2002). In this study, we aim to propose a previously unexplored joint map in which brands and contexts are located within the same unobserved attribute space alongside varying preferences across consumers. Building on the extant literature on space-reduction models for consumer’s intrinsic preference imposing a factor structure on the covariance matrix of preferences (Chintagunta 1994; Elrod and Keane 1995; Kim & Chintagunta 2012), we propose an extension of the traditional correspondence analysis while minimizing the loss of information on individual preferences. To discuss potential business insights from our proposed method, we demonstrate marketing analyses utilizing context-dependent consumer preferences which vary within- and across consumers. While our demonstration uses a unique panel data with usage scenarios—the contexts and ways in which consumers spend time with various ICT devices in their daily lives, the proposed method can also be applicable to other recent consumption diary data (e.g., people-meter and clickstream data from Nielsen).

3 - Accounting for Unavailability in the Shopping Basket Model

Dai Yao, Assistant Professor of Marketing, National University of Singapore, 15 Kent Ridge Drive, Singapore, 119245, Singapore, dai.yao@nus.edu.sg

Customers make multicategory purchase decisions in a shopping trip for a host of reasons, e.g., complementary of the products, co-occurrence, and customer heterogeneity. We show in the paper, using both simulated and empirical data, that without accounting for the possibility of product unavailability, estimation of all these effects can be erroneous. As the conventional approach to estimate choice models for these occasions, which are usually formulated as a multivariate probit, cannot handle the case of unavailability directly, we first develop a new one based on decomposing the covariance matrix in MVP. We then run the proposed method with both simulated multicategory decisions as well as purchase records of satellite radio service and GPS devices for customers in their car rental transactions. We find both approaches to obtain similar estimates when product availability is taken for granted. When product unavailability is possible (e.g., GPS devices can be out of stock), only the new approach can recover the parameters on the simulated data, and its estimates on the empirical data are substantively different.
2 - Impact of Advertised Reference Price on Purchase Intention: Role of Anchoring, Latitude of Expected Price and Uncertainty

Atanu Adhikari, Associate Professor, Indian Institute of Management Kozhikode, IBM K Campus, IBM Road, Kunnambalam, Kozhikode, 673570, India, atanu.adhikari@iiit.ac.in, Rajesh K Sinha

In the past, researchers have investigated the influence of advertised reference price (ARP) on consumer response variables that includes purchase intentions. However, recent advancements in anchoring literature provide opportunity to investigate the influences of ARP in novel ways. Therefore, we identified selective accessibility paradigm of anchoring as appropriate framework to describe the role of ARP and sales price (SP) as anchor points and investigated their influence on expansion and contraction of latitude of highest and lowest expected prices. Correspondingly, this study considered the change in the latitude of highest and lowest expected prices as the measure of change in uncertainty and investigated its influence on the consumers' purchase intention. The study advances our understanding of simultaneous influence of ARP and SP on the latitude of highest and lowest expected prices, predicts when the latitude will expand or contract due to anchoring effect, conceptualizes the latitude of expected price as a measure of uncertainty and suggests its association with the purchase intention. This study is distinct from other studies as, unlike other studies, it investigates simultaneous influence of ARP and SP and suggests a mechanism that can separately predict the highest and lowest expected price points' direction of shift due to anchoring effect. The study found that expansion and contraction of latitude of expected price expectation are better explained by semantic priming' mechanism as compared to hypothesis-consistent testing mechanism of selective anchoring paradigm. The study also found that expansion and contraction of latitude of expected price influence purchase intention.

3 - Selling Opaque Goods with Bundles

Ashitosh Prasad, Professor, University of Texas-Dallas, 800 West Campbell Road, Richardson, TX, 75080, United States, aprasad@utdallas.edu

Moving beyond pure components selling, a multi-product seller has pertinent and innovative selling strategies available for consideration. Two possibilities that received prior academic attention are to create bundles of products and to create opaque goods for populating the product line. We construct and examine an extended product line of original product components, derived bundles and opaque goods to assess their profitability. We find that consumer heterogeneity distribution, consumer risk profiles and marginal costs play important roles in establishing the profitability of the extended product line.

TD09
5B, 5th Floor
Contributed Session

New Product IV

Chair: Maciej Szymański, Rotterdam School of Management, Erasmus University, P.O.Box 1738, Rotterdam, 3000 DR, Netherlands, mszymanski@rsm.nl

1 - Diffusion of Successive Generations of Prescription Drugs in the U.S. Pharmaceutical Industry Using Extended Kalman Filter

Malika Chaudhuri, Assistant Professor, Dayton University, 300 College Park, Dayton, OH, 45469, United States, mchaudhuri18@udayton.edu, Roger Calantone

Study of diffusion of successive generations of new products (NPs) has become increasingly complex given the interplay of marketing-mix variables to educate customers, thereby influencing the NP diffusion path (Danaher, Hardie and Putts, 2001). Additionally, exogenous shocks such as government mandates, environmental regulations often change the course of NP adoption process. The pharmaceutical industry is no exception. Once the prescription drug patent expires, over-the-counter (OTC) drugs may enter the market. Since OTC drugs tend to be cheaper and close substitutes of the former, their availability tend to influence consumer purchase pattern, thereby altering diffusion trajectories of both the branded as well as the OTC drugs. Interestingly, there is a dearth in the literature addressing diffusion of multiple generations of NPs while considering the role of exogenous shocks and marketing mix variables. We make two significant contributions to the diffusion literature. We apply Extended Kalman Filter (EKF) methodology to estimate diffusion pattern of multiple generations of NPs while considering the role of exogenous shocks and marketing mix variables. We develop two integer program and its linear equivalent version in AMPL/CPLEX to benchmark the heuristic results.

2 - Nonlinear Conjoint Optimization

Xinfang Wang, Associate Professor, Georgia Southern University, P.O. Box 9038, Statesboro, GA, 30460, United States, xfwang@georgiasouthern.edu, Jeffrey Camm

Conjoint analysis is a statistical technique for evaluating market potential for new product(s) by estimating partworth utilities for product attributes. The objective of the share-of-choice problem - a common approach to new product design - is to find the design that maximizes the number of target consumers for whom the new product’s utility exceeds a specific hurdle (reservation utility). This paper extends prior work on linear problems to the nonlinear case where cross terms are incorporated into the model, that is, the pair-wise influence on the overall product utility is taken into account. The nonlinear interaction model is very difficult to solve to optimality, so we developed a set of very fast heuristics that make up our new heuristic algorithm. Based on subsets of data from two real data sets provided through a consulting project, the heuristic solution compared favorably to Sawtooth in terms of percentage share of choice and takes a small fraction of the computational time. In addition, we develop a nonlinear binary integer program as an equivalent version in AMPL/CPLEX to benchmark the heuristic results.

3 - The Impact of Two Types of Customer Involvement on New Product Development

Fang Wu, University of Texas-Dallas, 800 West Campbell Road, SM 52, Richardson, TX 75083, United States, fangwu@utdallas.edu, Anna Shaojie Cui

More and more companies are actively involving their customers in the new product development (NPD) process. However, there is little consensus regarding the contribution of customer involvement to new product outcomes. A better understanding of its contribution can shed light on whether and when it is worthwhile to involve customers and thus provide firms better guidelines for making such decisions. This study examines the contribution of two forms of customer involvement to new product outcomes: the traditional form of customer involvement as an information source (CIS) and the more active form of customer involvement as co-developers (CIC). We offer a better understanding of whether customer involvement can lead to successful innovation by (1) identifying conditions that impact the effects of CIS and CIC on NPD outcomes, (2) contrasting the conditional effects of CIS and CIC to understand how they influence NPD outcomes differently, (3) examining the potential substitutive relationship between CIS and CIC to understand their joint effects in improving NPD. We find that an experimental NPD approach that emphasizes trial and error learning moderates the relationship between customer involvement and new product outcomes. Specifically, we discover contrasting contingent effects of CIS and CIC: CIS is more beneficial for new product outcomes when the firm takes a more experimental NPD approach, whereas the effect of CIC is stronger when the NPD process is characterized with lower experimentation. We also find that CIS and CIC substitute each other in their contribution to new product outcomes. These findings suggest that each of the two forms of customer involvement has its unique advantages and is suitable for different conditions. When considering the adoption of CIC, firms should take into consideration their learning approaches as well as the effectiveness of CIS in the NPD process.
1 - Necessity, is it The Mother of All Innovation? The Case of Hotel Managers’ Decision to Manage Reputation or Renovate Their Properties

Amrit Pazgal, Rice University, Jones Graduate School of Management, 6100 Main Street (MS – 531), Houston, TX, 77005, United States, pazgal@rice.edu, Alexander Chaudhry, Yang Wang

We investigate the adoption patterns of two types of strategic actions available to managers aimed at improving customer satisfaction, one that is cost intensive and one that is not. We investigate the degree to which these managerial decisions are driven by mimetic and by market forces. We posit that early adopters of innovative managerial practices are driven by market forces, while late adopters are driven to adopt through imitation. However, when the costs involved are high, we hypothesize an attenuation of the direct mimicry effect. Specifically, we test our hypotheses in the context of hotel reputation management and renovation strategies using a large dataset of online reviews and managerial responses to investigate the adoption times of reputation management strategies and property renovations, consumer sentiment, hotel popularity, and competition.

2 - Why is Mobile Eye-Tracking so Rarely Used in Retailing Research? – How Researchers Might Benefit from Conducting Studies in Virtual Environments

Martin Meissner, Associate Professor, University of Southern Denmark, Niels Bohrs Vej 9-10, Esbjerg, 6700, Denmark, meissner@sam.sdu.dk, Jella Pfeiffer, Thies Pfeiffer

Measuring consumers’ attentional processes with mobile eye-tracking equipment at the point of sale has been identified as a promising area for retailing research. Likewise, researchers from the fields of decision-making stress the need to measure decision makers’ attentional processes in natural environments, like supermarkets, to understand consumers’ real-world choice processes in more detail. Information technology researchers have been using the mobile eye-tracking technology to improve decision support systems at the point of sale. A key advantage for all mentioned research disciplines is that attention and behavior can be monitored in an unobtrusive and noninvasive manner. However, despite the growing research interest and potential advantages, only a very few papers have been published in marketing journals which use the mobile eye-tracking technology. This paper argues that the recording of consumer attentional processes in store and the preparation of the mobile eye-tracking data is still very cumbersome which hinders research in the above mentioned research fields. To solve this problem, we suggest conducting mobile eye-tracking studies in virtual environments. This paper starts with a discussion of advantages and disadvantages of desktop and mobile eye-tracking in real and virtual environments. We then identify promising areas for the use of eye-tracking in virtual environments in various marketing-related fields of research. Finally, we illustrate how virtual environments can be used by presenting the design and discussing the results of a first empirical study in a typical retail setting.

3 - Salience in Performance Reporting the Case of the Automobile Industry

Rajdeep Grewal, University of North Carolina, Chapel Hill, NC, 1, United States, Rajdeep_Grewal@kenan-flagler.unc.edu, Gunee Kaur

‘Salience’ refers to the attentional mechanism for information consumption that enables consumers to focus their limited cognitive resources on simplified information. The academic literature thus far on the effectiveness of salience effect in big-ticketed categories has been mixed. In this research, we seek to investigate the salience of performance reporting by report cards in the automobile industry influences demand. If yes, then what are the underlying mechanisms that drive causality? We use a natural experiment in the automobile category, wherein we exploit two characteristics of the automobile report card introduced by US News World Report (USNWR). The first characteristic is that the USNWR automobile report card is constructed using incumbent report cards in the market. The second characteristic is the staggered inclusion of brands in the report cards over years. Using a rich data panel model with fixed effects, we attempt to tease out the impact of the direct mimicry effect. We find that on average, a salient has a positive and significant impact on the demand. We also find that causal impact of the report cards in the automobiles category is driven by quality signal mechanism, while the prestige signal mechanism does not seem to work.
3 - Giving Surprise Gifts in Romantic Relationships: The Effects of Givers’ Perceptions of Decision Outcomes Uncertainty

Yu-Chen Chen, Professor, Soochow University, Taipei, Taiwan,
No 56, Sec. 1, Kuei Yang St., Taipei, 111, Taiwan, cycc@scu.edu.tw,
Rong-An Shang, Ching-Kuang Lin, Chung-Ting Chang

Giving gifts to lovers may be seen by people either as an obligation or a pleasure. Nevertheless, the outcomes of giving gifts in an unexpected way to surprise the recipients may become more uncertain than giving a safe and popular gift. We tested the moderating effects of the perceptions of uncertainty on the relationship between giving gift as an obligation and giving gifts as a pleasure on the intention to give surprise gift by analyzing data of 411 valid samples collected via a questionnaire survey. The results show that the perception of uncertainty negatively influences the intention, making it harder to detect the effect of giving surprise gifts uncertain. In addition, a stronger perception of uncertainty was found to suppress the positive relationship between giving pleasure and the intention; however, the same effect was not found on the impact of giving obligatory to surprise gifts intention.

4 - Preference Reversal: Analysis using Construal Level Theory that Incorporates Discounting

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

In behavioral economics, discounting is often used to explain preference reversal along a time axis. On the other hand, in social psychology, many studies investigate preference reversal along psychological distances, including a time axis, using construal level theory (CLT). The current research incorporates discounting into CLT to introduce the discounted construal level model. This model extends the concept of discounting by its applicability to general psychological distances (including time); we posit two well-known properties of the discount rate—namely, the magnitude effect and the sign effect. This study presents three propositions, which are subsequently validated by the results of a survey of lottery choice. Using two samples of respondents—namely, students and web users—this study’s results largely support the three propositions.

2 - Word-of-Mouth, Observational Learning, and Product Adoption: Evidence from an Anime Network

Elisabeth Honka, UCLA, elisabeth.honka@anderson.ucla.edu,
Mina Ameri, Ying Xie

We quantify the effects of word-of-mouth and observational learning on consumers’ product adoption. We differentiate between the effects of word-of-mouth and observational learning from friends (“personal network”) and the effects of word-of-mouth and observational learning from the whole network (“community network”). Our unique data come from an online anime network containing individual-level data on users’ networks, product adoptions, and ratings of animés. We account for four challenges that come with analyzing our data, namely, endogeneity of network formation, simultaneity of adoptions, homophily, and low event rate. Our results show that word-of-mouth from both the personal and the community network enhances an individual’s probability of watching an anime. We also find evidence for observational learning from the community network. However, we do not find evidence of observational learning from the personal network to affect users’ adoption decisions. Regarding the relative importance of friends vs. strangers, to our surprise, our results show that information provided by strangers (i.e., users from the large community network) plays a more prominent role than information obtained from friends (i.e., users in one’s own personal network).

3 - Consumer Valuation of Network Convenience: Evidence from the Banking Industry

Hui Wang, Guanghua School of Management, Peking University, Beijing, China, jackie.wang@gsm.pku.edu.cn, Andrew Ching

This paper develops a structural demand model for the US retail banking market, in which consumers have preferences over the geographical convenience of banks’ networks. Unlike the previous literature which assumes consumers only care about branches located closest to their home locations, our model allows consumers to spend time in both home and workplace and may need to access their banking services from both locations. We use a detailed worker flow dataset from US Census to identify consumers’ home and work locations in the population. We combine this information with a dataset that details each branch’s deposit and location of 132 insolvent banks in the US, and use it to estimate our structural demand model. Our results suggest that it is important to take into account both consumer’s home and work locations in order to study the nature of spatial competition in the banking industry. To quantify the value of a bank’s retail network, we conduct a counterfactual experiment by restricting consumers to go to only one branch for all of his banking services. We find that the larger the bank’s network, the more market share the bank loses under this counterfactual scenario. More specifically, a one-branch reduction would lead to a reduction of 0.17 percentage points in its market share, which amounts to roughly $1.5 million in deposits.
2 - Social Communications and Live Content Broadcasts
Qiag (Steven) Lu, University of Sydney, Discipline of Marketing, School of Business - Econ Building H09, Sydney, 2006, Australia, steven.lu@sydney.edu.au, Rohan Miller, Raphaelle Mady

This paper conducts research in an industry, which is currently facing challenges due to digital innovation; the live television industry. It investigates the relationship between electronic Word-of-Mouth (eWOM) discourse (customer-to-customer and customer-to-business) and its effects on search engines, other social media platforms, and live television viewership. It also looks at two content theories (the negativity bias and emotion) to see if their presence in social media discourse has an effect on live television consumption. The findings from this research show that eWOM communications on Facebook before the broadcast and eWOM communications on Twitter during the live content broadcast increase live television viewership. This paper also finds that both the presence of the negativity bias and emotion have a moderating effect on live television viewership. These results add to existing social media literature and provide new solutions to re-invigorate live television watching behavior.

3 - The First Review Effect
Jinhong Xie, University of Florida, Warrington College of Bus 209 Bryan Hall, Campus Box 117155, Gainesville, FL, 32611-7155, United States, jinhong.xie@warrington.ufl.edu, Sung Sik Park, Woonchel Shin

Online shoppers now witness an excessive amount of user-generated information illuminating other shoppers’ experience with products and services. In such an information-rich environment, will a single consumer review have any significant influence over the fate of a given product? In this paper, we develop a theoretical model to demonstrate the powerful impact of a unique single consumer review, i.e. the very first one, on the product’s word-of-mouth (WOM) and market performance. Our empirical study based on vacuum cleaner data supports our theoretical predictions. First, the first review significantly affects two key metrics of WOM, volume and valence (e.g., compared to products with a positive first review, products with a negative first review suffer more than 50% loss in WOM volume). Second, the first review effect not only persists, but also can intensify over time. Specifically, although the impact of the first review on WOM valence declines over time, a negative (positive) first review leads to a significantly lower (higher) WOM valence even after 36 months since the first review was posted. More strikingly, the first review effect on WOM volume exaggerates rather than diminishes as time goes by. Together, these results underscore the crucial role of a product’s very first consumer review. A product starting with a negative first review suffers not only from lower ratings but also from lack of chances to correct the damage. The findings have substantial implications for online sellers and ecommerce platform providers.

TD15

Inform Marketing Science Conference – 2016

2 - Impression Effect vs. Click-Through Effect – Mechanism Design of Online Advertising
Xiang Zou, Southeast University, Southeast University Road No.2, Nanjing, 211189, China, xiangz@yeah.net, Ruhai Wu, Weijun Zhong

Search advertising and display advertising are two major online advertising formats. Search advertising emphasizes ads’ click-through effect. Advertisers only pay when customers click the link of their advertisements. Traditional display advertising emphasizes ads’ impression effect. Most display ads are charged based on the number of views on the ads. Considering that most online ads increase brand awareness (impression effect) as well directly promote sales (click-through effect), the non-optimized effect in search advertising or display advertising actually has a significant impact on the market outcome. However, these impacts have been largely ignored. In this paper, we examine various pricing mechanisms in search advertising and display advertising by considering both ads’ impression effect and click-through effect. Interestingly, we show a seesaw relationship between ads’ impression effect and click-through effect in search advertising auctions. The advertiser whose advertisement has a strong click-through effect benefits relatively less from the advertisement’s impression effect. In display advertising, the real-time-bidding (RTB) mechanism considers both ads’ impression effect and click-through effect. It allows a publisher to gain more surplus than that through a static auction. However, we show that RTB is associated with a high risk of market failure.

3 - Using Past Browsing Behavior to Improve Bidding Strategies in Search Engine Advertising
Sebastian Schubach, University of Passau, Innstraße 27, Passau, 94032, Germany, sebastian.schubach@uni-passau.de, Jan Hendrik Schumann, Alexander Bleier

Identifying successful bidding strategies in paid search advertising is an important and challenging matter. Whereas for the longest time, firms tried to outbid competitors in search engine keyword auctions to be displayed in the top positions of paid search ad slots, recent studies provide evidence that these positions might not always be optimal. In particular, consumers’ willingness to rely on ads in high positions decreases as they progress through the purchase decision process, commonly identified based on submitted search queries. Current search engine technology allows firms now to actually track consumers’ behavior in their online stores prior to visiting a search engine, facilitating a more accurate assessment of this progression. In the present study we use data from a large-scale randomized field experiment to incorporate this information into our model and specifically investigate under which conditions prior onsite browsing behavior provides additional information as search queries and how it affects the relevance of position effects. Our work adds to prior research on position effects in search engine advertising as well as multichannel behavior of consumers in the online space. For practitioners, we derive meaningful and actionable implications for firms’ paid search advertising strategies.

4 - Budget Allocation in Sponsored Search Advertising: An Attribution Modeling Approach
Ming Cheng, Assistant Professor, Suffolk University, 73 Tremont St, Rm 7069, Woburn, MA, 01801, United States, mcheng2@suffolk.edu, Chris K Anderson

Considering the nuances associated with the sponsored search paradigm, whereby search engines connect advertisers with a broad range of potential targeted customers, companies devote substantial resources to their quest for a successful search engine campaigns. - more specifically, keyword auction campaigns. From advertisers' standpoint, how to effectively allocate money (or budget) to individual keyword has become a critical issue, especially for advertisers which have to manage hundreds, or even thousands of keywords on a daily basis. After all, the amount of money that can be assigned to keywords is limited and therefore advertisers have to carefully place their bids balancing campaign effectiveness, cost and competitive impact. Conventional wisdom suggests several ways to allocate money in the sponsored search advertising domain (e.g. last-click, first & last-click, or evenly distributed approach). However, in spite of the fact that a typical consumer online search activity usually involves multiple steps (from an initial search query until a completed purchase), traditional guidance overlooks consumer’s search paths and therefore may not provide effective solution to the advertiser’s budget allocation. Using a unique dataset which includes disaggregate-level advertiser paid search, consumer clickstream and conversion information collected from a leading search engine company, we propose an attribution methodology which takes into account the consumer’s search journey and we show how this approach would help advertisers allocate money to individual keyword more effectively.
The increasing adoption of smartphone among consumers dramatically changes consumers’ purchasing behavior in online shopping industry. As wireless internet access through mobile offers consumers comfort, spontaneity and mobility (Buellinger and Woerter 2004), the online transactions via mobile devices has increased over the past year. The advantage of using mobile internet compared to fixed line services on a smartphone that consumers have less restrictions in time or space when they purchase the products. Nowadays, smartphones account for over 40% of eCommerce transactions in Japan and Korea and it is expected to grow more (Criteo 2015). Although understanding consumers’ mobile usage behavior is important for retailers to develop their efficient online strategy, its effect has not been well investigated. Moreover, even though the majority of consumers visit and purchase the products from online by using multiple devices these days (Criteo 2015), there is little prior empirical work considering cross-channel consumption behavior on mobile devices (Xu et al. 2015). To deepen our understanding of online shopping market, the purpose of this paper is to investigate consumers’ mobile shopping behavior by examining consumers’ usage experience in mobile and fixed network devices. To achieve our goal, we have obtained panel data from Nielsen in Korea. The data consists of 3,089 consumers’ daily transaction records within 3 months period from April 2015 to June 2015. The results indicate that the less consumer use diverse e-commerce websites or app, consumer purchase the products more frequently via mobile. We have also found that the less consumer actively searching price information of the products through websites or app, the more consumer purchase the products from mobile. Lastly, the more consumer connect to SNS site, the more tendency of purchasing the products from mobile has been increased.

2 - Mobile Shopping More Impulse Purchases in a Higher Friction Market

Banggang Wu, Tsinghua University, Room 2
24, Shunde Building, Tsinghua University, Beijing, 100084, China, wubg12@sem.tsinghua.edu.cn, Yubo Chen

The rapid development of the mobile Internet is changing the landscape of the E-commerce. It becomes very important to understand whether and how the mobile channel affects consumer purchase behavior. This paper studies this issue by modeling the data from one of the largest online retailers in China. We find that customers’ mobile channel adoption can significantly increase their overall purchase frequency and spending in both the short and long term. Interestingly, the mobile channel can have both substitutive and complementary effects on the traditional PC channel. We further examine the mechanism behind the impacts of mobile channel on consumer purchase behaviors.

3 - The Impact of Mobile App Crash

Wei Shi, Santa Clara University, 500 El Camino Real, Lucas Hall 221C, Santa Clara, CA, 95053, United States, wshi@scu.edu, Kirithi kalyanam, Michel Wedel

Mobile commerce has gained momentum in recent years. Consumers on mobile device often experience app crashes - unexpected shutdown of an app. On average, iOS apps crash about 2.5% of the time and Android apps have an even higher crash rate (Criteo 2015). Given the prevalence of app crashes, it is important to understand consumers’ reactions to such event. The objective of this study is to examine whether and how app crashes affect users’ subsequent browsing behavior. Our dataset recorded consumers’ browsing behavior and app crashes in a natural shopping environment on tablet devices, which provides a rich field setting to understand how consumers respond to the failure of an app. We applied Gaussian Copulas to investigate three response variables, i.e., session restart time, session duration, and actions taken in the immediate following session. The analyses quantify the magnitude of the losses in app usage, which provide a much-needed assessment for app developers and mobile marketers. The paper also generates implications as to the app-update release strategy for different consumer segments.
3 - Brand Voiceprint
Yi Wang, Associate Professor, Central University of Finance and Economics, 39 South College Road, Haidian District, Beijing, 100081, China, wangy@cufe.edu.cn, Hye-jin Kim, Min Ding

A successful brand sticks in the mind of the consumer and creates a strong differentiation point from its competitors. Various elements can be used to strengthen the brand, including names, logos, symbols, characters, spokespersons, etc. Most elements are focused on the visual aspect, and one under-utilized area is using the human voice to build the brand. Voice carries much information of the speaker and brand, and serves as an “auditory face” of the brand. Although previous research has addressed the effect of different voice characteristics on consumers’ responses to ads, no attempt has been made to link voice to brand. In this research, we aim to find the “ideal” voiceprint for a brand. Specifically, (1) After repeated exposure, can the consumer accurately connect a voice with a brand? (2) Can the consumer accurately remember the information expressed by the voiceprint? (3) Will the consumer infer brand characteristics and brand personality differently from different voiceprints? (4) Will such effects vary depending on the product category and segments of consumers? We conduct an empirical study to answer these questions, where subjects evaluated different actors’ voices in advertisements for various product categories. The data was analyzed using voice feature extraction methods and applying a latent class multivariate model. The results show that different voices do have a significant effect on people’s attitudes toward the advertisement, attitudes toward the brand, and purchase intentions. In addition, heterogeneity in different consumer segments and product categories were found. Implications and future research directions are discussed.

4 - The Natural Monopoly Effect: Do Big Brands Really Appeal More to Light Category Buyers?
John G. Dawes, Associate Professor, Ehrenberg-Bass Institute, UniSA, GPO Box 2471, Adelaide, 5001, Australia, John.Dawes@marketingscience.info

The Natural Monopoly [NM] effect is that big brands unduly appeal to ‘lighter’ or less frequent buyers of a product category, whereas small brands tend to be bought by heavier category buyers. The NM effect has an important managerial implication: it implies that for a brand to go from small to big, it must heighten its appeal particularly to lighter buyers of the product category. However, NM is under-researched. A literature search revealed the NM effect has generally only been mentioned as a sideline in empirical work. This study examines the NM effect in packaged goods markets. It uses data kindly provided by AImark, for 20 Dutch grocery categories. Analysis confirms the NM effect is quite pervasive, being present in many categories. The study suggests that bigger brands tend to have lighter category buyers; the study also finds lower-priced brands tend to have heavier category buyers. These findings are useful ‘general knowledge’ for brand marketers.

2 - Seller Competition and Fake Word-of-Mouth
Chun Qiu, Assistant Professor of Marketing, Wilfrid Laurier University, 75 Univ Ave, Waterloo, ON, N2L 3C5, Canada, cqiuj@wlu.ca, Ruhai Wu

On online platforms such as Alibaba and Amazon, some sellers, taking the advantage of anonymity of contributing consumers, forge consumer reviews to boost their own ratings. This research uses a game theoretical model to explore the competitive mechanism of the manipulation of consumer reviews in a competitive environment. By examining the interaction between price competition and review manipulation, this paper answers the following questions: Who manipulates online consumer reviews, and who does not? How does such manipulation influence the ranking of the perceived quality of the sellers? What factors contribute to the degree of consumer review manipulation? And, how does the propensity of consumers’ contribution to reviews affect such manipulation? Our model shows that although forging consumer reviews can improve their perceived quality, high-quality sellers do not do so because they incur higher marginal costs. Only low-quality sellers fake consumer reviews. However, the manipulation of consumer ratings does not change the rankings of the perceived quality of sellers. This paper also shows how market characteristics, including consumer quality preference and manipulation cost influence the manipulation of consumer reviews.

3 - Dynamic Effect of Customer Equity on Firm Performance: A Perspective of Competitive Market Structure
Ji Yoon Kim, Research Professor, Korea University, #611 LG-Posco, Korean Uvi, 136-705, Korea, Republic of, jiyoon77@korea.ac.kr, Tae Ho Song, Sang Yong Kim

Although there has been much conceptual evidence of the positive link between customer equity and firm’s performance either directly or through improved customer outcomes, little research compares the relationships between leader company and follower company. Therefore, research investigating the comparison between firms is needed. We collect the customer acquisition and retention data and performance data of a telecommunications company. Based on customer equity models of previous literatures, we first estimate the newly acquired and existed customers’ lifetime value and then the customer equity of the company over each period. We develop and employ a time-series model for examining the relationship between the estimated firm’s customer equity and firm profitability each firm. Then, we compare the relationship between two firms. The findings show that the effect of newly acquired CE of follower firm is stronger than that of leading firm. On the other hand, the effect of retained CE of leading firm is stronger than that of follower firm. Overall, the results offer strategic implications for firms to implement a different customer equity strategy in this competitive market structure.

4 - Strategic Product SpotLighting on Online Shopping Marketplace
Lin Liu, University of Central Florida, Orlando, FL, United States, lin.liu@ucf.edu, Haojun Yu, Yuxin Chen

Online shopping marketplaces such as Amazon (Amazon Marketplace or Taobao Mall) offer many products in the shopping environment that are overwhelming for consumers to evaluate. To alleviate this tension, marketplaces allow sellers to use sponsored ads to spotlight their products and draw consumers’ attention. The sellers can compete for the sponsored ads position through the second price auction, and in addition, they also need to pay a commission fee to the marketplace for each sale made. Thus, when deciding sellers’ position in the sponsored ads, marketplaces also need to keep sellers’ competition in check. Our paper focuses on asymmetric sellers in terms of their probability to provide a positive fit. We show that, although the spotlight decision is made based on sellers’ bids, such a decision can also maximize the commission fee collected from sellers. And our results show that, actually, the marketplace always would like to choose the spotlight order that maximizes the collected commission fee, while the sponsored fee is just an additional source of profit that does not necessarily change the spotlight decision.
1 - Whether to Reveal or Not Reveal Stock and Sales Information: Effects of Displaying Stock and Sales Level Information on Consumers' Online Product Choices
Yongfu He, Senior Lecturer, Monash University, 49 Woodside Drive, Rowville, VIC, 3178, Australia, yongfu.he@monash.edu, Harman Oppedal

Online retailers sometimes reveal to customers how many items they have in stock for a product or how many items have been sold. The underlying assumption seems that high sales signals popularity and quality, which will stimulate more sales; similarly, low remaining stock levels will also signal popularity, and hence quality and also potential availability, and thus stimulate sales. This study tests these assumptions in a scenario-based online experiment in which participants choose between competing products for which information about sales and stock is displayed. Results show that higher sales levels indeed result in an increase in the likelihood of product choice, while higher stock levels decrease this likelihood. When both sales and stock information is presented, the sales level effect dominates and the stock level effect reduces. Analyses reveal how perceptions of popularity and quality of the product mediate the effects of sales and stock levels on consumer choice.

2 - Forecasting Retailer Product Sales at the SKU Level in the Presence of Structural Breaks
Tao Huang, Lecturer in Marketing, University of Kent, Medway Building, Chatham Maritime, UK, ME4 4AG, Chatham, ME4 4AG, United Kingdom, t.huang@kent.ac.uk, Robert Filides, Didier Soopramanien

Grocery retailers need accurate sales forecasts to improve their inventory management. In practice, they face intense competition and spend heavily on price reductions and promotional activities, which has substantially increased the variation in their product sales. Previous studies thus proposed to incorporate the price and promotional information, not only from the focal product but also from other competitive products, in forecasting retailer product sales. These studies assumed the effectiveness of price and promotions to be constant. In reality, the effectiveness of price reductions and promotions may however change due to unobserved influencing factors such as economic conditions, the entry of new brands, competition, and the change of consumers’ tastes etc. As a result, the models in previous studies may potentially generate biased forecasts due to structural breaks. In this study, we develop new econometric models to forecast retailer product sales at the SKU/store level. We take into account the potential issue of structural breaks and forecast bias using recently introduced techniques including the estimation window combining strategy and the intercet point correction approach. In this study we evaluate the performance of the proposed models across a wide range of product categories and also based on whether the focal product is being promoted. Our results show that we can improve the forecasting accuracy of the econometric models regardless of whether competitive promotional information have been incorporated, which allows retailers to further improve their inventory management.

3 - Customer Return Rate Evolution in Online Retailing
Siham El Kihal, PhD Candidate, Goethe University Frankfurt, Grüneburgplatz 1, Frankfurt am Main, 60323, Germany, elkhalh@wwi.uni-frankfurt.de, Tülin Erdem, Christian Schulze, Bernd Skiera

Do customers' product return rates evolve over time? If so, what impacts this evolution and how do previous experiences with the retailer impact evolution patterns across customers? The authors investigate the evolution of customers' return rates over the course of their relationships with an online retailer. The results show that (1) customer return rate evolution exhibits great heterogeneity: While a considerable share of customers shows an increasing return rate over time, others show a decreasing pattern, even after accounting for other factors impacting return rate, such as shopping basket characteristics, (2) previous purchase experiences lead to a decrease in customer return rate providing evidence for learning, (3) previous return experiences increase customer return rate, suggesting habit persistence, and (4) the effects of previous experiences as well as customer tenure on return rates decrease over time. These findings highlight the need for managers to consider heterogeneity and individual-specific evolution of customer return rates in their micro-marketing and customer portfolio management strategies.

4 - What Drives Social Interactions for Group-buying Deals?: The Role of Online and Offline Contextual Factors
Jikyung Kim, Assistant Professor, IE University, Campus de Santa Cruz la Real, Cardenal Zúñiga, 12, Segovia, 40003, Spain, jeanne.kim@ie.edu, Jeonghye Choi

Social interaction among buyers and sellers result in greater sales. In particular, business models such as group-buying deals rely heavily on the social aspect of the commerce, and thus managing social interactions that revolve around a deal has been a key issue for deal providers. This study investigates two forms of social interaction, public discussion (posting on the within-platform deal board) and social sharing (sharing the deal information on an external SNS platform). In addition to the innate attractiveness of the deal, we hypothesize that the online and offline contexts affect the amount of social interaction. That is, (1) number of deals that are present along with the focal deal in the online platform and (2) the retail environment of the service offered in the deal affect the degree to which users participate in social interaction. An empirical analysis of deal-level data shows that the contextual factors, along with the deal attractiveness, affect the amount of social interaction. However, the effects are distinct for public discussion and social sharing. When there is a larger number of similar deals on the platform, less public discussion takes place while social sharing proliferates. Offline retail environment only affects public discussion; larger retailer revenue in the area that the deal provider is located results in greater social interaction. The innate attractiveness of the deal, defined as the past performance of deals of the same category in the same region, has contrasting effect on the two types: high attractiveness results in more public discussion but less social share. Managerial implications of the findings are provided.
3 - Upselling by Cheap Talk
Hyun Chul Maeng, PhD student, Hong Kong University of Science and Technology, LSK Business Building, Room 4017, Hong Kong, Hong Kong, hcmnaeng@ust.hk

Up-selling is an empirical phenomenon in which a seller tries to convince consumers to buy a product that may generate a higher profit to the seller. However, it is difficult for the seller to persuade consumers who understand such incentives of the sellers. This study theoretically investigates conditions under which successful up-selling by cheap talk is possible. In particular, we present a model of cheap-talk and search in which consumer search sequence may be influenced by the seller's message. Credibility of the message attires when trade-off exists between two states: when the true state is low both segments prefer the low-priced product, but when the true state is high one segment prefers the high-priced item while the other segment leaves the market. We show that informative cheap-talk always increases consumer surplus, and may increase or decrease seller profit. However, when informative cheap-talk works as a successful up-selling vehicle (i.e., informative communication increases demand of high-priced item) both the seller and consumers' welfare increase.

4 - The Protection Economy: Occasional Service Failure as a Business Model
Daniel Halbhöer, HEC Paris, Jouy-en-Josas, France, dhalbhoe@hec.fr, Eitan Gershon, Oded Koensigsberg

Conventional wisdom holds that service failure creates customer misery and reduces firm profitability. This paper challenges this view and shows that occasional service failure can be profitable for the firm when optimal protection against the resulting customer misery can be marketed. It also shows that a firm that uses such a protection strategy inflicts a calculated misery on unprotected customers and wastes resources to provide the protection. Despite these inefficiencies, using the protection strategy can lead to market expansion and social welfare gains due to lower prices.

2 - The Influence of Customer Characteristics on the Customer Need Knowledge of Frontline Employees
Björn A. Hüttel, University of Passau, Innstraße 27, Passau, 94032, Germany, lhueettel@uni-passau.de, Jan Hendrik Schumann, Marion Büttgen, Zelal Ates, Marcin Komor, Julian Volz

The accurate identification of customer preferences is central to the marketing concept. Given the high heterogeneity of customers, it has become increasingly important to successfully address the needs of each individual customer. This accurate perception of an individual customer's hierarchy of needs is defined as customer need knowledge (CNK). Despite its major importance, there is only limited research in the field of CNK. Research on the predictors of CNK thus far only examined employee characteristics and relational aspects between customers and employees such as the length of a relationship. The construct of CNK, however, is defined and measured twosided: customers are asked to rank buying needs according to their personal importance. Subsequently, employees are asked to indicate what hierarchy of needs the customer has due to their perception. CNK is operationalized as the sum of the absolute differences between customer and employee rankings. Due to this dual-perspective approach, characteristics of consumers might have an influence on the CNK as well. Hence the goal of this study is to examine the influence of customer characteristics, such as risk affinity, on the CNK of frontline employees. For this purpose, we collected data involving customer level and bank advisor level in the banking sector of three European countries. The data will be analyzed using hierarchical linear modelling. First results will be presented at the ISMS MS Conference 2016. The study intends to contribute to literature on the importance of frontline employees' ability to understand customer needs in order to successfully implement the marketing concept. More specifically, it extends research on CNK by showing the importance of customer characteristics as predictors for the CNK of frontline employees. Furthermore, the study transfers research on CNK to the banking context, a context in which CNK might be particularly important due to high complexity and importance of investment decisions in an environment of uncertainty.

3 - Are Leading Edge Consumers Different in Smartphone Social Network Communications?
Akira Shimizu, Keio University, 2-13-45 Mita, Tokyo, 19122, Japan, ashimizu@bc.keio.ac.jp, Jeff Inman, Takashi Teramoto

In the internet era, understanding leading edge consumers becomes increasingly important. In this research, we examine a new type of leading edge consumers using 4000 members of a Japanese smartphone social medium. Our analyses reveal that 1) these consumers use different communication strategies and social processes than other consumers, 2) the selection criteria of these consumers are different from other consumers, 4) these consumers do not react to SNS information released by business enterprises, 5) these consumers browse different new products information of SNS than other consumers.

4 - Romantic Appeals for Embarrassing Product Sales
Yiping Song, Associate Professor, Fudan University, 670 Guoshun Road, Siyuan Building, Shanghai, 200433, China, ypsong@fudan.edu.cn, Guiyang Xiong, Cheng Zhang, Xueming Luo

Embarrassment commonly exists in various consumer consumption contexts. Consumers may feel embarrassed when purchasing some products (e.g., condoms, AIDs test, undergarments, etc). The awkward feeling and threat of unwanted evaluation from others often prevent consumers’ purchases of such products, even though the non-use could incur risks (i.e., accidental pregnancy without using condoms in sex). Thus, it is important to investigate what marketing instruments can effectively boost the sales of embarrassing products, from the aspects of individual consumption, sales revenue, and societal public policy. We conducted a large-scale randomized field experiment sponsored by one of the leading chained supermarkets in the context of condom purchases. We sent mobile promotions to more than 11,000 store members, manipulating the message framings (i.e., romantic vs. non-romantic appeal in the message) along with three different levels of price discounts (i.e., zero discount vs. moderate discount vs. deep discount). The results show that romantic appeals can increase embarrassing purchase incidence as effectively as the moderate discount. Romantic appeals could even engender greater up-selling activities (more expensive items) than price discount. The sales impact of romantic appeals is robust, with heterogeneous effects across different levels of store crowding density, as well as consumer gender and age segments.
This paper studies the effect of the introduction of limited-time products on consumer purchase behavior in frequently purchased product categories. Limited-time products, including seasonal products (e.g., October Fest version of Samuel Adams), have been used as an effective marketing tool to generate interest among consumers and boost up sales. However, little has been documented about their roles and effects on consumer purchase behavior and firm profitability. We use a time-series data set from the Japanese beer market between 2011 and 2015, and investigate (1) whether limited-time products increase the overall brand sales by drawing in a new type of consumers, or simply induce brand switching and/or cannibalization, (2) behavioral factors through which the limited-time nature affects consumer purchase behavior (e.g., time preference, learning), (3) how the success of limited-time products depends on brand characteristics and competition, and (4) differences between truly limited-time products and seasonal products. To examine these issues, we develop and estimate a structural demand model that accounts for the behavioral factors regarding the limited-time nature and recover the substitution patterns. Using the demand estimates, we conduct a series of supply-side counterfactual simulations to investigate the effect of introducing a limited-time product on demand and firm profitability. Our analysis offers managerial implications for when and how firms could effectively benefit from introducing a limited-time product.
Not only have acting with integrity and being transparent become popular among companies, but there is also a growing body of academic literature surrounding and supporting this change towards transparency. We investigate how voluntary cost disclosure as a strategic tool can affect consumer perceptions of fairness and willingness to purchase across different product categories. Drawing on the literature and the first-run of experiments, we hypothesize that (1) consumers are more likely to choose an offer disclosing the cost information compared to non-transparent ones, and argue that (2) the relationship between cost transparency and consumers' willingness to purchase the offer is mediated by perceived price fairness. We further identify inferred company motive as a mediator between cost transparency and perceived price fairness, and hypothesize that (3) among the cost transparent offers, consumers perceive the situation involving a good motive (as opposed to a bad one) fairer. To make the findings generalizable across different product categories, we test our conjectures on hedonic and utilitarian products and argue that (4) for products scoring high on hedonic dimension, the effect of cost transparency on perceived price fairness is expected to be higher. The initial findings support our proposition that cost transparency, by decreasing the degree of asymmetric information in the market and influencing fairness perceptions, can challenge the long-established mind-set and create a unique edge for companies to differentiate themselves.

3 - Consequences of Price Fairness Perceptions: A Meta-Analytic Study
Farid Tarrahi, M.Sc., European University Viadrina, Große Scharrmstrasse 59, Frankfurt (Oder), 15230, Germany, Tarrahi@europa-uni.de
Price increases for certain products, e.g., energy prices, food prices, etc. and have made consumers more price sensitive, which led them to compare prices more intensively. Price comparisons trigger price fairness perceptions (PPF), which influence purchase behavior. Many studies have investigated the consequences of PPF, revealing high variation in findings. In order to explain this variation, we suggest that the effects of PPF depend on the economic and cultural context in which consumers compare prices, judge price fairness, and respond accordingly to their judgment. The investigation of the influence of economic and cultural factors is especially timely considering the economic turbulences and crises the current economies are facing, causing considerable variation in macro-economic factors over time and across countries. We perform a meta-analysis that accumulates findings in 102 price fairness studies providing 306 effect sizes, spanning a period of more than twenty-five years, and collected in twenty different countries. We identify the regions in which they should adopt the revenue sharing contract or choose the traditional product line instead. Moreover, when the low-segment consumers become very important, the manufacturer may abandon the product line. In this case, it becomes very costly to induce the retailer to offer the product line in the revenue sharing scheme. However, when the low-segment consumers become very important, the manufacturer may abandon the product line. In this case, it becomes very costly to induce the retailer to offer the product line in the revenue sharing scheme. Moreover, when there are a few low-segment consumers or their willingness to pay for quality is low, the quality for the low-segment product line is more willing to sacrifice the product line to provide a unique opportunity to examine the moderating role of the economic and cultural situation on PPF effects on consumer responses. We apply a meta-regression where we regress the effect size on annual GDP growth rate, inflation rate, interest rate, unemployment rate, and Hofstede's cultural dimensions. The findings show a strong effect on both positive consequences (e.g., satisfaction, behavior) and negative consequences (e.g., negative emotion), and the concept explains between 6% and up to 35% of the variance. Furthermore, the economic situation moderates these effects significantly. For example with increasing GDP growth rate, the influence of PPF becomes weaker. That is, price fairness is an important predictor in times of economic slowdowns, but is of lower importance in prosperous economic times. The findings provide implications for theory and practice.

4 - Repairing the Damage: The Effect of Gender and Price Knowledge on Auto-Repair Price Quotes
Ayelet Israeli, Harvard Business School, Morgan Hall 177, Soldiers Field Road, Boston, MA, 02163, United States, aixel@hbs.edu, Meghan Busse, Florian Zettelmeyer
In this paper we investigate whether sellers treat consumers differently on the basis of how well informed consumers appear to be. We implement a large-scale field experiment in which callers request price quotes from automotive repair shops. We show that sellers alter their initial price quotes depending on whether consumers appear to be correctly informed, uninformed, or misinformed about market prices. We find that repair shops quote higher prices to callers who cite a to a bad one later. To make the findings more generalizable, we show that women are quoted higher prices than men when callers signal that they are uninformed about market prices. However, gender differences disappear when callers mention a benchmark price for the repair. Finally, we find that repair shops are more likely to offer a price concession if asked to do so by a woman than a man.
3 - Signaling Quality through Availability in the Context of a Repeat Purchase

Axel G. Stock, Associate Professor, University of Central Florida, Department of Marketing CBA, PO Box 161400, Orlando, FL 32816-1400, United States, Axel.Stock@ucf.edu, Minoo Talebi Ashoori

In this paper we utilize a two period model to analyze the optimal signaling strategy of a service provider who markets a repeatedly purchased service to uninformed consumers. Consistent with prior research in psychology and marketing we assume that consumers desire exclusivity and make their purchase decisions not only based on product attributes and price but also based on how many other consumers in the market have access to the same service. We show that, somewhat consistent with prior literature, the high quality provider signals its quality by limiting access to its service and by charging a high price when consumers’ desire for exclusivity is high or cost of service quality is great. Interestingly, we also show that, even in the presence of exclusivity seeking consumers, there are conditions in which product availability and a low introductory price is a more effective signaling strategy for the high quality seller. The strategic impact of making the service available to more consumers in the introductory period negatively impacts the consumers’ product valuation and consequently firm’s profits, consumers are able to infer that only the high quality seller is able to compensate for the current low in the future. That is because the high quality seller attracts more repeat purchases than the low quality one. Our findings are consistent with the business observation that some high quality service providers are willing to make their product more available on daily deal websites by providing deep discounts because the repeat customers are more valuable to them than to the low quality providers. In sum, this paper contributes to the signaling literature by showing conditions under which availability supplements low introductory pricing as a signaling strategy in a repeat purchase context.

FA10
5G, 5th Floor
Probabilistic Selling
Contributed Session
Chair: Rachel Rong Chen, UC Davis, 3208 Gallagher Hall, University of California at Davis, CA, 95616, United States, rachen@ucdavis.edu

1 - Vertical Probabilistic Selling: The Role of Consumer Anticipated Regret
Lin Liu, University of Central Florida, Lin.Liu@ucf.edu

This paper studies vertical probabilistic selling (mixing products with different qualities) when firms compete, and consumers have different abilities to anticipate the potential post-purchase regret raised by the possibility of obtaining the inferior products. We show that, when consumers have either no or limited ability to anticipate the regret, probabilistic selling emerges only when the product differentiation between firms is intermediate. However, when consumers have partial ability to anticipate the regret, probabilistic selling will arise more often and yield higher profit compared with the previous two cases. This is due to the “reverse quality discrimination”: the perceived quality of the random product becomes non-increasing in consumer type. Such reverse discrimination can increase product differentiation at competition margin and, meanwhile, maintain sufficient attractiveness of the random product for infra-marginal consumers. Nevertheless, consumers’ perceived quality of the random product is not fully reversed in the full anticipation case, and this muts the benefits from the “reverse quality discrimination.” Thus, the profit of probabilistic selling is not monotone in consumers’ ability to anticipate regret. Accordingly, the random product provider prefers consumers to anticipate the regret partially, but not fully. In addition, the probabilistic selling always benefits its provider, but may hurt the competitor.

2 - Opaque Distribution Channels for Competing Service Providers: Posted Price vs. Name-your-Own-price Mechanisms
Rachel Rong Chen, University of California-Davis, rachen@ucdavis.edu, Esther Gal-Or, Paolo Roma

Opaque selling has been widely adopted by service providers in the travel industry to sell off leftover capacity under stochastic demand. We consider a two stage model to study the impact of different selling mechanisms, Posted Price (PP) vs. Name-your-Own-Price (NYOP), of an opaque reseller on competing service providers who face forward-looking customers. We find that in this environment, providers prefer that the opaque reseller uses a posted price instead of a bidding model. This is because the ability to set retail prices is critical for extracting surplus from customers who wait to purchase from the reseller. Thus surplus extraction enables providers to set high prices for advance sales and obtain high profits. The dominance of PP over NYOP disappears, however, when competition between sellers is minimal or absent. We extend our model to multiple opaque resellers who compete in selling off last-minute capacity for service providers, and find that our main insights continue to hold with differentiated resellers. Despite providers’ preference in favor of PP, there are circumstances under which the opaque reseller earns higher profits under NYOP. Leisure customers might also prefer the bidding mechanism, which allows them to retain some surplus. This can help explain the rapid growth of the NYOP model over the last decade. Our findings are consistent with the evolution of opaque selling in the travel industry, and in particular, the recent trend towards more published price sales for opaque products.

3 - Joint Pricing and Inventory Decision under Probabilistic Selling Strategy
Yifan Wu, East China University of Science and Technology, yifanwu@ecust.edu.cn

This study examines whether probabilistic selling could enhance inventory management in a rather general setting. Most former papers focus on probabilistic selling in service industries, in which capacity is assumed to be given or unlimited. We propose to study the impact of probabilistic selling on the profit, price and order quantity within a newsvendor framework. The main results are: probabilistic selling could generally increase firm’s expected profit. And the price and order quantity will be increased as well.

FA11
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Working Paper IX
Contributed Session
Chair: Nathan Yang, McGill Desautels, 1001 Sherbrooke Ave, Montreal, QC, H3A 1G5, Canada, nathan.yang3@mccill.ca

1 - How to Become a Planner for a Customer’s Shopping Cart
Hannaneh Rashidi Baijgan, PhD candidate, Lui Guido Carli University, Via Fumariaga, 34, Colico Piano, Lecco, 23823, Italy, hannaneh.rashidi@gmail.com

In the past few years, retailers have become interested in technology-based tools like smartphone applications and some other devices to improve in-store decision making processes. Giant and Stop & Shop American retail stores, and COOP as a European retail store use Modiv Media handheld scanners, which provide spending feedback as well as promotion notifications. The goal of bringing technology to the store is to make shopping experience pleasant, decrease customer uncertainties, increase customer satisfaction, increase utility, and consequently increase profitability. In spite of benefits for both consumers and retailers, unresolved concerns about possible negative effects have prevented adaptation of smart shopping devices on a large scale. It requires considerable investments while there is not enough evidence of consumers’ positive reaction towards this new facility. Furthermore, it seems that there are not enough researches around giving customized promotions in offline stores. Hence, there is a need for further in-depth studies of customization in brick-and-mortar business. The purpose of this research is to investigate the benefits of using smart planners in retail stores. The phrase “smart planner” here refers to a smart application, which can help to plan to achieve optimum balance of needs with the available resources. It means this device 1) gets objectives (i.e., shopping list and budget), 2) design strategies to achieve them (i.e., giving real-time promotions and spending feedback), and 3) arranges the means required (i.e., showing the shortest path to collect the list). The smart decision tool we are interested to study here offers real-time promotions considering consumer’s location in the store, affinity of existing items in the basket and on-shelves as well as previous purchases history. As the result, spending behavior of different segments of consumers could be examined.

2 - The Inspiration From “The Biggest Loser”: Social Interactions in a Weight Loss Program
Nathan Yang, McGill Desautels, 1001 Sherbrooke Ave, Montreal, QC, H3A 1G5, Canada, nathan.yang3@mccill.ca, Kosuke Uetake

We investigate the role that peer effects play in healthy and sustainable lifestyles. In particular, we study the impact of peer success on weight loss outcomes and participant retention in a large national weight loss weight program. In our setting, peer groups are defined based on frequent meetings among weight loss participants, whereby meeting attendance varies at a very high frequency across weeks and locations. We analyze a large database with over 10 million observations about individual meeting attendance and weight loss progress using dynamic panel data methods. Our key finding is that while higher average weight loss among peers leads to lower future weight loss, the effect of the top weight loss performer (i.e., “Biggest Loser”) among peers leads to greater future weight loss. Furthermore, we find that retention improves with the “Biggest Loser”. Finally, we demonstrate through counterfactual analysis that meetings can be designed and formed so as to improve the average customer’s lifetime value (CLV) from meeting fees.
FA12

INFORMS Marketing Science Conference – 2016

5E, 5th Floor

Working Paper X

Contributed Session

Chair: Liang Guo, Chinese University of Hong Kong, CUHK Business School, Chinese University of Hong Kong, Hong Kong, China, liangguo@baf.cuhk.edu.hk

1 - Budget Allocation Decision Methods: Inferences from Actual Firm Behavior

Alexander Edeling, Research Assistant, University of Cologne, Albertus-Magnus-Platz, Cologne, 50923, Germany, edeling@wiso.uni-koeln.de, Marc Fischer, Sonke Albers

Despite the high managerial relevance of marketing budgeting, researchers still struggle to understand the decision methods that firms apply when allocating their budgets across products. This study seeks to overcome the shortcomings of cross-sectional manager-survey studies by inferring the prevalence of budget allocation decision methods from actual budget allocation behavior. To this end, the authors model various allocation methods and apply this model to a unique dataset from the U.S. pharmaceutical industry that covers 198 firms and their product portfolios over a 7-year period. The authors find that most firms try to achieve different budgeting objectives simultaneously by combining several budget allocation drivers such as the scale of business or growth perspectives. Only a small minority of firms incorporates direct effectiveness of marketing investments on sales in their budgeting decisions. Further analyses show that organizational and market-specific variables correlate with the budget allocation decision regime, with a higher likelihood of combining different allocation drivers for larger and more innovative organizations.

2 - Compromise Effects Explained by Contextual Deliberation Reveal the Rationality In Preference Construction

Liang Guo, Professor, Chinese University of Hong Kong, CUHK Business School, Chinese University of Hong Kong, Hong Kong, China, liangguo@baf.cuhk.edu.hk, Wenbo Wang

Phenomena of preference construction demonstrate violations of rationality in classical economic theories. Psychologists and economists offer fundamentally different hypotheses to explain these puzzling anomalies. This research experimentally tests which explanation may account for the compromise effect, one of the most well-known examples of preference construction. We show that the compromise effect can be mediated by response time, cannot be mitigated by context information, but can be moderated by manipulating the level of deliberation (i.e., time pressure, preference articulation, task order). These findings suggest that the theory of contextual deliberation explains the compromise effect, parsimoniously reconciling rationality and preference construction.

FA13

5F, 5th Floor

The Role of New Technology in Online Advertising

Content- Digital Marketing: General

General Session

Chair: Zsolt Katona, UC Berkeley, UC Berkeley, Berkeley, CA, 94720, United States, zskatona@haas.berkeley.edu

1 - Should Platforms Accommodate Adblockers?

Aleksand Grickevich, Columbia University, AGrickevich20@gsb.columbia.edu

In recent months, “adblocking” - installing third-party software on one’s computer to block the ads on visited sites - has become a significant threat to content providers whose revenue model is based on advertising. Hundreds of millions of consumers were reported having installed adblock software, in some countries representing well over 20% of all internet users. Typically, adblockers sell their software to consumers, sometimes directly, but often through the App store of a transaction platform that also hosts the publisher’s content. In this paper, we build an analytical model to understand the incentives of publishers, adblockers and the platform under specific market conditions. The goal is to find the optimal strategy of the platform, which ultimately controls the contractual arrangements. We are also interested in the effect of contracting on equilibrium quality levels chosen by publishers to gauge consumer surplus. We assume that consumers are heterogeneous in their valuation for quality as well as in their disposition for advertising. Content providers (publishers) invest in costly quality investment and monetize their content by deciding on advertising volume. Publishers and adblockers are “taxed” by the platform. Under these assumptions, we show when it is optimal for the platform to tax the publisher instead of the adblocker. Interestingly, this choice has an ambiguous effect on the choice of equilibrium quality investment and on consumer surplus. We also consider a number of extensions. We explore the case when the publisher uses its own adblocking technology to discriminate among its customers. We explore competition at the level of adblockers. Finally, the paper also analyses the case when the platform cares about consumer surplus as well as profit maximization.

2 - Real or Fake: Managing User Authenticity in Ad Auctions

Zsolt Katona, UC Berkeley, Berkeley, CA, United States, zskatona@haas.berkeley.edu, Yi Zhu

This paper examines the role of fake user activity in online advertising. Publishers and advertisers can be hurt by user actions that are not authentic, especially if they result in advertising events that are paid for. For example, many advertisers on bidding platforms complain of fake user activity, and thereby bid their value out of the picture. The paper models online advertising as a common value auction, where each advertiser gets a private signal about the likelihood of the authenticity of the user reached through advertising. The auction exhibits winner’s curse as advertisers who believe the proportion of authentic user activity to be higher also bid higher. Due to the second price auctions typically used in online advertising this leads to a higher price paid only if there are many bidders with concentrated valuations. In this case, the platform benefits from fake user activity. In settings with few bidders with dispersed valuations the advertisers benefit from the uncertainty about the fake activity and the publisher suffers. The paper also examines when and how should the publisher defend against fake activity. The results show that defending by blocking user accounts based on activity patterns can backfire, because fake users will mimic legitimate user activities and interfere with advertising more.

3 - Information Revelation in Retargeted Advertising

Shijie Lu, University of North Carolina at Chapel Hill, shijie_lu@kenan-flagler.unc.edu

Retargeted advertising is the practice of allowing an advertiser to re-engage consumers by serving display ads to those who have visited the advertiser’s website in the past. Ad platforms such as Google and Facebook not only host real-time bidding auctions to sell retargeted ads, but also gather and assemble the dispersed data of consumers’ online behaviors and provide them to competing advertisers. The current paper investigates the ad platforms’ strategic choice of information revelation in retargeted advertising. In our model, at the time of auctioning an ad impression for a particular consumer, the platform can either reveal the consumer’s type based on her past behavior aggregated from all participating advertisers, or let advertisers bid based on their own knowledge about the consumer. Providing more precise consumer information may intensify advertisers’ competition in auctions, which increases the platform’s revenue; on the other hand, it may escalate advertisers’ price competition in product market, which decreases advertisers’ willingness to bid and therefore has a negative impact on the platform’s revenue. We delineate the market conditions for platforms’ choice of information revelation and examine its implications for consumers, advertisers, and platforms.

4 - The Information Overload Roller-Coaster

Kaifu Zhang, Carnegie Mellon University, zhangkaifu314@gmail.com

We consider a model of information overload a la Van Zandt (2004), but allow each sender to send multiple messages. In this generalized model, it turns out that consumer welfare can follow an N-shaped pattern as communication cost decreases. The decrease in welfare is characterized by information overload while senders broaden their communication scope, while the increase in welfare is characterized by information overload when senders deepen their communication effort by sending duplicate messages to the same individual. We argue that the condition for this pattern corresponds to a reasonable parameter range.
Big data analytics often examines large data sets to unearth hidden patterns and unknown correlations to gain insights about consumer behavior. These insights often must be gathered from various sources where consumers either unknowingly, unintentionally, or unceremoniously provide the data. Yet, occasionally customers can carefully create and systematically disseminate information regarding products and their consumption experiences. One such occurrence is in collaborative communities, where consumers actively participate and create the data that can be tied to future consumption. In this research, we examine the drivers and the interplay between product ratings and usage in an online, gaming community. Specifically, we propose and test a conceptual framework describing consumer usage and rating behavior on a large-scale, online community comprising of over 1 million consumers using and rating over 20,000 products across a period of over 7 years. Within our framework, we are able to merge product characteristics (such as game play and difficulty) with usage information (player involvement, etc.) to assess why and how consumers rate products. Further, we also elucidate the role of social aspects (such as peer ratings, usage, adoption etc.) on product ratings. Through our proposed model, we show that it is very important for managers to consider the social aspects as well as the interplay between ratings and usage when assessing success/failure of products, especially in collaborative settings. Further, we discuss the impact of this research on product design, online communities and marketing in a User Generated Content (UGC) environment.

2 - Social Media Content Generation by Both Company and Public on Fan Engagement
Ke Li, Assistant Professor, New Jersey City University, 110 First St, Apt 203, Jersey City, NJ, 07302, United States, kli@njcu.edu, Douglas Schultz
Fan engagement is essential in sports marketing. With the prolific use by sport fans of social media during nearly every spectator-sporting event, professional sports teams are eager to learn how to maximize fan engagement through social media and to increase fan loyalty. In this study, we use a large, unique Twitter data from the 32 football teams on the National Football League (NFL) through an entire football season to analyze factors that influence online fan engagement. Specifically, we examine how fan online engagement using Twitter is impacted by: fan expectations on team performance; content of the tweets from official NFL team franchise Twitter handles, content of popular fan-initiated tweets using text mining technique, platform mobility, emotions, as well as the timing. Our empirical results provide new knowledge on how team expectations influence team performance, organization tweets, and popular user tweets on fan Twitter behavior. It also helps sport organization marketing teams to generate the most influential tweets as well as to leverage the influence of popular users on Twitter to engage a larger number of fans.

3 - The Impact of Customer Reviews on the Performance of Experience Goods in Electronic Markets
Daniel Kaimann, Paderborn University, Warburger Str. 100, Paderborn, 33098, Germany, Daniel.Kaimann@uni-paderborn.de, Bernd Frick
Due to the digitalization of the retail landscape, customers can voice their product experiences via user-generated reviews. They have emerged as a strong information signal, which other customers use when making their buying decisions. Studies have examined the impact of user reviews on retail sites and portals such as Amazon or eBay and have shown a correlation of online customer reviews and product sales (e.g., Dellarocas 2003, Chevalier and Mayzlin 2006). However, in reality, the decision is much more complex than most of previous studies could account for: Customers are facing a multitude of information signals - such as prices, ads or tens to hundreds of reviews - they need to screen for relevance and evaluate for reliability both separately and jointly. We analyze how consumer behavior under such circumstances in electronic markets by addressing the following: “How do reviews impact the probability of clicking on a certain product offering? In the context of which other observable information signals of product quality are reviews evaluated?” Using data from the Apple App Store, we analyze a sample of 33 Applications with n=5,973 daily observations and their number of installations during the first six months of 2015. We find clear evidence to suggest that reviews and ads have a significantly positive influence on download rates. Specifically, we show that the interaction of reviews and ads with free applications have a significantly positive influence on download rates which outweighs that from the interaction of reviews and ads with applications for which customers are charged.

4 - Online Sentiments as a Predictor for Brand Equity
Raoul Kubler, Assistant Professor of Marketing, Ozyegin University, Nisantepe Mah Orman Sk No 13, Istanbul, 34794, Turkey, raoul.kubler@ozyegin.edu.tr, Anatoli Coilevc, Koen Pauwels
In recent years User generated content (UGC) found great interest amongst marketing scholars. Several new studies use different forms and approaches of natural language processing (NLP) tools to investigate consumers’ attitudes towards a company. Surprisingly, little has so far been done to give marketing scholars clear guidance how to best investigate and measure online sentiments. Sentiment analysis tools can be split into two major fields: lexicon based approaches and machine learning approaches. Lexicon based analysis uses specific word lists, which represent diverse human emotions. By identifying and counting words from each list, texts can then be aggregated into positive and negative sentiments. Machine learning based approaches use pre-coded sentiments to classify texts into positive or negative. The training set is used to infer probabilities that certain word occurrences indicate a sentiment. Each approach shares its own advantages and disadvantages. Lexicon based approaches are perceived to be faster and less expensive. They are also believed to be less precise. Machine learning is perceived to be more accurate. However it is also more difficult, takes longer time and is commonly more expensive. We investigate the suitability of each sentiment measurement approach to predict brand equity with the help of 14 different brand metrics from YouGov. We measure sentiments in UGC from the official US Facebook sites for more than 180 brands from 8 different industries. With an API based crawler we extracted posts and comments from consumers for more than 40 months. In total our data set consists of approx. 200 million observations of UGC. We measure sentiments with both approaches. Our results indicate that the suitability of lexicon based approaches and machine learning algorithms is moderated by product category and a set of company and brand specific factors like size, age, and category involvement. Our results further indicate that such category and brand specific factors influence the lag-structure of effects.
Moreover, we analyze the impact of the ad-carrying website (i.e., social vs. non-ad effectiveness over time as well as along the customer purchase journey. Insights into the drivers of advertising wear-out for online display ads. Hence, the purpose of this research is to provide further explanations to advertising wear-out for online display ads. Ultimately, we find that ad wear-out is not driven solely by ad placement but also by the type of website on which the ad is placed.

In conclusion, our findings contribute to the theory in digital advertising and the practice of mobile advertising and design. The biases of evaluating probabilistic information are commonly observed in consumer decision making. Cumulative prospect theory showed that people have a tendency to overweight small probabilities and to underweight moderate to large probabilities, which leads to risk seeking over gains and risk aversion over losses in small probabilities, and risk aversion over gains and risk seeking over losses in moderate and large probabilities. This research examined whether social distance reduces these biases. In Study 1, social distance was manipulated by asking the participants to make risky decisions for themselves or for others. Results showed that increasing social distance reduced the probability-evaluating biases (Studies 1–3), because the increased social distance reduced positive/negative emotional intensity and increased the emotional factors, and the mediating effect of emotional factors was stronger than that of cognitive factors (Studies 3). Moreover, the bias-buffering effect of social distance was stronger under the gain situation than under the loss situation (Studies 1–3). This research broadens our understanding of the factors that enhance rational decisions, and the relationships between psychological distance, emotion, cognition, and probability-evaluating biases.

2 - Social Distance Reduces the Biases of Probability Evaluations

Purushottam Papatla, Professor, University of Wisconsin-Milwaukee, School of Business Administration, P.O. 7423202 N Maryland Ave, Milwaukee, WI, 53201-0742, United States, papatla@uw.edu

The biases of evaluating probabilistic information are commonly observed in consumer decision making. Cumulative prospect theory showed that people have a tendency to overweight small probabilities and to underweight moderate to large probabilities, which leads to risk seeking over gains and risk aversion over losses in small probabilities, and risk aversion over gains and risk seeking over losses in moderate and large probabilities. This research examined whether social distance reduces these biases. In Study 1, social distance was manipulated by asking the participants to make risky decisions for themselves or for others. Results showed that increasing social distance reduced the probability-evaluating biases (Studies 1–3), because the increased social distance reduced positive/negative emotional intensity and increased the emotional factors, and the mediating effect of emotional factors was stronger than that of cognitive factors (Studies 3). Moreover, the bias-buffering effect of social distance was stronger under the gain situation than under the loss situation (Studies 1–3). This research broadens our understanding of the factors that enhance rational decisions, and the relationships between psychological distance, emotion, cognition, and probability-evaluating biases.
3 - You Are Not Fooling Anyone! How Social Feedback Affects Moral Disengagement and the Purchase of Counterfeit Luxury Products
Yajin Wang, Assistant Professor, University of Maryland, 3319 Van Munching Hall, College Park, MD, 20740, United States, yajinw@rhsmith.umd.edu, Jennifer Stoner, Deborah R. John
To curb counterfeit sales, luxury brands are launching anti-counterfeit ads aimed at consumers. To be more effective, the authors argue that these ads need to address the social aspects of counterfeit consumption, especially the role of social feedback. In five experiments, the authors show that the type of social feedback one receives while wearing a luxury counterfeit affects moral reasoning about counterfeits as well as future interest in purchasing counterfeits. Participants who received a question (compliment) about the item were more (less) concerned about negative consequences of using a counterfeit, were less (more) likely to morally disengage and justifying purchasing counterfeit products, and were less (more) interested in purchasing counterfeits in the future. In a final study, the authors use these findings to design a new appeal for anti-counterfeit ads, which warns that others can easily spot counterfeits and encourages the sales of authentic products to avoid being caught. Results show this appeal to be effective in reducing interest in purchasing luxury counterfeit products, especially for consumers who had purchased these products in the past.

4 - Showing off through Children – A Study on Extended Self-Conspicuous Consumption
Jeongwen Chiang, Professor of Marketing, China Europe International Business School, 699 Hongfeng Road, Shanghai, 201206, China, jwchiang@ceibs.edu, Chen Lin, Yuxin Chen
Conspicuous consumption is referred as acquiring goods and services to publicly display superior socio-economic status with the intent to provoke the envy of other people. There have been many studies examining conspicuous consumption. We investigate if parents extend this showing-off behavior to their children. In China, expensive branded handbags and watches are the typical items for the urban rich to flaunt their wealth to others while the rural folks may big-ticket home appliances to show off. We investigate if parents buy fancier or expensive clothes for their children. Use online children clothing purchase data, we find, for example, people in the poor regions are more likely to buy expensive or fancier clothing for their children than those live in rich areas. To our best knowledge, this research is the first on extended-self conspicuous consumption beyond adults’ self-indulgence and linking the children clothing consumption to social and economic factors. Insights from the study will offer children clothing beyond adults’ self-indulgence and linking the children clothing consumption to social and economic factors. Insights from the study will offer children clothing utility derived from a product and the children clothing consumption to social and economic factors. Insights from the study will offer children clothing useful suggestions on their distribution, pricing and product strategies.

2 - Flat-Rate Bias: Three-part Plans and Quality Degradation
Bobby Zhou, University of Maryland, bzhou@rhsmith.umd.edu
In the telecommunications market, firms typically offer consumers a menu of contracts that include an allowance of data at a fixed rate and an overage fee, associated with usage that is above the allowance. When customers are uncertain about their consumption needs and they have to choose from a variety of three-part tariff plans, they often exhibit an aversion to overage consumption. That is, they often prefer to pay a flat rate for an allotment of data even though they would incur lower costs with a plan with a lower allowance and overage charges. In other words, they have a bias toward a flat-rate that does not entail an overage price. Given this bias, the challenge for the firm is to design a menu of contracts that maximize profits. In this paper, we use a game-theoretic framework to analyze two competing solutions for the firm. In the first approach, the firm offers a menu of plans that include overage price (e.g., AT&T). The second approach does away with a specific overage price but lowers the “quality” of the service in the overage region (e.g., T-Mobile), where the overage consumption occurs at a lower speed (2G instead of 4G LTE). In the AT&T plan, we find that the high-value consumer segment always obtains an unlimited plan while the low-value segment gets a limited plan. In the T-Mobile plan, we analyze the service provider’s optimal product line design when the quality degradation (or the speed degradation) is exogenous and whether it is chosen by the firm. In the former case, as the quality degradation increases, both the allowance and the price of the lower-tiered plan decrease, whereas the impact of quality degradation in the firm’s marginal cost. Finally, we show that a service provider’s intentional product degradation can outperform the traditional three-part plan without quality degradation.

3 - Platform Service Offering to Business Customers: Strategic Considerations in Engendering Seller Use of Marketing Tools on E-commerce Platforms
Botao Yang, University of Southern California, botaoyan@marshall.usc.edu, Sha Yang, Shantanu Dutta
Many e-commerce platforms provide marketing tools to help their sellers attract customers and enhance users’ experience. However, there is virtually no theoretical framework or systematic evidence that provides insights for platforms on how their business customers use these marketing tools. In this paper, we develop a theoretical framework and apply this framework to an empirical setting to understand how business customers choose between two service offerings (Paid-Search and Hot-Shop) provided by an e-commerce platform. When sellers decide on which marketing tool(s) to use, they usually consider their competitors’ actions, and they may have knowledge about how their own customers will respond to those marketing tools. To capture competition among sellers, we adapt the cognitive hierarchy framework by modeling sellers’ different abilities in correctly predicting competitor actions and how competition affects their own decisions. To capture sellers’ knowledge about consumer responses, we first specify a sales response model where sales are affected by the marketing tools used, and then incorporate the response parameters in sellers’ profit functions. Our unique panel data allows us to separately identify the competition and strategic ability, and to identify the sales response parameters. Our estimation results show that sellers do consider the response parameters and they generally tend to differentiate themselves from each other in choosing which marketing tool(s) to use. Interestingly, sellers with highly-rated sellers are more likely to use Hot-Shop, while sellers with low-rated buyers are more likely to use Paid-Search, suggesting that sellers with good customers (highly-rated buyers) want to retain their existing customer base while sellers with bad customers (low-rated buyers) are eager to seek new ones. We also find that strategic thinking ability is positively correlated with seller rating.

4 - The Blessing of Bounded Rationality in Distribution Channels
Tony Haitao Cui, University of Minnesota, tcui@umn.edu
In this paper, we incorporate the concept of bounded rationality into the conventional dyadic channel to investigate how bounded rationality may affect the interactions between the manufacturer and the retailer. Surprisingly, we found that bounded rationality, a force that drives firms away from optimal profit maximization behaviors, may be a blessing for the channel. As a result, both the manufacturer and the retailer can become better-off due to the boundedly rational behaviors by firms. The finding provides good explanations for some current practices in business.
4 - Is There Proof in the Eating? Choice Effects from Tasting National Brands and Private Labels Side by Side

Bart J Bronnenberg, Tilburg University, School of Economics, Dept of Marketing, Tilburg, 5037 AB, Netherlands, bart.bronnenberg@uvt.nl, Jean-Pierre H Dube, Robert E. Sanders

We study the role of quality information and uncertainty in consumers’ preferences for branded versus private label food products. We conduct attitudinal surveys and in-store blind taste tests for a sample of consumers from Mariano’s Supermarket stores in the Chicago area in November, 2014. The survey elicited consumers’ expectations about the chain’s private label quality in general as well as for three specific product categories: cookies, ice cream, and yogurt. Subjects then participated in a blind taste test of a private label product and the leading national brand in the category. Following the taste test, consumers reported their preferred alternative before having the product’s identity revealed. Finally, subjects reported whether or not they would re-purchase the chosen alternative in the future. We match the blind taste test and survey data with each consumer’s shopping history using Mariano’s loyalty card database. For each participant, we observe the entire shopping history prior to the taste test and for four months after the taste test. We can therefore observe the short, medium and long-term effects of the taste test on in-store choice behavior. Using difference-in-differences between participants and non-participants in the blind taste test, we find an overall positive treatment effect of “participating in the blind taste test” on the propensity to choose the private label over the branded alternative even as long as four months later. By comparing a participant’s predicted choice before the taste test and revealed choice after the taste test, we classify each participant’s information about the private label as positive, negative or neutral. Most of the positive long run effect on private label sales appears to be explained by the valence of the information. Finally, we estimate a structural model of individual demand to quantify the treatment effect of the blind taste test on preferences and to study the implications for retailer pricing power.
2 - The Impact of Creative Class on Evolution of Marketplaces: Evidence from a Historical Study in East and West Berlin
Anna Dubiel, Assistant Professor, WHU-Otto Beisheim School of Management, Burrelplatz 2, Vallendar, 56179, Germany, anna.dubiel@whu.edu, Saurindra Banerjee, Jaideep Prabhu, Rajesh Chandy, Jing Wang
Why are some marketplaces evolving more than others? Scholarly research has paid relatively scarce attention to studying how marketplaces evolve. In particular, there is a dearth of research on drivers underlying marketplaces' evolution over time. Drawing from creative capital theory, we address this gap in the literature by introducing the concept of "creative class". We highlight that creative class drives the evolution of location-specific marketplaces. We do so by conducting a historical study over a period of 20 years (from 1981 to 2001) on the evolution of twelve location-specific marketplaces namely, twelve commercial streets in the city of Berlin, Germany. We use a uniquely compiled database of entries from business phone books (i.e., "yellow pages"), local rent directories, and land registry documents. From these sources we extract data on the different levels of creative class and the prosperity of streets. Our findings show that streets with a higher share of creative class tend to evolve more over time than streets with a higher share of working class. To increase the validity of our findings we apply the difference-in-difference approach to compare the evolution of streets in West Berlin (capitalist from 1981 to 2001) with their counterparts in East Berlin (communist from 1981 to 1989). Our findings have implications for firm location choices both in developed and emerging economies as well as expand our knowledge base concerning the domain of economic geography of global cities.

3 - The Effects of Digital Streaming Platforms on Competition in Digital Content Markets
Mark Bender, Assistant Professor, University of Pittsburgh, Pittsburgh, PA, United States, mb34@pitt.edu, Esther Gal-Or, Tansev Geylani
We seek to determine whether content producers may open themselves up to cannibalization and a reduction in profits if in addition to selling digital content directly they distribute their content through a digital streaming platform (e.g., Spotify, Apple Music). In the music industry, streaming platforms offer content producers a percentage of the platform's revenue after accounting for each content producer's market share on the streaming platform. We investigate the impact of such a payment scheme on competition, ability to attract content producers, and network effects between content producers on the platform. Our analysis shows that it may be profitable for the producer to distribute its content through a streaming platform. This increase in profitability originates from three sources. First, by distributing its content through the streaming platform, the producer is able to reach new customers. Second, because the producer has a stake in the platform's revenues through royalties, it has reduced incentives to compete on prices with the platform. Third, by allowing the platform to use its content, the producer makes the platform more valuable to consumers. This provides an incentive for the platform to set a higher subscription fee, which in turn, allows the producer to keep its content price high as well.

3H, 3rd Floor
Retailing VI
Contributed Session
Chair: Doug J. Chung, Harvard Business School, 161 Soldiers Field, Boston, MA, 02163, United States, dchung@hbs.edu

1 - Do Time Pressure, Peer Influence, and Scarcity Signals Work in Televised Sales Pitches? A Minute-by-Minute Analysis of TV Shopping Network Data
Ming Chen, University of Houston, 4800 Calhoun Rd., Houston, TX, 77004, United States, mchen@bauer.uh.edu
TV shopping networks (also known as the “home shopping” industry) are major channels of direct retailing in the United States and worldwide. In the United States, one of the largest television shopping networks, generated nearly $90bn in sales revenue, with about 300 million customers worldwide. Central to their business model, practitioners at TV shopping networks are keenly interested in understanding the impact (both individually and cumulatively) of commonly utilized sales strategies (such as time pressure, peer influence, and scarcity signals) on sales-per-minute (SPM) while promoting a product in real-time. Empirical studies linking sales strategies to SPM, however, are limited. In this paper, we collect a unique dataset from a major TV shopping network that includes both the video footage of the sales pitch, as well as SPM for a sample of 281 products across two major product categories (beauty and electronics). We then examine the effectiveness of the three aforementioned sales strategies in driving SPM using a Generalized Additive Poison regression model. Our results suggest that (1) overall, scarcity signals are the most effective in increasing SPM, followed by peer influence and time pressure; (2) the cumulative effect of time pressure and scarcity signals is more effective in increasing SPM than other sales strategy combinations; and (3) the effectiveness of sales strategies tends to be stronger for the beauty category (typically impulse goods, lower price, hedonic) than the electronics category (typically search goods, higher price, utilitarian).

2 - Spatial Effect in Grocery Retail Demand: Competition and Location
David Sugianto Lie, PhD Candidate, University of New South Wales, University of New South Wales, Quadrangle Room 3005, UNSW Sydney, 2052, Australia, david.lie@unsw.edu.au, Rahul Govind, Ashish Sinha
Location is one of the most essential factors that affects retailers. Our research uses location and distance of grocery stores to suggest corporate strategies that should be implemented. We utilize a multi-dimension approach to distance which in addition to considering only the physical location incorporates socio-cultural and demographics differences in the location of the retailer. A multivariate spatial model that allows for random effects is utilized for United States grocery and supermarket store data for 2012-2013. This model accounts for inter- and intra-Metropolitan Statistical Area (MSA) competition. Preliminary results show that the variation exists among various MSAs even after accounting for socio-demographics. We stress that the failure to deal with this variability meaningfully will result in increased risk of misleading inferences. Furthermore, we find that the effect of cross price elasticity among stores are concentrated around Eastern US as compared to the rest of the country. The results also show that consumers are more responsive towards super store prices in less concentrated regions. However, in more concentrated areas, consumers are more responsive to grocery stores prices as compared to supermarkets.

3 - Grow with Neighbors: Financial Outcome of Regional Clustering in Franchising
Li Ji, City University of Hong Kong, 81 Tat Chee Avenue, Kowloon Tong, Hong Kong, Hong Kong, mjkenny@cityu.edu.hk, Xu Zheng, Jelf Jianfeng Wang
Business format franchise has become the most popular franchising format in recent years and franchise outlets grow at a fast pace. How franchises expand, i.e., how their franchise outlets are located, may lead to varying outcomes. Drawing from agency theory and emerging work on regional clustering, this research aims to examine the financial impact of franchise system's geographical configurations. We hypothesize an inverted U-shape relationship between outlets' regional clustering and franchisees' financial performance. While regional clustering lowers franchisees' monitoring cost and facilitates knowledge transfer, overly high regional clustering may cause knowledge redundancy and cannibalization. Such an inverted U-shape relationship is stronger (steeper) when contract completeness between content producers on the platform makes it easier for franchisees to monitor, and amplifies the degree of knowledge redundancy. Relational governance also intensifies the inverted U-shape relationship as it prevents franchisees' free-riding behavior, which reduces monitoring cost, and alleviates cannibalization through enhanced quality of the system. Different from the two governance mechanisms, franchisees' socialization makes the inverted U-shape relationship weaker (flatter) as it may result in collusion among franchisees, which makes it harder for franchisees to monitor franchisees even they are geographically clustered. Our analysis of 106 franchisees over a nine-year period (2003-2011) supports our hypotheses. We conclude with recommendations to franchisees in terms of franchise outlets' optimal regional clustering configuration.

4 - Where Should We Build a Mall? A Bayesian Structural Estimation of Entry and Sales
Doug J. Chung, Assistant Professor, Harvard Business School, Soldiers Field, Boston, MA, 02163, United States, dchung@hbs.edu, Kyoungwon Seo, Ruoshong Wang
We estimate a structural model that takes into account the entry decisions of individual stores and their corollary effects on shopping mall sales. By understanding the endogenous behavior of individual store entry, we provide guidance on location choices for mall developers. Specifically, we identify stores that act as revenue generators versus opportunists reaping high demand generated by other stores. Furthermore, we delineate the direct effect of population and indirect effect of competition and agglomeration on total mall sales. Surprisingly, we find business-stealing effects of competition to dominate among different store types, but positive agglomeration effects of demand among same store types. Although it varies by store brand, we find that upscale stores are likely to enter in more-populated areas whereas discount stores enter in less-populated areas. This paper also introduces three main methodological innovations to the marketing literature. First, we correct for endogeneity issues with regard to both store entry and mall sales. Second, we address multiple equilibria by implementing the selection function method of Bajari, Hong, and Ryan (2010). Finally, we overcome the computational burden involved with solving games of complete information with multiple equilibria by utilizing processing power in graphics cards to increase computation speed by 500 times.
augment the data by matching all 18,000 UPCs in the data to the 109 public firms that sell products in Domnick's and their quarterly financial data for years 1989-1994. Our results reveal that firms focus more on cash flow at low to medium leverage, but the attention shifts back to profit maximization at high levels of leverage. Accordingly, firms' leverage impacts their pricing and promotion strategies in different ways, depending on their focus on either cash flow or profit maximization. Our findings underscore the importance of understanding financial constraints on marketing decisions and call for collaborations between financial and marketing functions when making financial and marketing decisions.

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**2 - Does Self-regulatory Resource Depletion Reduce or Enhance Creativity?**

Ding (Allen) Tian, Wuhan University, Wuhan, 430072, China, ditian2@ualberta.ca, Gerald Haibl

It is well documented that self-control draws on a limited resource and that the exertion of self-control depletes this resource. Self-regulatory resource depletion has been shown to lead to a number of maladaptive behaviors such as overeating, increased impulse buying, and unethical behavior. We contend that self-regulatory resource depletion is not universally maladaptive. In particular, we propose that, under certain circumstances, depletion can enhance creativity. We conducted four experiments to test this theorizing. Experiment 1 shows that, compared with non-depleted individuals, depleted individuals generate more creative ideas in a divergent thinking task. Experiment 2 identifies cognitive flexibility as a mediator of this effect. The results of Experiment 3 show that, whereas depletion enhances creativity in domains where divergent thinking is essential, it undermines creativity in domains where convergent thinking is indispensable. Finally, Experiment 4 demonstrates that depletion also impedes performance on a divergent thinking task upon which a stringent constraint is imposed, which hinders cognitive flexibility. By showing that depletion can enhance creativity, this research provides a unique theoretical contribution to the self-control literature, which has been primarily focused on ways of avoiding or overcoming negative consequences of depletion. The present findings also extend the creativity literature by demonstrating a causal link between depletion and creativity. Finally, this research contributes to the literature on scarcity by showing that not only the availability of external resources, but also that of mental resources, has a substantial impact on creativity.
3 - Rich People are Square Lovers: Impacts of Financial Resources on Product Shape Preference
Lei Su, Hong Kong Baptist University, 34 Renfrew Road, WLB 504, Hong Kong, Hong Kong, lsi@hkbu.edu.hk, Yuwei Jiang, Rui Zhu
Having money symbolizes one’s social status and achievements, and shows to others that one is a competent and successful person. And people tend to maintain this desirable social image in front of others. Given that angular (vs. circular) shapes activate competence-related concepts such as energy, toughness, and strength, we propose that more perceived financial resources leads to a higher desire for competence, which in turn results in consumers’ preference for angular-shaped product. The first experiment directly showed the main effect and underlying mechanism. Specifically, it showed that the more participants’ perceived financial resources, the more they preferred the angular-shaped plate over the circular-shaped one. Moreover, this effect is mediated by participants’ desire for competence. The second experiment further showed the directional effect of financial resources on product shapes. It demonstrated that participants who were primed with high financial resources liked the angular-shaped pendant more than low resources primed participants. Participants’ liking for the circular-shaped pendant, however, was not affected by the resource priming. This research contributes theoretically to both marketing and psychology literature by documenting and nuanced a novel effect, that of perceived financial resources on product shape preference. By identifying the underlying driver of this effect, the desire for competence, the current research also contributes to the research area of social perception. Lastly, from a managerial perspective, our research provides yet another evidence for the impact of socio-economic status constructs such as financial resources on consumer behavior.

4 - Alleviating Customers’ Crowding Perceptions: The Role of Contrived Similarity
Echo Wen Wan, Associate Professor in Marketing, The University of Hong Kong, Hong Kong, Hong Kong, ewan@business.hku.hk, Chi Kin (Bennett) Yim, Lili Wenli Zou
Crowding phenomenon is a double-edged sword to many service managers. On one hand, crowding implies a customer traffic and immediately increased sales to firms; on the other hand, crowding destroys customer experience and decrease firm revenues in the long run. How to reduce the subjective feelings of crowding while maintaining the high level of customer traffic represents a challenge for practitioners who need to formulate effective strategies of crowding management to achieve the dual goals of sales and service. Drawing from the social identity theory and using data from two laboratory experiments, this study shows that customers’ crowding perceptions in response to a high customer density environment can be mitigated by a contrived similarity, which is defined as a similarity that is artificially contrived instead of truly sharing between customers, through an increased perception of ingroup identification with the similar others. This research contributes to the crowding literature by identifying contrived similarity as the boundary condition of the density-crowding link and confirming perceived ingroup identification as the underlying mechanism. This study also extends the similarity literature by showing that even a contrived similarity is sufficient to alter customers’ ingroup identification and crowding perceptions given a high level of customer density environment.

FB07
3B, 3rd Floor
Gary Lilien Practice Prize Competition Presentations
Invited Session
Chair: Gary L. Lilien, Pennsylvania State University, 468 Business Bldg, University Park, PA, 16802, United States, GLlilien@psu.edu
Co-Chair: John Roberts, University of New South Wales, 6/61 Kirribilli Avenue, Sydney NSW, Australia, johnr@agsm.edu.au

1 - An Analytical Based Service Monitor and Improvement System for the National Dutch Railways: A Big Data Approach
Joost Bosma, joost.bosma@ns.nl, Martin Heijnbroek, Peter C. Verhoeft

2 - Consumer Heterogeneity and Paid Search Effectiveness: A Large Scale Field Experiment
Christopher Nosko, University of Chicago, Chicago, IL, cnosko@gmail.com, Thomas Blake, Steven Tadelis
1 - Meet the Editors 1
The following editors will be attending to discuss the Journals:

- International Journal of Research in Marketing - Peter C. Verhoef, University of Groningen (BUG), Groningen, Netherlands. p.c.verhoef@rug.nl
- Journal of Marketing Research - Rajdeep Grewal, University of North Carolina, Chapel Hill, NC. Contact: guneeet_kaur@kenan-flagler.unc.edu
- Journal of Consumer Psychology - Anirban Mukhopadhyay, HKUST, Kowloon, Hong Kong. anirban.mukhopadhyay@ust.hk
- Quantitative Marketing and Economics - Pradeep Chintagunta, University of Chicago, Chicago, IL. pradeep.chintagunta@chicagobooth.edu
- Customer Needs and Solutions - Min Ding, Pennsylvania State University, University Park, PA. minding@psu.edu
- Journal of Marketing - V. Kumar, Georgia State University, Atlanta, GA. vk@gsu.edu

3 - Technological Collaboration with Customers: Driver or Consequence of Product Innovation?
Ernst Oisinga, Assistant Professor of Marketing, Singapore Management University, 50 Stamford Road, Singapore, 178899, Singapore. ecosinga@smu.edu.sg, Carlos Santos

Technological collaboration with customers is common in the B2B domain. Customer collaboration may serve at least two strategic goals. First, firms may seek customers’ technological input for product innovation. Second, firms may collaborate technologically to bring product innovations to the market. Mostly due to a lack of data, existing research does not answer the question as to which strategic role dominates in which situation. With the analysis of a unique large-scale database, we aim to fill this gap. Our data inform us about the annual number of product innovations and whether a firm engaged in technological collaboration with its customers for over 3,000 firms over a nine-year window. Results from fixed-effects panel data models show strong association between technological customer collaboration and product innovation, while controlling for firm size, R&D expenditures, financial leverage and year fixed effects. Moreover, by leveraging the time-dimension of our panel data, we show that small firms are more likely to innovate after collaborating technologically with customers. Large firms, on the other hand, are likely to engage in technological collaboration with customers after product innovation. Our results are consistent with a resource-based view of the firm, where small firms need customers’ resources to compensate for the lack of own resources for product innovation. Large firms have sufficient resources for product innovation but need customer input to ensure a smooth uptake of the product in the market. Managers need to value customers along the different dimensions. For a manager of a small firm, customers can be active inputs into the knowledge process, helping to overcome the large initial hurdles of product development. On the other hand, for a manager of a large firm, customers are more important for their help in reaping the benefits of the firm’s product innovation investments.

4 - Project Suspensions and Failures in New Product Development and Returns for Entrepreneurial Firms in Codevelopment Alliances
Yansong Hu, Warwick Business School, Marketing Group - The University of Warwick, Coventry, CV4 7AL, United Kingdom, Yansong.Hu@wbs.ac.uk

Entrepreneurial biotech firms and large pharmaceutical firms often form alliances to co-develop new products. Yet new product development (NPD) is fraught with challenges that often result in project suspensions and failures. Considering this, how can firms increase the chances that their co-development alliances will create value? To answer this question, we build on insights from signaling theory to argue that prior project suspensions provide positive signals leading to an increase in value creation, while project failures have the opposite effect. In addition, drawing on insights from temporal construal theory, we predict that the strength of these effects is contingent on the stage along the exploration-exploitation continuum at which the alliance is formed. We argue that exploration alliances in the upstream of NPD add more to the positive value creation effect of prior project suspensions (or do more to counter the value-destruction effect of prior project failures) than moderate-scale exploitation alliances in the downstream of NPD. Event study analyses of 248 alliances formed by 104 biotechnology firms from the US and Europe over an eight-year period between 1996 and 2003 confirm these predictions.
4 - Can Social-Issue Documentaries Change People's Behavior? 

Effects of the Movie Food Inc. on Organic Food Purchases

Junzhao Ma, P.O. Box 197, Caulfield East, VIC 3145, Australia, junzhao.ma@monash.edu

Documentary films have long been used to raise awareness of social issues and advocate for social changes. Their efficacy in changing the audiences' attitude toward these issues is well documented. Yet there is scant evidence on whether documentary films are effective in changing actual behavior. In this paper, we empirically investigate the effect of Food Inc.—an influential exposé of the US food industry—on organic food purchases. We do so with store-level sales data from a representative set of US supermarkets that covers the country's main geographical markets. We exploit the variation in the documentary's influence across different geographical markets to examine its effect on organic food sales in the aftermath of the movie's release. We report the main findings and discuss their implications.

We also provide a discussion of the related econometric issue of endogeneity.

**INFORMS Marketing Science Conference – 2016**

**FB10**

5G, 5th Floor

**Entertainment I**

**Contributed Session**

Chair: Junzhao Ma, Monash University, Department of Marketing, P.O. Box 197, Caulfield East, VIC 3145, Australia, junzhao.ma@monash.edu

1 - Is “Bad” Betterness and Profit in Movie Sequels?

Sanjay R Sisodia, Associate Professor of Marketing, University of Idaho, College of Business and Economics, 875 Campus Drive MS 3161, Moscow, ID, 83844-3161, United States, sisodia@uidaho.edu, Steven R Shook, Berna Devezer

The movie industry has considerable economic importance, leading many researchers to study factors leading to movie success (e.g., Ellasberg, Elberse, and Leenders, 2006). Even with this heightened level of interest, some movies still fail at the box office (Elsashoff and Shugan, 1997). One attempt to improve movie success is by the use of movie sequels, the introduction of a movie that leverages the brand equity built up from a previously released movie (Soos and Dreze, 2006). Prior studies have investigated factors leading to success, and these have included the consideration of naming conventions, length, screens, star power, timing, etc. (Basuray and Chatterjee, 2008; Ibarra, Sun, and Weinberg, 2012; Soos and Dreze, 2006). An area of movie sequel research that is not well studied is that which considers the role of violence and profanity. Though profanity and violence have been studied in the broader context of movies (e.g., Taylor, 2003), we direct our efforts to investigating whether profanity and language increase in prevalence in sequels and do influence sequel success. A sample of 200 movie sequels is gathered to test this hypothesis. The data are compiled from a variety of secondary data sources, and we measure success using worldwide box office revenue. For the sequel being investigated, we consider the role of prior film success (quality, quality, length of film, number of movies, etc.), franchise success (total revenue, number of movies, etc.), and the role of violence and profanity. Results suggest that violence and profanity do influence sequel success.

2 - Actor Network and Box Office Prediction

Xinlong Li, Rotman School of Management, University of Toronto, 105 St George St, Toronto, ON, Toronto, ON, M5S 3E6, Canada, xinlongli7@universityoftoronto.com, Jinghui Qian

We examine the effects of actor network position, which reflects the extent and strength of an actor’s connection to other actors and directors in the film industry, on movies’ box office revenue. We find that although actors with high network centrality appear to be more experienced, when factors such as box office fame are controlled, movies with actors of higher network centrality tend to underperform movies with actors of lower network centrality. To explain this result, we test several potential hypotheses, among which, we find that overpayment to those actors with high centrality is more likely to account for this result. Contrary to Newman (2003)’s assertion that actor network is frivolous, we show that network properties pertaining to actors significantly influence movies’ box office revenue, and this holds even when the model has captured box individual star effect, which has been well studied by prior literature. In addition, we investigate to what extent incorporating actor network can improve movies’ box office revenue prediction. By comparing prediction including network information with prediction excluding network information, we document that incorporating actor network information improves three commonly used machine-learning algorithms (i.e., one-vs-all neural networks, decision tree) to different extent. Finally, we discuss the informativeness of actor networks under ensemble prediction methods.

3 - Optimization Approaches for Timing Decisions in Sequential Distribution Strategies

Sonneke Albers, Professor of Marketing and Innovation, Kuehne Logistics University, Grosser Grasbrook 17, Hamburg, D-20457, Germany, sonneke.albers@the-klu.org, Cord Oten

Hedonic media products, such as movies or fiction books, rely on sequential distribution strategies to manage their revenue streams. For movies these stages include theaters, digital streaming, Blu-ray/DVD and subsequent pay TV and free TV. Home video releases have moved closer to initial theatrical releases in the last years causing tension among industry players. Germany’s fixed book price laws prohibit price changes of books over time and highlight the importance of timing decisions between book formats. As experience goods, the quality of movies and books is inherently difficult to quantify. Together with proprietary data of the industry players this poses challenges to empirical studies and optimization approaches of timing strategies. A review of extant literature shows that optimization approaches range from closed-form solutions to numerical optimization and market simulations of conjoint-based consumer preference functions. Closed-form solutions can only be derived for rather simplified problem structures but offer direct insights into the solution structure. Numerical optimization can be applied for more complex problems but do not allow simple insights into the solution strategy. Market-simulations may capture the heterogeneity of consumer preferences but depend on the goodness of the choice experiments and are often limited to the evaluation of scenarios. So far, these proposals have not been compared for their predictive validity. We therefore compare the respective approaches based on a sample of movies and books. The results of this study allow for the selection of appropriate optimization or simulation approaches in future research in this field. Finally, the implications of this study for practical applications are also discussed.

**FB11**

5D, 5th Floor

**Working Paper XI**

**Contributed Session**

Chair: Aruna D. Tatavarthy, Indian Institute of Management Bangalore, Banerghatta Road, Bangalore, 560076, India, diviya.misacc@gmail.com

1 - Effectiveness of Incentives Alignment for Suppliers in Sharing Economy Platform: Forecast-Based Contracts vs. Menus of Linear Contracts

Hui Yan, Zhongnan University of Economics and Law, Wuhan, China, candy19920803@163.com, Xiaoling Li

In the sharing economy platform, for example, Uber that makes the service supplier and demander on board, the supplier is in a critical position to improve the platform performance and benefit. It is an effective strategy to motivate suppliers’ effort. Two popular contract forms are investigated. One is the forecast-based contract (FC) that requires the supplier to complete the forecasted transaction volume and then the supplier obtains fixed commissions. The other is the classical menu of linear contracts (MLC), from which the seller can obtain a unique commission rate based on the realized sales. The conventional understanding suggests that the MLC is superior in motivating sellers’ effort. This research discovered the boundary condition in the trade-off between MLC and FC. We found that MLC is superior for experienced suppliers while FC is superior for new suppliers deriving from a typical Uber market. These findings can enrich the understanding of these two contract forms and are useful for platform incentive strategy making.

2 - Risk Preferences on Time of Coverage: A Time Duration Based Explanation for Warranty Purchase Decision

Aruna D. Tatavarthy, Assistant Professor, Indian Institute of Management Bangalore, Banerghatta Road, Bangalore, 560076, India, diviya.misacc@gmail.com, Srinivas Prakhy

Individuals purchase extended warranties (EWs) for their durables priced at unreasonably high premium due to the characteristics of their risk preferences over repair costs. The tendency to perceive repair costs as a loss and non-linearly weight the probability of repair events explains the warranty purchase decision. Extant literature has thus assumed warranties as another type of insurance products, where individuals purchase decision is driven by cost related factors. In this paper, we propose that individuals may be motivated by factors beyond costs to purchase warranties for their durables. We borrow insights from behavioral decision making to point out that individuals have expectations about repair-free usage period for their durables. At the time of purchasing a durable or evaluating the warranty purchase decision, individuals do not have information about the repair costs and failure probability. Hence, their intended ownership duration and knowledge about usage behavior influence the expectations they form about repair-free usage period for the durable. Their time-varying sensitivity towards repair costs influences the choice among available warranty options differing in price, length of coverage and scope of coverage. We assess individuals’ risk preferences over entire ownership duration to identify the impact on warranty purchase decisions. We combine the approaches for measuring utility of time in years and the standard gamble method of utility assessment procedure to calibrate individuals’ marginal utility from consuming the durable. Our results indicate that individuals exhibit reference-dependent preferences on the time of coverage, where the reference point is endogenously dictated by ownership horizon and usage behavior. We conclude by suggesting implications for price and designing menu of EWs.
In the online market, platforms can be seen as a two-sided marketplace, with sellers and buyers interacting through its website, in which sellers have to compete for the service of platform to get more attention of buyers. As a result, it's important to develop an understanding of the two-sided customer marketing strategies and the platform performance. In order to explore the existence and evolution of internal counteract effect, the authors argue that the effects of customer marketing strategies on platform performance can be different in the short-term and long-term. The authors test these ideas by collecting data from an ad bidding platform of B2B website with a total of 220 days. Finally, using a VAR model to analyze the dynamic evolution effects, the authors put forward some implementations for effective control over buyers and sellers.

2 - Mobile Advertising and Real-time Group Dynamics: Evidence From a Field Experiment
Belbei Li, Carnegie Mellon University, belbeii@andrew.cmu.edu.
Anindya Ghose, Sijuan Liu
We propose to combine machine learning with hierarchical Bayesian models to design a novel mobile advertising strategy that leverages not only granular-level information on consumers’ physical movement trajectories, but also their real-time social dynamics. To evaluate the effectiveness of this strategy, we design a large-scale randomized field experiment in a large shopping mall based on 52,500 unique user responses from 252 stores for a 21-day period. Our study demonstrates the potential of inferring individuals’ social contexts in real-time from their movement trajectories. It demonstrates the value of leveraging real-time social dynamics in mobile advertising.

3 - Mobile Hailing Technology, Worker Productivity and Digital Inequality: A Case of the Taxi Industry
Yanwen Wang, University of Colorado Boulder, yanwen.wang@colorado.edu, Ting Zhu, Chunhua Wu
This paper investigates whether and to what extent mobile hailing technology affects taxi drivers’ productivity. We exploit unique geo-location data of taxi drivers, build a change-point model on the underlying process of mobile technology adoption and estimate the changes in hourly earnings with MCMC. We find that adoption of mobile hailing technology increases drivers’ productivity by 25% to 50%. In the long run mobile hailing technology brings about 13% productivity increase at the market level. Comparing driving patterns pre and post-adoption, we show that productivity gains are achieved by sorting and selecting larger lare trips rather than reduction in waiting time.
2 - Central Backers in Social Networks and Their Impact on Outcomes of Crowdfunding Projects

Yee Heng Tan, Ph.D. Student, Singapore Management University, 50 Stamford Road, Singapore, 178999, Singapore, yehcheng.tan.2013@pbs.smu.edu.sg

In crowdfunding research, attention has been paid to a number of explicit factors such as project attributes (project duration, funding goal, and project design), founders' details and media coverage as key drivers of project success. This view however neglects the impact unobservable network effects may have on project outcomes. Our paper looks at the potential existence of an implicit backer network. Examining over 300 projects and 11,000 backers, we estimate the backer network and identify central backers within the network. We investigated the impact of central backers on several project outcomes such as a) success rate b) total percentage of goal funded and c) the speed with which the funding goal was achieved. Our findings suggest that the presence of central backers in a project increased the likelihood of project success by 78% and reduced the time needed to meet the funding goal by 18%. These results suggest that backer networks do form organically and central backers play a role in influencing other backers' project contribution decisions. Marketing academics and practitioners should find the results interesting as we find that influence is driven by network position rather than high rates of activity on the platform. Our study also contributes to the digital media literature by collating diverse forms of digital media and their effects on central and non-central backers in the network, allowing practitioners to develop a coherent digital media strategy when formulating their crowdfunding project.

3 - Does Distance Still Matter? The Impact of Geographic Distances in Social Networks on Crowdfunding

Tingting Fan, The Business School of the Chinese University of Hong Kong, Room 1113, 11/F, Cheng Yu Tung Building, No. 12 Chak Cheung Street, Shatin, Hong Kong, Hong Kong, tfan@stern.nyu.edu, Yowie Li Crowdfunding offers a new opportunity for innovators to raise capital from large online communities. Innovators (called "project creators") can create a project and ask for money on a crowdfunding platform, whereas people (called "backers") can support projects by contributing money on the same platform. One advantage that crowdfunding platforms claim is that unlike traditional finance, its online environment can eliminate the geographic constraints to help project creators raise money from local and distant backers. However, it is unknown to what extent can geographic constraints be eliminated, (2) in which social network do geographic distances matter more, project creators' or backers' social networks, and (3) for what kind of projects do geographic distances matter. We collect data from two sources: a crowdfunding platform and an online social network which contains the social networks of users on the crowdfunding platform. These unique datasets allow us to accurately identify both project creators' and backers' social networks. Our empirical results suggest that geographic distances still matter on the crowdfunding platforms. But their effects vary between project creators' and backers' social networks. In project creators' social networks, distant friends, as compared with local friends, play a more important role in fostering the success of a project, increasing the total amount raised as well as accelerating project goal completion. In contrast, local friends have more impacts than distant friends in backers' social networks. In addition, we found that the effects of geographic distance also vary across projects. Compared with non-technology projects, creators' local fans contribute more to the technology projects. Our research contributes to the literature of both crowdfunding and online social networks. We can also help entrepreneurs successfully raise money on crowdfunding platforms.

4 - Backer Connectivity and Crowdfunding Success

Girish Mallapragada, Indiana University, 1309 E Tenth Street, Kelley School Of Business, Rm. BUSI 328M, Bloomington, IN, 47405, United States, gmallap@indiana.edu, Vishal Narayan Unlike traditional methods for funding new ideas, crowdfunding platforms make information about who backs an idea, and when, publicly visible in real time. We study whether prior connectivity among an idea's backers, that is backers' joint participation in backing past ideas, impacts backers' funding support for that specific idea. We estimate a Tobit model of funding success on 37 days of data from 2,021 crowdfunded ideas on the prominent Kickstarter platform. We employ latent instruments for identifying the causal effect of connectivity. We find that prior connectivity of backers has a negative effect on the funding success of an idea. A standard deviation increase in connectivity is associated with a 4.3% weekly decrease in the proportion of funding goal achieved. This effect is larger during the first week of funding (5.1% decrease). To the best of our knowledge, this is the first study to show the negative effect of connectivity between agents on any monetary outcome. Our results suggest that backers strive to act uniquely from backers they are connected to. This motivation seems stronger than the motivation to reduce information asymmetry by acting consistently with connected backers. We discuss managerial implications for creators seeking funding and for crowdfunding platforms.

1 - Investigating the Effectiveness of Triggered Email Marketing

Marcel Goic, University of Chile, Beauchef 851, Santiago, 8370439, Chile, mgoic@di.uchile.cl

Email marketing is a powerful communication tool in many businesses. Over time email campaigns have become more sophisticated, incorporating new technologies to enhance traditional processes. Triggered emails correspond to personalized messages sent automatically as a response to specific actions or states of the customers. Typical examples of this kind of campaigns include confirmation and order emails, personal greetings, cross-selling recommendations, cart abandonment reminders, and reengagement emails among others. Despite the widespread growth of these triggered emails, there is no formal evaluation of their effectiveness. This paper investigates the impact of triggered email marketing campaigns using an experimental approach, where automated emails were sent to a sample of approximately 12,000 customers who had recently browsed the website of a multichannel retailer but abandoned the process before purchasing.

We propose a conceptual framework to characterize the effectiveness of triggered emails in terms of the identification of customers and the value proposition of the campaign. Then we propose an experimental design to evaluate of different configuration of campaigns affect key business metrics. The study was complemented with an analysis of the email performance on different customer segments and the potential cross-channel effects of the campaign. Our results show that browse abandonment triggered emails have significantly greater open rates, click through rates and incremental sales than traditional emails. In term of the design, contacting customers more than once and more personalized content positively influence the profitability of a campaign.

2 - Less Might Be Better: Can Information-Only Websites Bring Higher Revenue?

Jieun Lee, Master Student, Korea University, 145 Anam-ro, Seongbuk-gu, Seoul, Korea, Republic of, jane1122@korea.ac.kr

Omni-channel retailing has been emerging as an important strategic issue for many marketing practitioners. Most of firms maintain both online and offline channels that play different roles in consumer decision journey, and thereby create favorable consumer responses such as awareness, transactions and loyalty. This study aims to comprehend synergistic interplay between online and offline communications influence brand performance in various contexts. However, the impact of online communications on consumers’ purchasing decision may differ depending on the purpose of the online posts (e.g., advice-seeking vs. comment-sharing posts) and the characteristics of the online media (e.g., discussion website vs. social networking website). A series of consumer experiments revealed that information-only websites may be more beneficial for a market-share leader and for a supplier of experience goods rather than search goods. These results suggest that, in developing and implementing omni-channel retailing strategy, managers should be aware of different roles of online and offline channels give the firm’s market status and product characteristics.

3 - The Impact of Different Types of Online Communications on Brand Performance

Sue Ryung Chang, Assistant Professor of Marketing, University of Georgia, 130 Brooks Hall, 310 Herry Dr., Marketing Dept., Athens, GA, 30602, United States, suerchang@uga.edu, Mantian Hu, Shuba Srinivasan

With the dramatic growth of online communications in recent years, consumers have become accustomed to gathering product information and sharing their opinions through social media. Prior studies have shown that online communications influence brand performance in various contexts. However, the impact of online communications on consumers’ purchasing decision may differ depending on the purpose of the online posts (e.g., advice-seeking vs. comment-sharing posts) and the characteristics of the online media (e.g., discussion website vs. social networking website). Detailed knowledge of the effects of purpose of online posts and characteristics of online media is required for the company to fully take the advantage of the online word of mouth. In this paper, we use a proprietary dataset on daily online communications of all Chinese social media websites combined with the sales index of Taobao, one of the largest online shopping websites in China, to investigate the impact of online communications on brand performance. In particular, we focus on how advice-seeking vs. comment-sharing posts influence online brand sales differently and how the two types of online posts are in predicting brand sales. We also study whether brand sales are influenced by online communications about competing brands after controlling for typical marketing mix variables, such as price and advertising. Finally, we provide insight on prediction of future sales based on different types of online communications and offer metrics for digital analytics.
The importance of the Internet as a commercial platform is ever-growing. With more and more firms selling vast amounts of products through various channels, competition becomes increasingly fierce. Today, success in the online retail environment hinges not only on offering superior products, but on their effective presentation. While a large body of research has examined the influence of various web design content factors on consumer response and firm performance, these studies typically focus on a limited set of factors and outcome variables in a single business context. Research on the impact of multiple content factors across contexts is sparse. To bridge this gap, we collaborate with an online content production company and four major international manufacturing firms. We investigate the effects of four types of factors, identified from the literature and interviews with industry experts, on business performance across firms, channels, and products. Our empirical approach combines extensive lab experiments (20,000+ consumers) with subsequent field tests. The results demonstrate the relative importance of specific factors under various circumstances. Besides its theoretical contributions, our work has significant value for managers, as it provides them with clear context-specific guidelines for their online retail strategies.

**Social Influence II**

**5J, 5th Floor**

**Contributed Session**

Chair: Purushottam Papatla, University of Wisconsin-Milwaukee, School of Business Administration, PO 7423202 N Maryland Ave, Milwaukee, WI, 53201-0742, United States, papatla@uw.edu

Co-Chair: Purushottam Papatla, University of Wisconsin-Milwaukee, School of Business Administration, PO 7423202 N Maryland Ave, Milwaukee, WI, 53201-0742, United States, papatla@uw.edu

**1 - It is Not Only What You Say, But Also How You Say it: The Role of Language Style in Perceived Helpfulness of Online Reviews**

Ying Xie, Associate Professor of Marketing, University of Texas-Dallas, 800 West Campbell Road, SM #32, Richardson, TX, 75081, United States, ying.xie@utdallas.edu, Angela Xia Liu, Jirui Zhang

Existing literature has examined the impact of review content and reviewer attributes in the perceived informativeness of consumer reviews. In this study we move beyond these features and explore the role of language style in consumer perception of online reviews. Language style (LS hereafter) refers to the way people speak or write, i.e., how people convey the content. Recent research in psychology and sociology has shown that synchronization in conversational style, irrespective of content, increases rapport, credibility, and shared perceptions among conversants. In the context of online reviews, we posit that the degree to which reviewers accommodate the LS of the product interest group directly influences the perceived helpfulness of the reviews. We test our hypothesis using restaurant reviews from Yelp Academic Dataset. We quantify the LS of a review by calculating a nine dimensional score with each dimension representing the percentage of a particular type of functional words among all functional words in a review. We then calculate a “language style matching” (LSM) measure for every review based on the Euclidean distance between its own LS score and the typical LS score of the product interest group. We find that LSM has a significant and positive effect on the number of helpful votes a review receives even after controlling for various review content and reviewer characteristics variables. We also find that LSM significantly impacts the perceived “coldness” and “funniness” of a review.

**2 - The Role of Self-Sacrifice in Social Reward for Pro-Social Behavior**

Gil Peleg, Ben-Gurion University of the Negev, Beer Sheva, Israel, Gilpel@post.bgu.ac.il, Oded Lowengart, Daniel Shapira

Societies incentivize individuals to act pro-socially as they reward monetary donations and volunteering work, like other forms of contribution, with social reputation. It seems that for most people, gaining social reputation is important for different reasons. Using a choice-based conjoint experiment we show that the rewards are given not only for the value of the acts themselves but also for the self-sacrifice, or relative effort, one needs to make to for the contribution. Moreover, we show that societies with different social values rewards different forms of contribution. Such differences can assist managers with better resource allocation when it comes to recruit volunteers and/or fundraising. The economic theoretical framework developed here might explain why sometimes people do not use their relative advantage for choosing their form of contribution. For example, people with low income might decide to donate money while people who have a lot of money might decide to volunteer. A series of lab experiments will examine some of these behavior given the choice of different forms of contribution.

**3 - Analyzing Interactions and Identifying Social Roles in a Brand Community on Social Networks**

Lamya Benamar, Research Engineer, Telecom School of Management, Evry, France, lamya.benamar@telecom-em.eu, Christine Balague, Mohamad Ghassany

This research focuses on the understanding of brand communities created by consumers on social networks, by identifying the social roles of its members. We analyze the different users’ roles through three levels of analysis: activity, content, and users’ shared, structural position in the network. Our data come from a specific brand community on Facebook. The considered brand is worldwide famous and belongs to the Small Household Equipment market. We coded more than one thousand posts to provide a content analysis. We first apply two types of analysis: quantitative and qualitative. We conceptualize the role as observable behaviors, created by the individual position in the network and his interactions with the other members. Analysis led to the detection of nine different roles, based on three criteria: the subject of interest (product/practice), the need and objective (learning/knowledge sharing); the individual orientation (factual/relational). In a second step and in order to improve the understanding of the social roles in the community, we run a structural approach by qualifying each member of the community by network structure variables. We show that network structure variables provide valuable insights for better understanding the interactions between members and their roles. We show that it is valuable for managers to characterize social networks users by their social roles by analyzing content and structural position. This work opens new topics for future research on monitoring interactions, social roles and users’ actions on social networks and their impact on marketing strategies.
To attract the attention, firms often use tensile price claims that state the maximum amount of discount possible (e.g. in a category, such as ‘up to 70% off’) rather than the precise discount offered for a product. However, we know little about whether such price claims work online. As shopping increasingly moves online and new online retailers aim to attract customers to their sites by advertising the price offered, knowing whether tensile price claims are indeed effective in attracting customers becomes increasingly important. We use data from an online fashion retailer that experimented with tensile advertising campaigns which varied whether a tensile or a specific price claim was displayed. Surprisingly, we find that tensile price claims are on average not effective. We explore in detail the mechanism that leads to these results using granular data on the demographic targeting of the advertising campaigns and suggest that price knowledge contributes to whether tensile ads are effective.

2 - Consumer Search and Choice under Limited Information
Jun B. Kim, HKUST, Hong Kong, junkin@ust.hk, Qiang Zhang
Recent empirical models on consumer information search typically assume that consumers are fully informed about key product attributes and their values prior to search. Conditional on such information set, the goal of fully informed consumers during search process is to resolve purely idiosyncratic match values. This is a strong assumption on consumer's information set since consumers may be neither fully aware of key product attributes nor informed about their values prior to search. In reality, consumers are likely to be partially informed about options and their goals during search process include identifying unknown attributes and their values in addition to the idiosyncratic match values. In this paper, we propose an empirical model that incorporates realistic and flexible consumer information search into the model of optimal sequential search and choice. Starting from consumer primitives subject to uncertain product attributes and their values other than idiosyncratic error term, our parsimonious modeling approach leads to a novel idiosyncrasy in consumer choice that adds richness in the model. Using data experiments, we demonstrate that assuming fully informed consumers when they are not leads to poor estimates of demand primitve including biases in key consumer parameters. As an empirical application, we apply our model to consumer durable goods category in Amazon.com. In particular, we introduce unobservable product characteristics into the model that affect not only consumer expectation but also variances of product utilities during consumer search and choice. We conduct a few simulation studies for market insights in online market.

3 - Investigating the Effects of Retargeting on Consumers’ Revisit, Search, and Purchase Behaviors
Maik Eisenbeiss, University of Bremen, Bremen, Germany, eisenbeiss@uni-bremen.de, Alexander Bleier, Sylvia Hristakeva
Online advertising has become an integral channel through which firms can reach consumers to influence their behavior on the Web and increase revenues. While attracting new customers has long since been a central advertising goal, recent technological advances allow targeting previous online store visitors in order to induce further visits. Moreover, through a method called retargeting, firms can track individual consumers’ online shopping behaviors at their online stores and provide them with targeted personalized ads. In this project, we use data from a large-scale field experiment with a fashion and sporting goods retailer to investigate how this form of ad personalization affects consumers’ behaviors in terms of revisit, search, and purchase. We estimate a structural model to explain the effects of banners with different degrees of content personalization on these three behavior types, while accounting for consumers’ current positions in the purchase decision process. Based on our model, we conduct a series of counterfactual analyses that involve various combinations of ad personalization, timing, and frequency. The results shed light on the heterogeneous effects that specific execution strategies exert on consumers’ revisit, search, and purchase behaviors. Our results provide managers with important insight on how to increase the effectiveness of their online advertising efforts.

4 - Selection, Order, and Pricing of Linear Online Video Ads
Paulo Albuquerque, Adobe Systems, Fontainebleau, France, paulo.albuquerque@insead.edu, Wreetabara Kumar
This paper studies the selection, ordering, and pricing of in-stream advertisements in videos shown in online video platforms, and proposes an algorithm that uses a collective measure of price and quality for each advertisement to do the optimal selection of ads that maximizes revenue. The algorithm is based on cascade models and uses a dynamic programming method to assign ads to slots in an online linear video. The approach accounts for the negative externality created by lower quality ad placed early in a video that increases the probability of viewfract and prevent the platform from showing the subsequent ads scheduled in that video session. Our proposed algorithm is scalable and suited for real time applications. Accounting for externalities generated by the ads, a pricing scheme based on Vickrey-Clarke-Groves auction mechanism is implemented, which ensures truthful price quotes by the advertisers. We use a large log of viewer activity from a leading video ad platform is used to empirically test the algorithm. A series of simulations show that our algorithm generates more revenue for the publisher and increases viewer retention, when compared to other algorithms currently practiced in industry.

Friday, 1:30pm - 3:00pm

FC01

1 - How Does Emotional WOM Influence Brand Equity: The Unparalleled Mechanisms of Brand Trust and Sentiment
Feng Wang, Michigan State University, 1471 North Business Complex, 632 Bogue St, East Lansing, MI, 48824, United States, wangf@broad.msu.edu, Hang Nguyen, Roger Calantine
Consumer emotions expressed through WOM is an important driver of brand equity. Drawing upon Plutchik’s wheel of emotions and emotions as social information (EASI) theory, we identify eight types of emotional WOM, including joy, trust, anticipation, surprise, sadness, fear, disgust and anger WOM, and investigate their impacts on brand equity. Using seven-years of linguistically interpreted web scraped of consumer WOMs regarding 117 brands, our findings indicate that emotional WOM impacts brand equity through unparalleled mechanisms. High arousing emotional WOM exhibits strong direct and indirect effects on brand equity, in which the indirect effect is mediated by brand trust and sentiment. In contrast, low arousing emotional WOM has an indirect effect on brand equity through brand trust and sentiment. These findings demonstrate the selective mediations of brand trust and sentiment in the emotional WOM-brand equity relationship. Furthermore, our results suggest that corporate branding strategy strengthens the mediating effects of brand trust and sentiment with a greater magnitude for trust. However, market competition presents a differential moderation of brand trust and brand sentiment mediations. These findings are robust when we use multiple analysis approaches, including the 3SLS, GEE and bootstrapping mediation models.

2 - The Impact of Recalls on Customer Acquisition and Customer Retention in the U.S. Automobile Industry
Thomas Schreiner, Universitat Hamburg, Welckerstrasse 8, Hamburg, 20354, Germany, thomas.schreiner@wis0.uni-hamburg.de, Florian Stahl, Lucas Beck
The number of product recalls increased dramatically in the last years and became a relevant research topic. In this paper, we analyze the impact of recalls on customer acquisition and customer retention in the U.S. automobile industry using multinomial logit market share attraction model. The data presented in this study comprise among other things two main elements - data on 13’000 recalls issued in the U.S. between 1999 and 2008 and actual purchase data of more than 700 car models of 19 different brands sold in the US between 1999 and 2008. We derive customer acquisition and customer retention rates from first-order Markov brand-switching matrices. The main finding of this study is that customers depending of using a product of the affected brand or of another brand perceive and interpret product recalls totally differently. While safety recalls, which got announced in news media, have a significant negative impact on customer acquisition, they do not influence customer retention. More detailed analyses demonstrate that this negative influence appears if the recalled products are severe damaged. Furthermore, the results show that customer-based brand perception acts as amplifier and protector against the negative impact of recalls at the same time. The authors conclude with a discussion of the findings and various managerial implications.
3 - Consumer-Based and Sales-Based Brand Equity: How Well Do They Align?

Harald van Heerde, Research Professor of Marketing, Massey University, Auckland, 0745, New Zealand, heerde@massey.ac.nz, Kusum L Allawadi, Hannes Datta

Brand equity is a central construct in marketing. The two broad approaches to measure it are consumer-based and sales-based. Consumer-based brand equity (CBBE) measures what consumers think and feel about the brand, and this manifests itself in sales-based brand equity (SBBE), which is generally measured by the brand intercept in a choice or market share model. Despite the widespread use of both CBBE and SBBE, the link between them has not been empirically established. This study fills this gap by examining the association of the major dimensions of CBBE on the one hand, and the intercept and marketing response components of SBBE on the other hand. It uses ten years of IRI scanner and Business Asset Valuation (BAV) data for over two hundred consumer packaged good brands across 24 categories. The study uncovers fairly high correlations between SBBE and three dimensions of CBBE - Esteem, Relevance and Knowledge, but much weaker correspondence with the fourth dimension, Dimensional Differentiation. The paper also reveals important new insights about “outliers” - brands that buck the trend between CBBE and SBBE. Moreover, it documents a differential association of the CBBE dimensions with price, promotion, distribution, and advertising response. The paper concludes with managerial implications.

4 - Predicting Consumer-Based Brand Equity with Google Trends

Fiorian Stahl, Professor of Marketing, University of Mannheim, L5 - 2, Mannheim, 68161, Germany, florian.stahl@uni-mannheim.de, Marnik G. Dekimpe, Kusum L Allawadi

Brands are increasingly recognized as the primary intangible asset of many firms, and brand management has become a top priority. Monitoring a brand’s health is of utmost importance. Recent developments in digital/social media technology have created a data-rich environment that allows managers to flag changes in brand health and take corrective actions more quickly. In this paper, we examine the extent to which online search volume can act as an early indicator of a brand’s health, and how the predictive power of search volume varies across the major dimensions of brand equity. We link 10 years of quarterly Google Trends data on Young and Rubicam’s four Brand Asset Valuation (BAV) pillars for 177 brands across 22 product categories as varied as automobiles, appliances, clothing, sporting equipment, and financial services, to their search volume indices from Google Trends. We study whether the latter has incremental information value beyond the information already contained in the previous values of the BAV pillar. Our paper contributes in substantive, empirical and managerial areas. Substantively, we extend the application domain on the predictive power of freely-available online search data to the brand-equity arena, while our moderator analyses advance theory development by identifying relevant boundary conditions. Empirically, we estimate our model on a unique large-scale data set that matches conventional, survey-based, customer-perception information on hundreds of brands with the corresponding online search-volume data. Managerially, we identify under what conditions freely-available online data can act as an early indicator of changing brand-health conditions that may require swift managerial action.

FC02 INFORMS Marketing Science Conference – 2016

3A, 3rd Floor

Competitive Strategy III

Contributed Session

Chair: Sumitro Banerjee, European School of Management and Technology, Schlossplatz, 1, Berlin, 10718, Germany, sumitro.banerjee@esmt.org

1 - Mi ni z i ng Li ti g at i on i n Fr anchi se: The Ro le of Contract An gi u ty

Xia Zheng, Assistant Professor, City University of Hong Kong, Hong Kong, 00000, Hong Kong. xuzheng@cityu.edu.hk, Ling Ge, Uri Ben-Nobiel

Franchise relationships are prone to conflicts due to interest misalignment between the franchisor and the franchisee. When either party breaches the franchise contract, the defending party may suffer damages arising from such breach. As litigation entails significant economic and psychological costs, however, firms try to avoid litigation when able. Building upon the literature on asymmetric information and interorganizational governance, this study aims to examine the antecedents and consequences of litigation occurring in franchise relationships. Specifically, we investigate how (1) power asymmetry between the franchisor and the franchisee, (2) the level of interorganizational governance; and (3) reliance on relational governance drive occurrences of franchisor- and franchisee-initiated litigation, respectively. Conditional on these baseline relationships, we further examine how franchisors’ strategic use of vague contract terms, such as “reasonable” or “satisfactory”, “conventional” or “best efforts”, etc., in designing franchise contracts moderates these relationships. We found that franchisors’ strategic use of vagueness in designing contracts amplifies its advantages compared with franchisees. In addition, we examine the impact of litigation on franchise termination ratio and achieved system growth. We create a unique dataset by combining multiple data sources, including franchise disclosure documents, Entrepreneur Magazine, and Bonds’ Questionnaires, and examine the antecedents and consequences of franchisee and franchisor-initiated litigation over a 20-year window across 130 franchisors. Our results allow us to offer practical advice to franchisors on how to minimize the occurrences of litigation through employing appropriate governance mechanism and strategically utilizing vague terms in contract design.

2 - Relationship between Intellectual Property Rights Protection Strategy and Innovation Performance

We Li, Zhejiang Gongshang University, Hangzhou, China, lewaway@126.com

Technology innovation is the value creation activities of enterprises. But companies were often unable to fully achieve benefits arising from innovation, thus derive value appropriability and intellectual property (IP) protection issues. The concept and dimensions of this issue have not been clarified yet, thus the “black box” of technological innovation is yet to be revealed. Specific research on pharmaceutical industry is not enough. In order to clarify the relationship between IP protection strategy and openness of innovation in different innovative activities, and its impact on technological innovation performance, we used PPI (Profiling from Innovation) framework which was proposed by Trece (1986) as the starting point of our study and explored the influence of pharmaceutical company’s IP protection strategy on its innovation performance in the background of open innovation. In accordance with the official degree of IP protection, we extract the knowledge asset protection to three dimensions: Intellectual Property Rights Protection, Knowledge Isolation mechanism and Knowledge Integration. This study used grounded context to conduct systematic exploratory case studies on four pharmaceutical companies and summarized different dimensions of Intellectual property protection strategy and made a series of initial propositions. We collected data using a large sample survey and explore the relationships between variables with structural equation modeling.

3 - How Good is Enough to be Great: CSR and CSIR in Panel Data Analysis

Sean Yin, Assistant Professor of Marketing, Penn State Erie, The Behrend College, 5100 Jordan Road, 220 Burke, Erie, PA, 16563, United States, sean.yin@psu.edu, U.N. Umesh, Alberto Sa Vinhas, Arvin Sahaym

In past decades, Corporate Social Responsibility (CSR) becomes one of the essential business elements of successful corporations and firms strive to gain CSR reputation. However, the firms also seem to compete with each other to establish superior CSR practices (namely, Corporate Social Irresponsibility, CSIR), which may not be intended, but are strongly penalized by their stakeholders. As the pressure of competitive business environments increases, a firm’s resource deployment to the CSR initiatives has to be strategically determined. This raises our research questions: 1) how good is good CSR, and 2) how bad is bad CSIR? Drawing from the institutional theory and signaling theory, we investigate how a firm’s institutional homogenizing efforts influence the relationship between CSR and financial performance. We theorize that firms have to make efficient resource strategy how to devote their limited resources to CSR and CSIR. Further, the normative and mimetic isomorphic processes are desirable to assure the cost-effectiveness in designing CSR programs. The panel data analysis with over 21,000 firm-year samples indicates that the firm’s CSR isomorphic processes enhance the positive CSR-performance relationship. However, the firm’s attempt to match industry average CSR further worsens the negative CSIR-performance relationship. The decrease in the industrial ethical norm (industry average growth in CSIR) amplifies the negative impact of CSIR. This study suggests the importance of the strategic resource deployment in firms’ CSR initiatives. It also suggests that CSIR is not a way of competition in an industry. Rather, CSR is the value that the firms in the same industry collaborate to enhance the sustainability of the industry.

4 - Competitive Preannouncements under Two-Sided Asymmetric Information

Sumitro Banerjee, Associate Professor, European School of Management and Technology, Schlossplatz, 1, Berlin, 10718, Germany, sumitro.banerjee@esmt.org, David A Soberman

While new product preannouncements are common in computer software markets, consumers and other actors may ignore them because the claims in the preannouncements cannot be verified. We examine the reasons behind the prevalence of preannouncements by analyzing a competitive market where an incumbent can decide to preannounce a new version of its product well before its launch. The incumbent is threatened by the entry of a superior product and users of the incumbent’s product incur a switching cost to adopt the entrant’s product. We show that when the switching cost exceeds a threshold, the firm preannounces a new product and the entrant reacts by reducing the price of its product. The higher the switching cost, therefore, the higher the likelihood of preannouncement. When only the entrant knows the consumer switching cost and only the incumbent knows whether it has an upgraded product, we show that a low switching cost will lead the entrant to choose a price such that preannouncements are not observed. When the switching cost is higher, the entrant’s price will lead to preannouncements. Vapourware or fake preannouncements do not occur in equilibrium. The result shows that an incumbent can strategically use preannouncements to cause its current user base to wait for a new version when switching costs are sufficient. This model thus provides an explanation for the surprising pervasiveness of non-verifiable preannouncements in rapidly changing software markets.

NEW MARKETING SCIENCE_NEW MARKETING SCIENCE  6/1/16  2:28 PM  Page 58
Frontline employees form an essential channel between firms and customers as they have a central role in gaining important market insights, communicating marketing information and strengthening relationships with customers. Researchers therefore often consider that performance of frontline employees lead to greater success in the marketplace. However, empirical evidence linking performance of such employees with market performance of firms is scarce. In addition, whether contextual, social or individual factors influence the relationship between frontline employees’ job performance and firms’ market performance remains unknown. In this paper we attempt to address these issues. Analyses of a cross-cultural and multi-level data from 81 branches and 477 employees of an international bank provide important implications for how to better manage frontline employees.

### 3D, 3rd Floor

**Marketing Finance II**

**Contribution Session**

Chair: Rachel Rong Chen, UC Davis, 3208 Gallagher Hall, University of California at Davis, Davis, CA, 95616, United States, rachen@ucdavis.edu

**FC04**

**Product Discontinuation and Firm Market Value**

Ismail Erzurumlu, PhD Student, Koç University, Istanbul, Turkey, lerzurumlu@ku.edu.tr, Nukhet Harmancioğlu, Sundar G Bhargava

Product discontinuation is a firm’s strategic decision to cease the production of a product, and to consequently take its product off the market. The effect of firms’ product discontinuation decisions on their market value is examined in this study. Specifically, the following research questions are addressed. First, what are the effects of product discontinuation on short and long-term stock market performance? Second, what are the (announcement and firm-related) factors that may influence the relationship between product discontinuation and short and long-term stock market performance? To the best of our knowledge, this is the first study to analyze the stock market value of firms’ product divestment decisions, and to study a number of contingency factors. Data collection procedure resulted in total sample size of 256 product discontinuation decisions announced from January 1996 to June 2012. To analyze the short-term effects, we study the firm’s stock returns due to the event using the ‘market model’ (Brown and Warner 1985). To measure long-term effects, we use a calendar-time portfolio analysis. The method covers an approximately two year period which begins at the end of the short-term event window (Sorescu et al. 2007). Preliminary results showed that: (1) product discontinuation announcements lead to negative (positive) firm market value in the short-term (long-term); (2) product discontinuation reason and announcement specificity moderate the relationship between product discontinuation announcement and firm market value.

### 2 - Does Made in USA Matter? Stock Market Reactions to Reshoring Initiative

Wonjoo Yun, California State University Long Beach, Long Beach, CA, United States, yun@calstate.edu

In recent years, there has been a rapid increase in reshoring (i.e., bringing jobs back to the home country) initiatives by U.S.-based companies that have previously sent work overseas. While prior research has largely focused on the impact of offshoring (i.e., outsourcing) decisions on firm performance, the effect of reshoring is not well understood. To fill this gap, this research investigates the financial returns of firm’s reshoring using an event study methodology. Our analysis on the reshoring initiatives over the 11-year period (2005-2015) shows that reshoring can hurt the firm value. While companies often cite increasing labor cost overseas and quality control as the reasons for reshoring, investors seem to think potential cost increase from reshoring is more critical to firm performance. Our study contributes to marketing and operations scholarship by investigating the relationship between reshoring strategy and short-term stock market reactions, which has not been empirically tested.

### 3 - Compensation Mechanism for Coordinating Inside and Outside Sales Forces

Yeji Lim, PhD Student, University of Missouri, Cornell Hall 435, University of Missouri, Columbia, MO, 65211, United States, y660c@mail.missouri.edu, Murali K Mantrala, Eunjin Anna Kim

To analyze the drivers of salesperson performance has gained considerable attention in literature. Previous studies mainly focused on state attitudes data rather than on salespersons’ actual behavior. Differently, this study disentangles the dynamic effects of building long-term salesperson-customer relationships and leveraging transactional marketing elements. Our study differs from previous literature in several ways. First, this study empirically distinguishes the relational and transactional marketing effects for salesperson performance and assessing their relative importance. Second, we highlight the dynamic nature of both, salesperson performance and its determinants over a salesperson’s tenure. We rely on a unique longitudinal dataset of monthly sales records of 82 independent salespersons from 2005 to 2013. Extending previous work, which only relies on time-invariant subjective measures obtained through survey data, we leverage objective measures to map the time-varying nature of the focal effects. Third, applying a random effects approach, we discuss the importance of accounting for both, heterogeneity and endogeneity, when modeling the dynamics of salesperson performance. The study reports the following results: (1) the importance of relational marketing efforts for performance increases with time; (2) price specialization enhances performance, but its importance decreases with time; (3) product specialization and (4) selling more in advance both increase performance and the importance of both effects increases with time; (5) geographic proximity enhances performance regardless of time. Important managerial implications are discussed in detail.

### 4 - Antecedents and Consequences of Frontline Employee Performance

Selin Kudret, Kingston Business School, London, United Kingdom, S.Kudret@kingston.ac.uk, Oguz Ali Acar

Frontline employees form an essential channel between firms and customers as they have a central role in gaining important market insights, communicating marketing information and strengthening relationships with customers. Researchers therefore often consider that performance of frontline employees lead to greater success in the marketplace. However, empirical evidence linking performance of such employees with market performance of firms is scarce. In addition, whether contextual, social or individual factors influence the relationship between frontline employees’ job performance and firms’ market performance remains unknown. In this paper we attempt to address these issues. Analyses of a cross-cultural and multi-level data from 81 branches and 477 employees of an international bank provide important implications for how to better manage frontline employees.
insights in understanding how online advertisements work. Such effects, however, no longer exist once consumers find out the persuasive or signaling function of advertising, during their information search process. We argue that display ads increase the expected value of consumers, via spillover effects. We use a consumer information search model to explain these effects. When consumers who have not clicked into the firm's website before. We followed up by conducting a field experiment, in which the agency relaunched display advertising for eight days. The experiment data further validates the positive spillover effects. We use a consumer information search model to explain these findings. We argue that display ads increase the expected value of consumers, via the persuasive or signaling function of advertising, during their information search process. Such effects, however, no longer exist once consumers find out the actual deals from the firm's website. Our findings shed valuable managerial insights in understanding how online advertisements work.

2 - Pennies for Your Thoughts: Costly Product Consideration and Purchase Quantity Thresholds

Yufeng Huang, University of Rochester, yufeng.huang@simon.rochester.edu

Why are consumers unresponsive to small price discounts? This paper proposes that it is costly to consider the purchase of a product, even given full information. As a result, a consumer will rationally not consider a product (and thus will not purchase) until the price becomes favorable, at which point she will buy enough quantity that justifies the fixed cost of consideration. In this paper, we identify consideration cost through discontinuities in the purchase quantity at these "marginal" prices. We then construct a love-of-variety model of demand, explicitly modeling the choice of consideration set. Estimating this model using data from the yogurt category, we find that considering each yogurt product costs $1.37 for consumers familiar with the product, against a 4 fold for consumers unfamiliar with it. Such mental cost discourages allocating expenditure across many products. A new consumer with love-of-variety taste would purchase 50% more varieties if she were familiar with all the products. Finally, at our estimates, larger costs of consideration increase price sensitivity of new consumers.

3 - Discovering Two-stage Decisions Based On Discrete-continuous Choices

Thomas Otter, Goethe University Frankfurt, otter@marketing.uni-frankfurt.de, Keyvan Dehmamy

We show analytically how discrete-continuous choice data are informative about consumers who infer signal-like information from the appearance of attractive discounts. We propose a new identification approach that exploits variation in product availability, which allows us to distinguish advertising's effect on brand equity from consideration cost. It is well known that a brand on the shelf influences only what brands are considered in a choice experiment. We also illustrate that including the number of facings as an argument to utility maximization over the full set of brands presented instead results in clearly misleading inferences in our example.

4 - Identifying Consumer Inattention: A Product-availability Approach

Kosuke Uetake, Yale School of Management, kosuke.uetake@yale.edu

Consideration set models are widely used to investigate the effects of marketing strategies on the consumer choice funnel. However, identification of these models is challenging because low choice probability may be attributed to either low utility or low attention. In this paper, we propose a new identification approach that exploits variation in product availability, which allows us to distinguish advertising's effect on brand equity from consideration cost. It is well known that a brand on the shelf influences only what brands are considered in a choice experiment. We also illustrate that including the number of facings as an argument to utility maximization over the full set of brands presented instead results in clearly misleading inferences in our example.

3E, 3rd Floor

Consumer Search & Consideration

Contributed Session

Chair: Kosuke Uetake, Yale SOM, 165 Whitney Avenue, Rm. 5475, New Haven, CT, 06520, United States, kosuke.uetake@yale.edu

1 - Targeted Display Advertising, Paid Search Advertising, and Consumer Information Search: A Field Experiment

Tat Y Chan, Washington University, chan@wustl.edu, Yaxin Ming, Xing Zhang

Technology development has enabled marketers to track individual consumers who search for information online and, therefore, marketers can use display advertising to target prospects who search for the keywords that are relevant to their business. This research studies how targeted display advertising can work with paid search advertising to generate more consumer clicks and conversions. Using data provided from a car loan firm, we find that the click and conversion rates from display ads are far lower than from search ads. Because of the limitation in budget, the advertising agency that provides online advertising services for the firm decided to eliminate display ads during the sample period and focus spending on search ads. Our analysis shows that, after the change, the click and conversion rates of search ads have declined, suggesting a positive spillover effect from display ads to search ads. These effects only come from consumers who have not clicked into the firm's website before. We followed up by conducting a field experiment, in which the agency relaunched display advertising for eight days. The experiment data further validates the positive spillover effects. We use a consumer information search model to explain these findings. We argue that display ads increase the expected value of consumers, via the persuasive or signaling function of advertising, during their information search process. Such effects, however, no longer exist once consumers find out the actual deals from the firm's website. Our findings shed valuable managerial insights in understanding how online advertisements work.

FC06

3G, 3rd Floor

New Methods in Structural Estimation

General Session

Chair: Avery Haviv, University of Rochester, 661 South Ave., Apt. 403, New York, NY, 14620, United States, averyhaviv@gmail.com

1 - Lasso Random Coefficient Estimator

Xing Li, Stanford University, Stanford, CA, United States, xinggli@stanford.edu, Han Hong

We propose to incorporate LASSO estimator in a nonparametric random coefficient model for an aggregate demand model, based on the linear regression formulation in Bajari, Fox and Ryan (2007) and on solving for the weights on a predetermined discrete support. The size of the support may increase as the sample size increases, as allowed by the LASSO selection procedure. We present Monte Carlo study to demonstrate the finite sample properties of the estimator.
2 - Approximating the Cost-of-living Index for a Storable Good
Matthew Osborne, University of Toronto. Contact: matthew.osborne@rotman.utoronto.ca
This paper estimates a cost-of-living index using a dynamic structural model for a two storable product categories with periodic promotions. In each category regime shifts to higher or lower regular retail prices are observed. Fixed base indexes do a poor job of capturing changes in the cost of living after a regime shift, deviating from the dynamic index by as much as 13%. I investigate whether two recently proposed approximate indexes can significantly reduce this deviation. Although neither always perfectly track the dynamic index, an average of the two indexes reduces the overall deviation to about 5%. I also introduce an extension of the widely used Inclusive Value Sufficiency assumption that will allow it to be employed in settings where consumers purchase multiple packages of a product in a single purchase occasion.

3 - Identification of the Discount Factor in Discrete Dynamic Choice Models
Oystein Daljord, University of Chicago, Oeystein.Daljord@chicagobooth.edu
Empirical models of infinite horizon dynamic discrete choice models are extensively used in marketing. The identification of the discount factor in these models is crucial for their application to the evaluation of agents' responses to dynamic interventions. It is well-known that the discount factor and the utilities are not jointly identified from choice data without further restrictions. Magnac and Thesmar (2002) showed that the discount factor is identified by the existence of a state variable that affects expected future utility under an exclusion restriction on the current value function. The current value restriction is however hard to satisfy in applications, which limits its practical value. We present a new identification result using exclusion restrictions that are more directly useful to applied researchers. Either set of exclusion restrictions is shown to give the dynamic discrete choice model. The identification of the discount factor is shown not to follow as a special case of recent generic identification results for hyperbolic discounting.

4 - Estimation of Dynamic Discrete Optimization Problems with Generalized Discounting Patterns
Avery Haviv, Simon School of Business, averyhaviv@gmail.com
Many fundamental economic behaviors, including savings, investment, and insurance, involve agents making trade-offs between current and future payoffs. Structural dynamic models have developed to account for this decision making. To date, dynamic models have almost exclusively assumed an exponential discounting rate. However, evidence in both economics and psychology research suggests that agents often do not discount exponentially. In this paper, I introduce a method that can estimate an infinite horizon discrete structural dynamic model for any convergent discounting function. This paper contains three results. First, I show that there always exists a Markov perfect equilibrium where the agent employs a stationary strategy. Second, by assuming the agent employs a stationary strategy, I show how expected discounted payoffs can be calculated for any discounting function, including those that vary by time or by state. Finally, in the special case of hyperbolic discounting, I derive a closed-form solution for the value function.

FC08
5A, 5th Floor

 Pricing VI
Contributed Session
Chair: Sabine Moser, University of Passau, Passau, Germany. Contact: sabine.moser@uni-passau.de

1 - Time Preferences and the Pricing of Complementary Durables and Consumables
Iman Ahmadi, PhD Candidate, Goethe University Frankfurt, Theodor-Adorno-Platz 4, Frankfurt am Main, 60323, Germany, I.Ahmadi@wwi.uni-frankfurt.de, Bernd Skiera, Anja Lambrecht, Florian Heubrandner
When consumers buy complementary products, the durable is typically purchased in an earlier period than the consumable. There is strong empirical evidence that consumers discount at significantly higher rates than firms. Yet, most research has not considered the effect of consumer discount rates on optimal prices. In this paper, we extend the identification of consumer consumption and pricing choices for complementary products in an infinite repeated game setting. We model four competitive settings: the firm is a monopolist or competes in the durable market and either ties the consumable to the durable or sells untied products. We derive optimal prices for the durable and the consumable, as well as profit, consumer surplus and welfare. Our analysis yields four main results: First, higher time preferences of consumers may decrease profits and always decrease consumer surplus and, thus, welfare. Second, if the firm competes in the durable market, tying increases consumer surplus when consumers discount at a greater rate than the firm. Third, higher time preferences of consumers may decrease the optimal durable price and increase the optimal consumer surplus. Fourth, the optimal consumer surplus of tied goods is always higher than the optimal consumer surplus of untied goods, while the optimal durable price is always lower for tied than untied goods. We discuss the implications of our results for firms' pricing strategies as well as public policy makers.

2 - Simple Pricing with Heterogeneous Consumers
Manish Gangwar, Indian School of Business, Hyderabad, 500032, India, manish_gangwar@isb.edu, Hemanth K. Bhargava
Many technology products and services are consumed in multiple units over a period of time such as an hour, day, week or year. Such products are often sold under “Simple Pricing” a single price plan offered to all consumers. This pricing philosophy is partially driven by service pricing and current business trends, including unbundling of products, and ability of firms to monitor actual usage. Simple pricing schemes include single-parameter plans that charge for either usage or access (i.e.,”Pay as you Go” or per-unit pricing, and “All you can Eat” or buffet pricing), and a combination of the two via a two-part tariff (2PT) or a self-selection menu of buffet and per-unit pricing. A fundamental question in simple pricing is the relative role of access fees and usage fees in monetizing the product value. We examine optimal design of these plans, and how their relative performance depends on the two forms of consumer heterogeneity, valuation and appetite. We find that appetite heterogeneity, not the traditional valuation heterogeneity, is more critical in optimal plan selection. Moreover, when firms are uncertain about heterogeneity, the per-unit plan is less risky compared to the buffet plan, sacrificing less profit across the spectrum of heterogeneity scenarios. In general, the per-unit plan is better on market coverage, but buffet pricing creates higher consumer surplus. Does 2PT always handsomely beats both single-parameter plans? It does so only when the two forms of heterogeneity are both moderate. However, 2PT merely reduces to per-unit pricing when consumers primarily exhibit appetite heterogeneity, and it is similar to buffet pricing under high valuation heterogeneity. While a 2PT does well at combining the contrasting features of these two plans, generally a better approach is to offer a self-selecting menu, because it produces profit roughly similar to the 2PT and dominates on market coverage and consumer surplus.
Sabine Moser, University of Passau, Passau, 94032, Germany, sabine.moser@uni-passau.de, Jan H. Schumann

Increasingly, service industries ranging from financial to telecommunication services allow consumers to customize their service tariffs by selecting individual features from a menu. Despite the growing proliferation of such toolkit pricing models, research on its impact on customer perceptions and their actual behavior is still sparse. Moreover, the effects of mass customization of tariffs on service firm’s profits have not been investigated so far. Whereas various studies show that customers are willing to pay a premium for self-designed products using MC toolkits, our results show that those findings do not necessarily hold for service tariffs. With an online-based scenario experiment and one laboratory experiment we show that consumers prefer toolkit pricing models compared to regular flat rates even when the price is held constant. Consumers perceive toolkit tariffs to have a higher preferences fit and experience higher task enjoyment, leading to higher perceived price fairness as compared to regular flat rates. Hence, from a consumer perspective toolkit pricing creates additional value. Yet, by using five years transactional data of a mobile phone service provider with over 400,000 customers we show that toolkit pricing has negative effects on customer lifetime values as customers learn and change their behavior over time. Firms should therefore carefully evaluate the trade-off between value creation and profits. This study extends the existing literature on MC and flat rate pricing, and is among the first to show that the active participation in a contractual service price setting differs from customizing products.

FC10
5C, 5th Floor
Entertainment II
Contributed Session
Chair: Charles B Weinberg, University of British Columbia, Sauder Business School, Henry Angus Bldg, Rm 669, Vancouver, BC, V6T 1Z2, Canada, weinberg@sauder.ubc.ca

1 - Timing Strategies for Sequentially Distributed Products
Rouven Seifert, PhD, University of Hamburg, Hamburg, Germany, rouven.seifert@uni-hamburg.de, Michel Clement, Ole Kleinen

Exclusive product releases play an important part of the marketing strategy for sequentially distributed products. In many industries, producers use exclusive product releases of a product line to segment the market with time-delayed product versions (Bruce et al., 2012; Hennig-Thurau et al., 2006; Lehmann and Weinberg, 2000). Especially in the movie industry which is dominated by sequential release strategies, movie studios employ exclusive home video distribution strategies to convert consumers from the rental channels to purchasers. These exclusive product releases are critical for the profitability of the producers. They can increase total profits through low-to-high-margin substitution, but can also hurt total profits if consumers are not convertible and switch to other products or switch versions. Previous research simulates exclusive releases of two product versions, but lacks of an empirical support (Mulckherjee and Kadiyali, 2011). This study is the first that empirically quantifies the effects of exclusive product release policies to two distribution channels. We provide a multi-channel demand model and apply it to a dataset of movies released on home-video between 2009 and 2014. For each movie, we collect data on sales in digital rental and sell-through channels, box office results, prices, and movie attributes. Seemingly unrelated regressions report a significant positive effect on the sales of the exclusive high margin channel, but only little cannibalization of the delayed version. We tested the robustness of our results against different model specifications and estimation strategies. Our main implication is that managers should use exclusive windows in sequential distribution contexts to increase market segmentation and enable low-to-high-margin substitution.

Nils Woelmer, Assistant Professor, Vienna University of Economics and Business, Institute for Interactive Marketing & Social Media, Welschendplatz 1, Vienna, 1020, Austria, nils.woelmer@wu.ac.at, Dominik Papis, Michel Clement, Martin Spann

Although the Internet has been a marketplace for digital products for years, our knowledge about the factors that shape the price elasticity of digital products is incomplete. This paper investigates how free music consumption via legal on-demand video streaming services (i.e., YouTube) and illegal piracy channels (i.e., BitTorrent) affects the price elasticity of paid music downloads. On the one hand, music is an experience good whose true utility is only revealed to the consumer after it has been consumed. Thus, consumers may use free offers as a sampling device to reduce the uncertainty associated with a product’s quality. This in turn may lead them to update their a priori utility expectation and to purchase music they have previously discovered via free channels. In line with information integration theory, it can be argued that providing more non-price information will dampen consumers’ price sensitivity. On the other hand, free channels can serve as a substitute for purchases, putting distributors of digital products in direct competition with free offers. If this competition takes place, price elasticity will become more negative with the usage intensity of free channels. As theory does not make clear predictions about which of these effects dominate, these effects must be disentangled empirically. To this end, we use a large panel data set from the German market comprising the sales and various control variables of more than 100 music albums over a period of more than two years. Our results show that the availability of free legal and illegal channels is important, as only US$0.70 are the price sensitivity, which suggests that consumers do not use these sampling tools to reduce their uncertainty prior to consumption, but rather as a substitute for purchases.

FC10
5D, 5th Floor
Working Paper XIII
Contributed Session
Chair: Bret Hollenbeck, University of California-Los Angeles Anderson, 1317 S Westgate Avenue, Apt 204, Los Angeles, CA, 90025, United States, brett.hollenbeck@gmail.com

1 - The Effect of Online Piracy On The Box Office Performance of American Movies In Foreign Markets
Christophe Bellego, Crest, Malakoff, France, christophe.bellego@ensae.fr, Romain De Nij

Using the French anti-piracy law known as Hadopi, we study the effects of online piracy on movie sales in theaters. Applying four estimation strategies at different levels of observation (country, town, consumer, and movie), we find that the introduction of the law is associated with a 9% increase in the market share of American movies but no expansion of the total market. We exclude supply side reactions by distributors as an explanation for this displacement effect that benefits American movies. The increase in the box office performance of American movies is primarily explained by the behavior of younger consumers.
2 - Online Reputation Mechanisms and the Decreasing Value of Brands
Brett Hollenbeck, University of California-Los Angeles Anderson, 1317 S Westgate Avenue, Apt 204, Los Angeles, CA, 90025, United States, brett.hollenbeck@gmail.com
This paper investigates the value of umbrella branding and how it is changing in response to a large increase in consumer information provided by online reputation mechanisms. Theory suggests much of the value of umbrella branding results from asymmetric information between buyers and sellers. As more information becomes available, consumers should rely less on brand names as quality signals and the ability for firms to extend reputations across heterogenous products or services should decrease. To examine this empirically, this paper combines a large, 15 year, property- level panel of hotel revenues with millions of online reviews from multiple platforms. I find that branded, or chain- affiliated, hotels earn substantially higher revenues than independent hotels, and that this premium has declined by over 50% from 2000 to 2015. I find that this can be largely attributed to an increase in online reviews, and that this affect is largest for low quality and small market firms. Finally, the correlation between firm revenue and brand-wide reputation is decreasing and the correlation with individual hotel reputation is replacing it.

■ FC12
5E, 5th Floor
Working Paper XIV
Contributed Session
Chair: Hannes Datta, Tilburg University, Department of Marketing, P.O. Box 90153, Tilburg, 5000 LE, Netherlands, h.datta@uvt.nl
1 - I Am Somebody: The Role of Non-Verified Reviews in Consumers’ Decision
Miaomiao (Michelle) Liu, Fudan University, Shanghai, China, michelle9131hm@icloud.com, Cheng Zhang, Pei Huang
In this paper, we undertake a quasi-experiment study, along with sentiment classification analysis to explore the role of non-verified reviews using reviewer data from amazon.com. By controlling for reviewer heterogeneity and product selection bias, we compare the key attributes and peer evaluations on non-verified reviews and verified reviews. The results show that comparing with verified reviews, non-verified reviews usually have lower mean star ratings and more review texts with mixed opinions. The proportions of extreme star ratings (both negative rating and positive rating) for non-verified reviews are also lower than those for verified reviews. Besides that, non-verified reviews usually include more words and sentences in review texts, and also more video reviews. However, consumers are more likely to vote for non-verified reviews and consider them to be more helpful than verified reviews. Follow-up robust check analyses also confirm that the main results are also consistent in less active reviewer sample and non-top reviewer sample. Our research reveals evidence for the value of non-verified reviews, and reminds us to pay more attention to non-verified reviews.

2 - Changing Their Tune: How Consumers Adoption of Online Streaming Affects Music Consumption and Discovery
Hannes Datta, Assistant Professor, Tilburg University, Department of Marketing, P.O. Box 90153, Tilburg, 5000 LE, Netherlands, h.datta@uvt.nl, George Knox, Bart J Bronnenberg
Constructing a unique panel data set of individual consumers’ listening behavior on digital music platforms, e.g., iTunes and Spotify, we study the effect of adopting streaming services on individual music consumption. Achieving quasi-randomization via a matching procedure, we estimate the changes in quantity and variety of consumption after adopting a streaming service like Spotify. Adopting streaming services leads to substantial increases in quantity, variety in any measure, plays of new content, and discovery of new favorites. It is also associated with a large drop in concentration. We document that adopting Spotify leads to more discovery of highly valued music. Relative to using iTunes, adopting Spotify raises repeat listening for consumers’ best new discoveries, although consistently with the marginal variety on Spotify being free-lowers repeat listening for the average new discovery relative to non-adopters. We discuss the implications for platforms, labels, artists, and consumers.

■ FC13
5F, 5th Floor
Mobile Marketing Session II: Omnichannel Targeting and Field Experiments
General Session
Chair: Xueming Luo, Fox School of Business, Temple University, Philadelphia, PA, 19122, United States, xluo@temple.edu
Co-Chair: Yuchi Zhang, Temple University, 1, Philadelphia, PA, 1, United States, yuchizhang@gmail.com, Rex Xu, University of Houston, rexdu@bauer.uh.edu, Raymond Pettit, Kenneth Wilbur, Linli Xu
About 200 million US consumers owned smartphones in 2015, 66% of whom reported that they have used their smartphone to look up information received from TV commercials. Thanks to the prevalence of such “second-screen” behavior, a growing body of evidence has documented that TV ads can lead multitasking viewers to take immediate actions via their mobile devices, causing temporary spikes in search, web traffic, sales and other online activities. In this study, for a cross-section of brands over several months, the authors matched second-by-second TV ad insertion and viewership data with minute-by-minute online search data. They found not only significant online search spikes in response to TV ads but also, after controlling for viewership size and composition, substantial and systematic variation in the height of those spikes across days/TV, TV networks, programs/genres, ad slots and creative. They illustrate how their findings can help make TV advertising more effective.

2 - How Do TV Ads Drive Search Spikes: Second-Screen Behavior
Rex Xuying Du, University of Houston, rexdu@bauer.uh.edu, Raymond Pettit, Kenneth Wilbur, Linli Xu
About 200 million US consumers owned smartphones in 2015, 66% of whom reported that they have used their smartphone to look up information received from TV commercials. Thanks to the prevalence of such “second-screen” behavior, a growing body of evidence has documented that TV ads can lead multitasking viewers to take immediate actions via their mobile devices, causing temporary spikes in search, web traffic, sales and other online activities. In this study, for a cross-section of brands over several months, the authors matched second-by-second TV ad insertion and viewership data with minute-by-minute online search data. They found not only significant online search spikes in response to TV ads but also, after controlling for viewership size and composition, substantial and systematic variation in the height of those spikes across days/TV, TV networks, programs/genres, ad slots and creative. They illustrate how their findings can help make TV advertising more effective.

3 - O2O Omnichannel Coupons
Yuchi Zhang, Temple University, Philadelphia, PA, United States, yuchizhang@gmail.com, Fue Zeng, Xueming Luo
Due to the omnipresence of mobile and digital technologies, O2O is a burgeoning cross-channel marketing practice of enticing online customers to shop offline (online-to-offline) and offline customers to shop online (offline-to-online), thus O2O for short. Our research exploits a two-sided multi-promotion randomized field experiment in collaboration with a large department store. The multiple promotions are channel-targeted coupons (treatments): an offline-only coupon, an online-only coupon, and a dual-channel coupon. The control is a holdout group of customers who did not receive any coupon. This field test seeks answers to three questions: (1) can marketing promotions effectively engender cross-channel behavior such as online-to-offline and offline-to-online? (2) what are the downstream impacts of these promotions on the total multichannel sales from both online and offline purchase channels for the firm? And (3) does the distance between the consumer’s home residence and physical store account for these effects? The results proffer novel managerial implications regarding how to leverage channel-targeted coupons for omnichannel marketing promotions.
1 - Product Trial Versus Online Product Fit Opinions: A Balancing Act on Fit Uncertainty
Yang Wang, Graduate Assistant, University of Utah, 1655 Campus Center Dr., Rm. 1113, Salt Lake City, UT, 84112, United States, yang.wang@eccles.utah.edu, Vandana Ramachandran, Olivia Sherg, Bill Moore

Online retailers are frustrated with the issue of high product returns related to fit uncertainty. While some retailers have a lenient return policy to encourage product trial, others provide information in an attempt to reduce pre-purchase uncertainty. The goal of this study is to test whether consumers either of these two options provided by online retailers. Across customers, we find a potential balancing act between the use of a free return policy to trial product and the use of online product reviews to reduce the pre-purchase fit uncertainty. By linking online product reviews with sales and returns data, we discover a unique role of product fit opinions in online transactions. Specifically, fit information volume has a positive relationship with sales and a negative relationship with product returns. More interestingly, there is substantial heterogeneity in the impact of fit information volume on sales: although the majority of customers tends to select products with high fit information volume (i.e., fit uncertainty), there is a niche group of customers (i.e., low fit uncertainty) who do not return the fit. Although such behavior leads to a high product return rate, we find that it actually brings long term benefits to the online retailer in terms of customer lifetime value (CLV).

2 - Content Monetization on Social Media: A Two-Sided Analysis
Rubin Geng, PhD, Candidate, Zhejiang University, 388 Yuhangtang Road, Hangzhou, 85719, China, grace.bin.207@gmail.com, Sha Yang, Chen Xi

As the success of social media platforms heavily depends on the amount and the nature of user-generated content (UGC), content monetization has been introduced as a mechanism to incentivize users to generate high quality content. In particular, content contributors can be paid (i.e., tipped) by readers who like the story. We present a two-sided dynamic model of content consumption and content generation with presence of such content monetization mechanism. On content consumption, we model three aspects of demand for content type j contributed by individual i: reading volume, percentage of favorite, and percentage of tipping. On content generation, we model the choice probability of submitting content type j from individual i to be affected by her expectation on the reading volume, percentage of favorite, and percentage of tipping, via a Bayesian learning process. We posit that a user may learn the popularity of a content type based on her previous experience as well as others’ experience. We apply the model to a panel data set of long blog posting behaviors by 3,292 users in Sina Weibo platform. The empirical result supports the learning story, which helps to explain how the monetization mechanism leads to content convergence. Our findings also generate important managerial insights on effective use of content monetization on social media platforms.

3 - Drivers of Social Media Engagement with Rival Brands
Koen Pauwels, professor, Ozegin University, Kusbakisi Str No 2, Altunizade Uskudar, Istanbul, Turkey, koen.pauwels@ozegin.edu.tr

Social media become focal points for marketers to communicate with and to engage consumers and customers. Fans do not just interact with the own social media ecosystem but also have a keen eye on what is happening behind the neighbor’s fence. However, this puts managers into a dilemma. Whatever drives engagement on the own side, may simultaneously positively drive engagement on the opposition’s site. We use a unique social media data set to explore the dynamic relation between liking, commenting and sharing and link it to marketing performance. With the help of an R based social media crawler we extracted all publicly available data from the official Facebook sites of the two leading presidential candidates of the US Democratic Party. The data sets consists of more than 850,000 comments and posts for Bernie Sanders and 1.35 million comments and posts for Hillary Clinton. We ran the analyses from April 2, 2015 until January 2016. For each comment and post we further have information on the number of likes and shares. We aggregated the social media data on daily basis. We enrich our data set with information on donation for the two candidates, which was also aggregated on daily level and matched with the social media data.
4 - Multichannel Management with Digital Products: How E-Books Affect Online and Offline Print Book Sales
Hui Li, Assistant Professor of Marketing, Carnegie Mellon University, 5000 Forbes Avenue, Pittsburgh, PA, 15213, United States, hul1@andrew.cmu.edu
Digital products combine the advantages of online (lower prices and broader selections) and offline products (convenience) and place new threats on the existing channels. This paper studies their impact in the context of books. Using individual-level online book and e-reader transaction data and zip code level offline bookstore data, we estimate a structural demand model of consumer dynamic e-reader adoption and subsequent book retailer (Amazon, other online retailers, offline bookstores), reading format (e-book or print book), and quantity choices in a number of book genres. The estimates reveal that e-books are closer substitutes to online print books and seem to compete head-to-head with offline bookstores in the “casual” genre. Overall, 48% of e-book sales come from cannibalizing print book sales and 52% come from market expansion. Offline bookstores experience the largest cannibalization loss. They may respond by strategizing their genre selections and carrying fewer “casual” books or cutting prices for “lifestyle” and “practical” books, especially in neighborhoods with fewer bookstores. The results suggest that multichannel management strategies should vary by product category and market.

■ FC16
5J, 5th Floor
Social Influence III
Contributed Session
Chair: Douglas Bowman, Emory University, Goizueta Business School, 1300 Clifton Road, Atlanta, GA, 30322-2710, United States, doug.bowman@emory.edu
1 - M-WOM for Mobile Marketing
Juyani Jiang, PhD Candidate, Lingnan University, 8 Castle Peak Road, Tuen Mun, Hall D 717, Hong Kong, NA, Hong Kong, juyanjiang@l.hk
Mobile technologies have enabled consumers to discover and reach products anytime, anywhere. With consumers are deeply engaging and increasingly relying on mobile devices for searching and interaction during purchasing, marketers are embracing an unprecedented era of mobile opportunities. In consequence, the ubiquitous interaction makes mobile word-of-mouth (m-WOM) more valuable and gains considerable attention. In comparison with computer, mobile devices are smaller in size and mostly used by consumers on-the-move. The constraints of devices limit the amount of content that they can generate or consume. In order to help marketers to realize this evolution and offer consumers the context-sensitive recommendations, this research draws from the theories of media psychology and behavioral economics to better understand the strengths, limitations and the effect of m-WOM by analyzing the data from dianping.com. Three escalating studies were performed to investigate the distinctive attributes of m-WOM, their persuasiveness under a lower construal level and their effectiveness in the adoption and redemption of group-buy promotion. We point out that m-WOMs have a nature of abstractness, shortness and extremeness, more generated by common consumer rather than experts for those inexpensive consumption; they are perceived to be more helpful when they are from an associated group and this social association is amplified; they are valued more for their freshness and for hedonic consumption; under a circumstance of price promotion like group buying, they have a higher influence on the adoption of moderate discount offers and their fast herding speed will lead to the urge of redemption. The finds will contribute to the growing literature on the role of m-WOM and help business owners to effectively improve performance by utilizing this seamless interaction.

2 - An Experimental Test of the Performance of Referral Reward Programs
Chanho Song, California State University San Bernardino, 5500 University Parkway, San Bernardino, CA, 92407, United States, chanho.song@csusb.edu, Jennifer Johnson, Sungha Jang
Generating word-of-mouth (WOM) is considered a marketing tool to stimulate customers to purchase a product. Firms use referral rewards to encourage existing customers to make a recommendation. Previous research has separately considered the effects of different referral reward schemes on the recommender’s referral likelihood and the receiver’s purchase likelihood. However, when recommenders are making referrals to strong ties, receivers are highly likely to purchase regardless of the reward scheme. In addition, the recommender only scheme is found to be the least effective in increasing the receiver’s purchase likelihood for weak ties. This is significant, as many firms use this reward scheme in practice. Thus, this study has implications for managers deciding how to design customer referral reward programs.

3 - An Empirical Analysis of the Mediating Role of Word-of-Mouth in Movie Industry with Pirated Contents
Xin (Shane) Wang, Assistant Professor, Ivey Business School, Western University, 1255 Western Road, London, ON, N6G 0N1, Canada, xwang@ivey.uwo.ca, Shijie Lu
The age of digitization has led to the prevalence of pirated copies in movie industry. Previous literature has generally found a negative net impact of pre-release piracy on box office revenues. However, there exists anecdotal evidence that piracy can boost box office revenues by generating online word-of-mouth (WOM). In this paper, we investigate whether such an indirect WOM-effect of piracy exists as well as its magnitude. By employing a dynamic fixed-effect model to a panel dataset of over 300 movies released between 2013 and 2014, we find evidence for the positive WOM-effects on both pre-release and post-release piracy. Our results indicate that the WOM-effects are about 6% and 3% for low-quality and high-quality piracy prior to movie release and are about 4% and 2% for low-quality and high-quality piracy post to movie release. The results also suggest that to battle against the direct negative impact of movie piracy, comedies and dramas should actively monitor the occurrence of low-quality piracy after movie release, whereas thrillers and horrors should actively monitor the occurrence of high-quality piracy after movie release.

4 - Internet Source Reliance for Services
Douglas Bowman, Professor of Marketing, Emory University, Goizueta Business School, 1300 Clifton Road, Atlanta, GA, 30322-2710, United States, doug.bowman@emory.edu, Alberto SaVinhias
We study information search behavior by consumers to support a purchase decision for services high in experience attributes. Our contribution is an understanding of how reliance on different Internet source types impacts search outcomes for services. We find evidence of non-linear effects of Internet source reliance on search outcomes, accounting for the different benefits and costs of Internet searches. We propose a disaggregated analysis of different Internet source types and demonstrate that the impact of Internet reliance on search outcomes depends on the specific type of Internet source consumers rely on. Further, we integrate the loyalty program and information search literatures finding that loyalty program membership is an important determinant of search patterns. Our empirical application uses data from a national survey of consumers who recently made a hotel-stay purchase/reservation. Our results have important implications for consumers and for service providers designing loyalty programs, targeting strategies and planning and scheduling promotional campaigns.
1 - The Dynamics of Evidence-Based Strategies In R&D-Intensive Markets: The Case of Specialty Drugs

Demetrios Vakratsas, McGill University, 41 King, Montreal, QC, Canada, demetrios.vakratsas@mccgill.ca, Wei-Lin Wang

We focus on the dynamics of evidence-based strategy and its effects on new product success in the context of the specialty drug market. More specifically, we examine the dynamic effects of clinical trials and resulting scientific publications, as well as marketing effort, on the sales of newly launched specialty drugs. Although prior research has examined the effects of the valence and volume of public scientific evidence (i.e., published clinical trial results in medical journals) on new product performance, no study, to the best of our knowledge, has investigated the dynamics of clinical trials effects, and their interactions with marketing efforts. Our empirical application uses a Bayesian Dynamic Linear Model on data consisting of information on all clinical trials and the resulting scientific publications (including authorship, citations and publication impact), as well as post-launch marketing investment information for the focal drug. The sales of the drug are decomposed into short-term shocks and a long-term trend, both dependent on marketing variables such as detailing and physician journal advertising. To account for endogeneity, we consider the influence of sales on the marketing variables and the interactions between marketing variables. Our findings suggest positive relationships between trials, public scientific evidence, and sales. These relationships are moderated by the reputation and reach of the researchers, the locations they work, as well as the scale and stage of the clinical trials. The influence of marketing variables is limited. The results provide insights into the return on R&D activities and evidence-based strategy, key opinion leader selection, and information propagation in R&D-intensive industries.

2 - Competitive Reactions to Personal Selling

Jaap E Wieringa, University of Groningen, Groningen, Netherlands, J.E.Wieringa@rug.nl, Niels Hollotrop, Maarten Gijsenberg, Philip Stern

A recurring question facing managers is how (if at all) to react to competitive actions. In this research we distinguish between reactions to competing strategic and competing tactical actions, different from prior homogeneous definitions of competitive actions. Using a unique, single-source dataset of personal selling interactions between firms and customers covering fourteen drug categories, the authors show that substantial differences in reactions exist. In particular, strategic actions elicit competitive responses with stronger short- and long-term consequences compared to tactical actions. Furthermore, while the decision to react to competing strategic actions is always warranted, this is not the case for a substantial amount of tactical actions, where firms retaliate with an ineffective marketing instrument that accommodates with an effective marketing instrument. This divide between actions is further exacerbated in the strength of the reactions that we observe: stronger or weaker reactions to strategic actions occur in line with theoretical expectations, whereas reactions to tactical actions are often not. Based on these findings, we suggest directions to improve decision maker’s reactions to competing tactical actions.

3 - The Impact of Comparative vs. Non-Comparative Message on New Product Adoption

Pradeep K Chintagunta, University of Chicago, Pradeep.Chintagunta@chicagobooth.edu, Xiaojing Dong, Ying Xie

Since the FTC issued a statement in 1972 endorsing the view that advertisers can explicitly name competing brands, comparative message has become prevalent in various forms of marketing communication. In this study, we seek to understand the impact of comparative advertising on new product adoption vis-à-vis non-comparative advertising. We then build a Bayesian learning model to formally incorporate these distinctive features. Our proposed model has three major distinguishing features compared to the standard Bayesian learning framework. First, our model allows the information signals extracted from the two types of advertising messages to be biased. Second, we allow the information efficiency associated with these signals to differ across message formats and brands. Lastly and most interestingly, although we assume there is no quality uncertainty associated with the incumbent product in our model, the incumbent has incentives to disrupt the learning process of the new entrant through comparative advertising. We estimate the model using a behavioral panel dataset of physicians’ drug choices in a therapeutic category with three drugs. Among these drugs, one of them is a successful incumbent, two entered the market during the data period. We estimate the proposed model in a hierarchical Bayesian framework. We infer not only “how much” of an effect comparative and non-comparative marketing communication has on consumers’ choice, but also via “which” mechanism this effect takes place.

4 - When Generics Challenge Brands: The Interplay Between Regulation and Detailing

Vijay Ganesh Hariharan, Erasmus University Rotterdam, Rotterdam, Netherlands, hariharan@ese.eur.nl, Vardit Landsman, Stefan Stremersch

Generic drugs are comparable, but not necessarily identical, to their corresponding branded drugs in efficacy, dosage, administration form and intended use. Generic drugs pose a formidable threat to branded drug manufacturers, which are facing a record number of expiring patents. This increase reflects a benefit not only to generic drug manufacturers but also to healthcare payers, because generic drug makers typically charge lower prices than branded drug manufacturers. Branded pharmaceutical firms respond to the loss in sales due to patent expiry and to generic entry by adjusting their detailing efforts both before and after patent expiry. On the other hand, regulators may introduce different regulatory policies to encourage the penetration of the generics after patent expiry. In this study, we investigate the effect of three individual regulations targeted to increase generic penetration viz., generic prescribing, generic substitution, and generic reference pricing, on the detailing efforts of branded drugs and on the effectiveness of detailing both before and after patent expiry. We also investigate the spillover effects of pre-expiry detailing on post-expiry sales across different regulatory regimes. We develop a time-varying vector error-correction model to estimate the short-run and long-run effects of detailing efforts on brand sales both before and after patent expiry, the spillover effects, and the moderating effects of individual regulatory policies. We use a unique and comprehensive data set consisting of 31 molecules across 11 countries over a 12 year time period. Our results are relevant to branded and generic manufacturers as well as for regulators.
2 - Horizontal and Vertical Brand Extensions Impact on the Case of Automobile Industry
Darren Kim, UNSW, University of New South Wales, Australia, darren.kim@unsw.edu.au, Tania Bucic, Lim Viet Ngo, Ashish Sinha
Shareholder value based financial metrics are used to investigate the impact and relative effects of vertical and horizontal brand extension compared to no brand extension. For vertical brand extension additional specifications including vertical-up and vertical-down extensions are examined, and for the horizontal brand extension, moderators including attribute-fit and image-fit are included. We extend the traditional risk-return investment framework by including the impact of brand extension strategies on intangible assets, through Tobin's Q. The proposed extended framework clarifies the long term impact of marketing strategies on market-based assets. Dynamic vector autoregressive (DVAR) models are applied to data from firms operating in the automobile industry, within which both vertical and horizontal brand extensions are considered key drivers of performance. The authors find that horizontal brand extension with attribute-fit is a conservative strategy with a steady risk and return, while horizontal brand extension with image-fit is a risky but effective cash boosting strategy. Vertical-up brand extension is a challenging strategy yielding high return though with high risk, and in contrast, vertical-down brand extension is a relatively safe strategy. Furthermore, mediation of intangible assets enhances the emphasis on brands, while additional moderating factors are also found to be sufficiently potent to impact outcomes and hence, should receive due consideration. The principal practical contribution is the clear articulation of the efficacy and impact of brand extension strategies on shareholder value-oriented measures. Theoretically, this paper advances the endogenous growth theory with empirical evidence generated effects on firm financial performance though brand extension strategies.

3 - The Influence of Ingredient Co-Branding on New Product Success: Modestering Role of Product Innovativeness
Manuel Skrzypczak, PhD Student, University of Stuttgart, Keplerstrasse 17, Stuttgart, 70174, Germany, manuel.skrzypczak@bwi.uni-stuttgart.de, Stefan Hattula
An emerging strategy to market new products is the incorporation of one brand's key attributes into another brand so-called ingredient co-branding. There is extensive literature highlighting that this strategy should create positive "spillover" effects from an established component brand on the product and thus send a strong quality signal to consumers of benefits combined from two brands, which in turn stimulates buying behavior. Given these advantages, it may surprise that some firms intentionally avoid ingredient co-branding and are successful by doing so. Based on cue diagnosticity framework, the authors argue that different types of cues are available in the marketplace and a consumer's use of the ingredient brand as quality cue depends on whether a new product is evaluated as rather innovative or incrementally improved. Ingredient brands are perceived as diagnostic only if consumers observe high product innovativeness but not in the case of incrementally improvement. The results of two studies confirm the proposed moderating effect of product innovativeness on the relationship between ingredient co-branding and buying intention. Ingredient co-branding has a positive (no) effect on consumers' buying intention if product innovativeness is high (low). Moreover, the data support the theoretical argumentation for this effect. Ingredient brands are perceived as diagnostic cues only if consumers observe high product innovativeness too. Thus, ingredient branding is more effective for new product innovations. This research offers practical implications for managing new products by providing a decision framework for the effective implementation of ingredient brands. Moreover, it offers an explanation for the success of firms avoiding ingredient co-branding.

2 - Effects of Competition in Start-ups and Business Incubation
Yong Liu, Eller College of Management, University of Arizona, Tucson, AZ, United States, yoliu@eller.arizona.edu, Weihe Gao, College of Business, University of Missouri, Columbia, MO, 65211, United States, gopalakrishnas@missouri.edu
Innovation and entrepreneurial activities have taken a central stage in economic and business development across the globe. This paper examines the effects of competition in the early stage of business development, that is, how start-ups react to competitive pressure and how these reactions generate important impacts on young companies' survival and growth. Our data contain more than 100 incubators and the thousands of start-ups that these incubators fostered from 2010 to 2012 in Shanghai, China. Key characteristics such as the location, physical characteristics, the number of start-ups being fostered, the number of entrepreneurial mentors, and annual incubation spending are available for the incubators. For the start-ups, we have information about the founders, employees, tax treatment, the utilization of mentors, the number of patents applied and granted, sales revenue, and so on. Our study show that, when facing more similar start-ups and greater competition for sales and venture capital, start-ups companies often reduce their R&D investment. This is in many ways undesirable since R&D fosters competitive advantage and the long term growth for these young companies. Similarly, greater competition reduces the number of intellectual properties that the start-ups apply for. Furthermore, and contrary to what conventional wisdom prescribes, a larger number of start-ups in the same industries in the same incubator does not help attract greater investor attention. For the incubators, these results point to the need of maintaining a healthy balance between the specialization and diversity of start-ups. Our analysis also provides insights on the start-ups' entry into incubation.

3 - Competitive Reactions and Spillover Effects of Product Recalls
Chen Zhou, Moore School of Business, University of South Carolina, chen.zhou@moore.sc.edu, Rafael Becerril Arreola, Yan Dong, Tony H Cu
Do firms react to competitors' product recalls by adjusting marketing mix variables? Do they gain or lose from competitors' product recalls, and why? Is the impact of product recalls symmetric for all firms? In this paper, we address these questions. We take advantage of a natural experiment setting, namely the 2010 2010 Toyota recalls in the U.S. automotive industry. We assign car models in the same categories as the recalled car models to the treatment group and other car models to the control group. We then compare the changes in promotions, inventory levels, and sales between these two groups. We find that, after the Toyota recalls, promotional spending, inventory levels, and sales increased significantly more for car models in the treatment group than for car models in the control group. Further analyses show that post-recall promotions of Toyota drove the sales increase of car models in the same categories. That is to say, competitors' product recalls may create positive spillover effects for firms. Furthermore, we find the spillover effects are often asymmetric and substitutable between quality and promotions: (1) products with superior quality perceptions may increase sales without aggressive promotions; (2) products without strong quality perceptions may increase sales through aggressive promotion; and (3) products with brand origins similar to the recalled brands may not increase sales.

FD02
3A, 3rd Floor
Competitive Response and Spillover Effects
Content - Competition: General
General Session
Chair: Chen Zhou, Assistant Professor, Moore School of Business, University of South Carolina, Room 492, Moore School of Business, 1014 Greene Street, Columbia, SC, 29208, United States, chen.zhou@moore.sc.edu
1 - Design Versus Technology: Which Brands Benefit More from Which Type of Product Innovations?
Yan (Lucy) Liu, Mays Business School, Texas A&M University, yliu@mays.tamu.edu
Firms invest heavily in product innovations by refreshing the aesthetics design and/or improving the technological features of products. However, little is known on how the two types of design innovations impact sales differently for different brands. In this paper, we study the differential impacts of design and technology innovations on brands. In addition, we further examine how brands should adjust advertising and promotion strategies after introducing two types of product innovations. We collect 10 years of data about 207 car brands from the automobile industry, measure the degree of design changes and technological upgrades made to each car brand, and examine their impacts on sales in a hierarchical Bayesian framework. Our findings suggest that design and technology innovations have very different impacts across brands.

FD03
3H, 3rd Floor
Sales Force II
Contributed Session
Chair: Srinath Gopalakrishna, University of Missouri, Trulaske Sr. College of Business, 434 Cornell Hall, Columbia, MO, 65211, United States, gopalakrishnas@missouri.edu
1 - The Impact of Salespeople Pay Differentials on Performance
Maria Rouziou, HEC Paris, 1, Rue de la Liberation, Jouy en Josas, 92290, France, maria.rouziou@hec.edu, Dominique Rouziou
In corporations operating in business-to-business (BtoB) markets, decision makers often rely on combinations of fixed and variable pay in order to create motivating pay differentials. However, some experts believe that large pay differentials lead to pay comparisons and unfair pay perceptions. Drawing on social comparison and pay equity theory, we develop a new theoretical approach for analyzing salespeople’s pay inequalities and performance. Specifically, using multi-industry sales pay data, we examine horizontal pay inequalities within sales organizations. The results show that the impact of pay differences on performance depends on the nature of the job. We discuss the implications of these configurations for future research.
To secure sales in complex environments requires a salesperson to not only undertake a variety of critical tasks (e.g., choosing the most promising prospects; allocating limited time across prospects; offering solutions that fit customer needs, etc.) but also use the obtained information to close the sale through appropriate pricing decisions. Whereas theory has suggested when salespeople should be delegated the authority to make these decisions, empirical evidence on whether delegating authority is useful (or not) is scarce. In particular, is delegating authority actually related to sales? And, which kind of salesperson is most likely to secure higher sales growth. Our results provide managerial guidance on when, how, and to what kinds of salespeople should the firm delegate sales-related activities and decisions.

3 - A Theoretical Model of Key Account Sales Team

Ying Yang, Assistant Professor, University of Iowa, 21 E Market St, Tippie College of Business, Iowa City, IA 52242, United States, yyang24@ui.edu, James D Hess, Niladri Syam

During the past two decades, key account sales teams become more and more popular in B2B organizations. The globalization trend makes it even more challenging for sales practitioners. What are the different roles of key account managers? How to make a key account sales team work effectively? What’s the impact of salespeople’s complaints of unfairness? Although academics have started to work on these issues for years, the extant literature primarily uses qualitative method and conceptual theory. We attempt to make contributions in three aspects. First, we build a game theoretical model of a key account sales team to quantify the multiple roles of key account manager and the team selling process. Second, we mathematically show the interrelationship of salespeople’s manager’s decision between guiding and training and product specialist’s decision of selling. Third, we incorporate the salespeople’s feeling of unfairness into the model and show its detrimental effect on the team sales outcome. Under different circumstances, the inequity aversion of the key account manager may lead the team to a less desirable direction. The behavioral game theoretical model provides deep insights into the key account sales process and important strategic suggestions for managers.

4 - Managing the Sales Funnel by Assessing Prospecting and Conversion Effectiveness

Srinath Gopalakrishna, Professor of Marketing, University of Missouri, Trulaksr College of Business, 434 Cornell Hall, Columbia, MO, 65211, United States, srinath@missouri.edu, Andrew Crecelius, Ashutosh R Patil

Researchers and practitioners acknowledge that sales prospecting is critical in new customer acquisition, but academic research on this subject is virtually nonexistent. In this study, we examine the salesperson’s role at the front of the sales funnel which involves prospecting for leads and converting those prospects into customers. Based on the Motivation-Opportunity-Ability framework, we test the relationships between several drivers of prospecting efficacy and conversion efficacy via an NBD and Beta regression model. First, we discover a trade-off between prospecting and conversion, implying a ‘sweet spot’ that maximizes new customer acquisition. We also find that salespeople with more experience acquire fewer new customers than those with less experience. Further, increasing advertising support improves the PE and CE to a greater extent for more rather than less experienced salespeople, suggesting that incremental increases in the advertising budget are better allocated in favor of more experienced salespeople.

2 - Salesperson Decision Authority and Productivity: The Moderating Role of Salesperson Characteristics

Zhen Tang, The University of Arizona, 2926 North Tyndall Avenue, Tucson, AZ, 85719, United States, zhentang@email.arizona.edu, Desmond Lo, Arti Gandhi, Mrinal Ghosh

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Consumer Behavior: Learning

3E, 3rd Floor

Contributed Session

Chair: J. Miguel Villas-Boas, University of California, Haas School of Business, Berkeley, CA, 94720-1900, United States, villas@haas.berkeley.edu

1 - Communication Strategies for the Introduction of Innovative Products: The Impact of Process and Outcome Information

Ping Zhao, Assistant Professor of Marketing, Wilfrid Laurier University, P2078 Peter’s Building, 75 University Ave W, Waterloo, ON, N2L 3C5, Canada, pzhao@wlu.ca, Zhenfeng Ma, Jiulie Chen

In this research, the authors use experimental studies and Bayesian learning models to investigate the impact of various communication strategies on consumer learning and adoption of innovative products. In particular, this research investigates: (1) how customers update their perceptions of the progressive (e.g., usage progress) and outcome (e.g., product benefits) aspects of the products, and their desire to buy the products, given the new information they receive at each stage; (2) whether there exists a spillover effect between the two types of information, toward the progressive and outcome aspects of the products. Prior research has shown that process-related vs. outcome-related information processing has distinct impact on consumer acceptance of new products. However, the impact of different sequences of process- and outcome-related information on consumer reactions toward new products, as a key managerial issue, remains ambiguous. In this research, the authors examine whether and how the order of providing process- and outcome-related information influences consumer adoption of innovative products. Methodically, this research marries lab experiments and empirical modeling. The authors first track consumers’ perceived quality and purchase propensity toward new products in the setting of lab experiments, where various communication strategies have been experimented based on the combinations and the sequence of information provision. The authors also incorporate potential influence of consumer information-processing modes (cognitive vs. affective) and the newness of products (radically vs. incrementally) into the model. Based on the observations from lab experiments, the authors further quantify the impacts of information on consumer learning and decision making, using Bayesian learning model. This research brings insights into the optimal communication strategies to promote innovative products, in terms of information types and the sequence of information provision.

2 - Quantifying the Option Value of Service Menu Extensions

Wanqing Zhang, Purdue University, West Lafayette, IN, 47906, United States, zhang955@purdue.edu, Sangwoo Shin

Service providers often extend a menu of service plans via new plan introduction. While the strategic motive for service menu extension is easy to rationalize, its revenue implications are challenging to derive for various reasons. Using customer-level panel data sampled from the database of a service provider, we attempt to measure the impact of service menu extension on consumer’s subscription behavior. The unique feature of our data that a couple of service menu extensions took place during the sample period, in conjunction with rich customer-level information, enables us to accomplish our task. We propose a subscription choice model in which forward-looking consumers are learning about their subscription benefits in a Bayesian fashion and the choice set faced by them varies over time. Through a number of counterfactual experiments, we quantify the total option value of service menu extension and its decomposition into three sub-dimensions: the size of paid customer base, the duration of subscription, and the amount of spending.

3 - Optimal Learning About Multiple Alternatives: When to Rule Out Alternatives Early

J. Miguel Villas-Boas, Professor, University of California, Haas School of Business, Berkeley, CA, 94720-1900, United States, villas@haas.berkeley.edu, T. Tony Ke

A Bayesian decision maker is choosing among multiple alternatives with uncertain payoffs and an outside option with known payoff. Before deciding which one to adopt, the decision maker can purchase several informative signals on each of the alternatives to maximize the expected payoff. The decision maker solves the problem of optimal dynamic allocation of learning efforts as well as optimal stopping of the learning process. We show that the optimal learning strategy is of the type of consider-then-decide. The decision maker considers an alternative for learning or adoption if and only if the belief on the expected value of the alternative is above a threshold. Given several alternatives in the decision maker’s consideration set, we find that sometimes, it is optimal for the decision maker to learn information from the alternative with lower expected value, i.e., the one the decision maker currently prefers less. If the decision maker subsequently receives enough positive signals, the decision maker will learn the better alternatives; otherwise the decision maker will rule out this worse alternative from consideration and adopt one of the other alternatives. We find that this strategy works because it minimizes the decision maker’s learning efforts. It becomes the optimal strategy when the outside option is weak. Early learning is more informative than later learning, and the decision maker’s beliefs about the different alternatives is in an intermediate range.

Game Theory

3G, 3rd Floor

Contributed Session

Chair: Prabirendra Chatterjee, Sabanci University, Orta Mahalle, Universite Caddesi No 27, Istanbul, 34956, Turkey, prabirendra@sabanciuniv.edu

1 - Product Positioning Strategy of Small and Medium Sized Enterprises

Hejun Zhuang, Brandon University, Brandon, MB, R7A 6A9, Canada, hjzhuang1@gmail.com, Hejun Zhuang

This paper examines the optimal product positioning strategy of Small and Medium-sized Enterprises (SMEs). Most of the existing strategies, such as technical investments and advertising, focus on symmetric firms. Less attention is given to weak firms when they face strong competitors such as IBM, Sony, GE, and Wal-Mart. We find that small and medium-sized firms position their products on areas which they are at advantages relative to their competitors. More importantly, they have an incentive to avoid close competition with strong firms by randomizing their product positions in the market if the advantage gap is small enough to focus on the extreme edges of the market if the advantage gap is large. That is contrast with strong firms which locate on mass market when the advantage gap is small, and randomize their market positions and expand to the edges of the market when the advantage gap is larger. Moreover, the SMEs make less on radical innovation than on incremental on product’s features. These findings show the fundamentally different strategy positioning strategies under asymmetric competition than under symmetric one.

2 - Frenemy: Relationship as Implicit Contract

Weining Bao, Assistant Professor, School of Economics and Management, Luijia Hill, Wuhan, 430072, China, wbao@jlu.edu.cn, Jian Ni, Shubhranshu Singh

Competing firms sometimes compete with each other to enter a market, while at the same time cooperate with each other in the same market. While the strategic motive for service menu extension is easy to rationalize, its revenue implications are challenging to derive. Using customer-level panel data sampled from the database of a service provider, we attempt to measure the impact of service menu extension on consumer’s subscription behavior. The unique feature of our data that a couple of service menu extensions took place during the sample period, in conjunction with rich customer-level information, enables us to accomplish our task. We propose a subscription choice model in which forward-looking consumers are learning about their subscription benefits in a Bayesian fashion and the choice set faced by them varies over time. Through a number of counterfactual experiments, we quantify the total option value of service menu extension and its decomposition into three sub-dimensions: the size of paid customer base, the duration of subscription, and the amount of spending.

3 - Modeling Consumer Retail Shopping Behavior in Emerging Markets

Abyan Uppal, University of Pennsylvania, 3730 Walnut Street, 727.6 JMHH, Philadelphia, PA, 19104, United States, auppal@warton.upenn.edu, Kinsuh Jetha, Jagmohan S. Raju

Organized and unorganized retailing coexist in emerging markets today where unorganized retailing has traditionally been dominant. Unorganized retailing is characterized by small neighborhood stores typically run by individuals or families. These small stores, also called kirana stores in India, stock items inside the store away from the direct view of consumers while a shopkeeper, typically the owner, delivers requested items to consumers. By virtue of this personalized delivery of items, the shopkeepers, given consumers’ category choice, generally exercise control over their brand choice. In contrast, organized retailing is characterized by supermarkets and retail chains that stock all items in aisles directly accessible to consumers. We develop a game theoretic model with both organized and unorganized retailers, modeling the differences in consumer behavior across these retailers and explore their implications on manufacturer and retailer strategies.
We then build a structural model that captures the evolution of consumer responses to time and cognitive cost, and, using loading time as new instruments, comprehending a collection of search result entries and the cost of clicking. We outer layer. People may click on an entry to reveal all the attributes of a result information presentation. The outer layer displays the collection of search results and (2) incorporate online WOM into the media planning and buying process. These results suggest the need for social TV activity to be viewed in terms of viewer engagement with both program and advertisements. Moreover, the results indicate that the program in which the advertisement airs affects the extent of online WOM for both the brand and program following television advertising. Overall, this research sheds light on how marketers, television networks, and program creators can (1) increase online WOM for their respective brands and programs through media planning and advertisement design strategies and (2) incorporate offline WOM into the media planning and buying process. We study the consumer search process for information at the expense of time and cognitive cost. We investigate this question empirically in a large modern online search platform. Modern day search platforms generally have two layers of information presentation. The outer layer displays the collection of search results with the platform-selected attributes of each result entry, and people may click on an entry to reveal all the attributes of a result entry in the inner layer. One of the major policy implications of our study is how much information to reveal in the outer layer. People may click on an entry to reveal all the attributes of a result entry in the inner layer. If too much information is revealed, the cost of clicking may increase, suggesting that a ban on e-cigarette advertising may have unintended consequences.
4 - Managing Regret in Intertemporal Sales

Chih-cheng Wu, National Sun Yat-sen University, 70 Lien-Hai Road, Kaohsiung, 80424, Taiwan, chicheng@mail.nsysu.edu.tw, Yung-Jan Cho

In today's marketplace, we see "you won't regret buying it" as often as "you'd regret it if not". How are these two messages different from each other? And how should marketers choose between them? This paper addresses regret management strategies in inter-temporal sales. We discuss how firms should adjust their pricing, communicating, refunding and limited supply policies to cope with, and be benefited from consumers' cognitive flaws, including regret aversion, uncertain valuation and excessive temporal discount. By distinguishing the effects of buying and waiting regret, our analysis show that: (a) While small uncertainty tends to be detrimental, large uncertainty can magnify the positive effect of excessive discount in increasing profitability. (b) Mitigating buying regret and provoking waiting regret may not always take effect, i.e., their effectiveness is contingent upon the strength of regret aversion. (c) At the optimal refunding rate, refund policy can extend the effectiveness of waiting regret, and turn its otherwise dormant effect into profit. (d) Uncertainty and regret aversion have a positive effect in medium supply, whereas the optimal effect of limited supply policy is negatively related to uncertainty.

2 - The Impact of Brand Equity on Companies' Pricing Power

Yang Pan, University of Iowa, S252 John Pappajohn Business Building, Department of Marketing, Iowa City, IA, 52242, United States, yang-pan@uiowa.edu, Thomas S. Graca

Warren Buffet values pricing power as one of the most desirable traits of any business. Companies with high pricing power are less likely to lose business when they increase prices. Surveys suggest that two-thirds of companies do not have sufficient pricing power, i.e. they can not charge the prices they deserve. This lack of pricing power reduces profits by 25% (Simon and Kucher, 2011; Zatta, Simon and Kucher, 2013) One important determinant of pricing power is brand equity. Many companies believe they have strong pricing power because of their strong and well-known brands (Zatta, et al. 2013). Brands give consumers a reason to buy a product (e.g., higher levels of quality or increased popularity) other than having the lowest price (Aaker, 1992; Keller, 2013) The current research on the measurement of the overall pricing power for a company is limited. To fill this gap, we propose adopting company-level price sensitivity. Company-level sensitivity is inversely related to firm-level pricing power. This is consistent with the market power literature in industrial organization economics (Landes and Posner, 1981) Building on Kandori et al. (2012), we estimate company level price sensitivities for a sample of public firms using quarterly data from COMPSTAT. The underlying estimation model is based on the neoclassical theory of the firm. We model how price elasticity varies across industry sectors and levels of brand equity (EQUI tent). We find that companies with stronger brands have significantly lower levels of price sensitivity, implying higher levels of pricing power.

3 - A Comparison of Measuring Willingness to Pay for Developing Pricing Strategies in a Mature Market

Akihiro Nishimoto, Associate Professor, Kwansei Gakuin University, 1-155 Uegahara Ichiban-Cho, Nishinomiya, 662-8501, Japan, anishimoto@kwansei.ac.jp, Satoshi Katsumata

The purpose of this study is to identify a more accurate measurement of willingness to pay (WTP) by comparing various methods. WTP is the maximum amount of money a consumer is willing to pay for a given quantity of a product (cf. Kadish and Nelson 1991). Its concept is the same as that of the reservation price in economics. There are three reasons that explain the increasing need for a more accurate measurement of WTP in marketing (cf. Jedidi and Jagal 2010). First, the pricing and transaction data required to estimate WTP are readily available. Second, the advent of e-commerce has made mass customization possible. Third, the methodological advances in Bayesian statistics, finite mixture models, and experimental economics allow researchers to obtain more accurate estimates of WTP at the individual or segment levels. However, there are also three biases in measuring WTP, namely, the hypothetical bias, by which the WTP in a hypothetical context is overestimated against the real WTP, the method bias, by which the estimated WTP differs according to the method used, and the demand bias, by which each participant who indicates WTP is in a different context. In this study, we compare eight methods for considering these biases. Then, we develop a Bayesian model to identify the most accurate WTP among them at the individual level. Finally, we demonstrate a pricing strategy to increase the customer unit price by applying the best method to the mature market.
### FD10

**INFORMS Marketing Science Conference – 2016**

**3 - Affordability vs. Availability: Access To Essential Medicines and Intellectual Property**

Jian Ni, Johns Hopkins University, jni@jhu.edu, Chirantant Chatterjee, Pengfei Liu

Debates on "access to medicines" emphasize price control and the hidden costs of non-availability of essential drugs due to regulated prices. But this focus on extensive margins needs to be augmented with an understanding of intensive margins. The heterogeneous market outcomes herein are closely tied to the issues of affordable medicines. Using a novel sales dataset of 104 cancer molecules across 20 states in India between 2007 and 2013, we document the variations in prices, price-dispersion, quantity and choice-sets in providing first evidence on the intensive margins of the debates. We found that cancer drug prices and price dispersion fell heterogeneously, with certain states of India witnessing a rise in contrast to falling prices in other states. Price dispersion widens in some poorer states while tightening in richer states. Contrary to public perception, domestic firms exhibited a 30% increase nationally in prices in comparison to multinational firms' 60% decrease. Product varieties differ significantly across regions, though nationally cancer drug consumption rises. In such environments, we describe the market responses across regions between molecules that went through some intellectual property litigation and those that did not. Our results suggest that the well-intended loose patent-litigation policy could potentially result in unintended welfare loss.

**FD10**

SC, 5th Floor

**Social Value Marketing Strategy**

Content: Marketing Strategy: General

Contributed Session

Chair: Wei Zhang, School of Management, Fudan University, No. 670, Guoshun Road, shanghai, 200052, China, daisyzw@163.com

#### 1 - Enterprise Social Value Co-Creation and Stakeholder Marketing Strategy: A Classical Grounded Theory Study in Terms of Voluntary Sustainable Development Reporting and Social Value Marketing Behavior of Listed Companies

Weiz Zhang, School of Management, Fudan University, daisyzw@163.com

In the lens of sustainable development and social innovation movement all over the world, social value marketing strategy and enterprise citizenship demonstration in term of its stakeholder management for listed companies are becoming more important and are calling for more research attentions and jointed research efforts from different disciplines. This paper uniquely employed Classical Grounded Theory (CGT) to explore "voluntary sustainable development reporting and social value marketing behavior of listed companies" grounded in the data from above 2000 listed companies GRI reporting history, hundreds of social value marketing case studies, the interviews towards people joined the value chains of social value marketing and sustainable development reporting, and some related industry conference participation notes. The purpose of this theory-building study is to solve the main concern on the future market uncertainties and risks management via stakeholder collaborative to shared social value creation.

#### 2 - How Are Social Enterprises Connecting Stakeholders to Transmit Social Value?

Shiying Liu, Tongji University, shadow6410163.com

The social enterprise aims to deliver the social value in business way, which is leading to more concerns on its social benefits, rather than commercial achievements. However, the social value marketing strategy of social enterprises lacks research attentions before. In this paper, we decide to fill in this gap and use Actor Network Theory to study how the social enterprise uses marketing tools connecting stakeholders to transmit social values, through driving social resource. This research begins at case studies and is followed up with a related survey. We are supposed to study the actors and actions of the stakeholder networks of typical social enterprise cases' deep dive, and through such study we can figure out features of social value marketing behaviors of social enterprises. Then we employed quantitative survey study further, and the overall data could help us to figure out the strategy model of the social value marketing being practiced by the social enterprises.
1 - The Effects of Superstar App Adoption on Enhancements to Mobile App Proficiency

Mi Hyun Lee, Arizona State University, Tempe, AZ, United States, mi.h.lee@asu.edu, SungHo Park, Sang Pil Han, WonSeok Oh

Despite the massive influx of mobile apps into the market, mobile users substantially differ with respect to their mobile app proficiency. The steady growth of the mobile industry has led to the emerging need to advance mobile proficiency. Using a dataset on individual mobile app usage, we examine the potential of highly ranked “superstar apps” as stimulants of consumption in terms of volume and extent, especially among less mobile-proficient users. We choose Anipang as a stimulus in our quasi-experiment and compare the app proficiency of Anipang adopters to that of non-adopters before and after Anipang adoption. Anipang is similar to Candy Crush Saga and was the most popular social game app in South Korea at the time of sampling. App proficiency is measured by the number of apps used and duration of app usage. We employ the Gaussian copula-based difference-in-differences (DID) framework given that it allows us to construct a flexible joint model of continuous app usage duration and discrete number of apps used. The main analytical strategy employed under the framework is propensity score matching. Results indicate that Anipang adoption increases app use variety and volume within the same app category and across different categories. Such spillover effects are more pronounced among less technically knowledgeable groups (e.g., users in their 50s or older and late adopters) and managerially under-represented target segments (e.g., irregular, occasional, and light app users). The investigation into the sources of positive spillover effects reveals that use frequency and duration among superstar app adopters increase for new apps downloaded from app stores but decrease for existing apps. We provide valuable implications that marketers can capitalize on adopters who receive precisely targeted promotions may take a less active role in search, potentially limiting the opportunities for exploration of new categories. As marketers improve their targeting practices, consumers who receive precisely targeted promotions may take a less active role in search, potentially limiting the opportunities for exploration of new categories. Thus, retailers need to consider cross-category spillovers when using targeted promotions.

2 - A Structural Two-sided Matching Model of Online Labor Market

Jing Gong, Assistant Professor, Temple University, 1810 North 13th Street, 201C Speckman Hall, Philadelphia, PA, 19122, United States, gong@temple.edu

In the past decade, IT has facilitated the shift from permanent employment to need-based outsourcing and from local labor market to global online labor markets. While prior studies have examined how global frictions affect employers’ hiring decisions on online labor markets, we have limited understanding of the inter-dependence between workers and employers and the economic impact of IT-enabled globalization on matching outcomes such as the number of matched projects, freelancer wages, and project values generated from matching. This study is an attempt to fill in the gap by examining the dual roles of IT-enabled globalization, (1) in determining the formation of matches between employers and freelancers, and (2) in affecting market outcomes. From a market perspective, we take into account two-sided decision making, competition on each side, complementarities between employer and freelancer attributes, and endogenous money transfers between employers and freelancers.

In our empirical analysis, we estimate a structural two-sided matching model of the online labor market from a revealed preference perspective. The estimation is based on a dataset from a major freelancing website that connects freelancers and employers from more than 200 countries. We then conduct counterfactual analysis to quantify the economic impact of IT-enabled globalization in online labor market by comparing the current scenario with a counterfactual scenario where employers can only match with freelancers from the same country. The results from our estimation suggest that employers tend to match with freelancers from the same country, and that employers from developed countries tend to match with freelancers from developing countries. The results from the counterfactual analysis suggest that IT-enabled globalization leads to more employers and freelancers with successful matches, lower average wage among freelancers, and higher total project values generated on the market.
The customer with high CIV, high CRV, and high CIV are different segment of users and each segment contribute to the social networking site differently.

2 - The Impact of Adding Online-to-Offline Channels on Firm’s Offline and Total Revenues
Shia Zhang, Assistant Professor of Marketing, University of Chinese Academy of Science, Beijing, China, zhansh@ucas.ac.cn, Koen Paepels, Chernwing Peng

Over the last two years, online-to-offline (O2O) apps and companies have mushroomed, establishing platforms for consumers buy products and services online and enjoy them offline. Examples include U.S.-based GrubHub, the U.K.’s Just-Eat, German’s Delivery Hero, and the three Chinese Tist giants Baidu, Alibaba, & Tencent. Despite the hype though, companies lack a clear understanding about the impact of such actions on firm’s offline and total revenues. Previous research focuses on adding a pure channel (either online or offline) to complement existing ones operating in Western markets. China is 2 years beyond the rest of the world for O2O business (Alibaba 2015) as both consumers and companies pursue O2O in a more aggressive way, including heavy discounts to promote channel migration. Moreover, the threat of cannibalization is severe as O2O typically works through platform apps, where thousands of companies compete for consumers. This paper analyzes a unique daily dataset of a Chinese chain fast food company that offers O2O channels (i.e., Meituan, Baidu, Ele.me, and Koubei) between 2/5/2013 and 12/31/2015. We estimate several competing models and compare their results. The findings of this research are highly relevant for managers making strategic channel decisions in a multichannel environment.

3 - Friction in Multi Step Peer-to-Peer Transactions
Chuang Tang, PhD Student, National University of Singapore, 15 Kent Ridge Drive, Biz 1, 08-14, Singapore, 119245, Singapore, a01050266@u.nus.edu, Dai Yao, Junhong Chi

Peer-to-peer sharing marketplaces are becoming more prevalent due to the advent of information technology and escalating considerations of human sustainability, through which an individual can sell the excess time to use his or her own products (e.g., apartment, car, yacht, parking space, etc.) to others. These marketplaces thus facilitate exchange of the usage right, rather than the ownership, of the products, and are drastically different from other marketplace. In each transaction, the renter first requests the usage right of the product and the owner then decides whether to approve the request. At any stage, the renter can cancel the request and look for another offer. Thus, transactions are completed in multiple steps rather than in one shot, as is commonly seen elsewhere. The nature of the multi-step transaction and the various decisions made by these participants endow us with enormous opportunities to explore a rich set of factors contributing to the friction in these exchange platforms. Using detailed transaction data from a large p2p car sharing platform in China, we uncover a series of novel findings: owners in general favor female and older renters, but not vice versa; renters are strategic in the exchange relationship, but not owners; finally, there is a natural “perception gap”, that owners care about shorter-term (e.g., daily) operations but renters pay more attention to longer-term (e.g., monthly) market dynamics.
Given that a sizable proportion of organic products consumed in the US are imported and the organic certification process has been criticized for not being consistent in foreign countries, our findings have policy implications of mandating the feed origin in organic product disclosure.

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

**SA01**

**3C, 3rd Floor**

**Advertising V**

**Contributed Session**

Chair: Jun Bum Kwon, University of Toronto, 35 Charles Street West, Apt. 604, Toronto, ON, M4Y 1R6, Canada, junkwon12@rotman.utoronto.ca

1 - **Online Advertising and Retailer Platform Openness**

Jiaying Chen, The University of Texas at Dallas, Scholl of Management SM33, 800 West Campbell Road, Richardson, TX, 75080, United States, chenj@utdallas.com, Zhiling Guo

It becomes increasingly popular that some large online retailers such as Amazon open their platforms to allow third-party retail competitors to sell on their own platforms. We develop an analytical model to examine this retailer marketplace model and its business impact. We assume that a leading retailer has both a valuation advantage that may come from its reputation and information advantage that may come from the higher availability of relatively low-cost advertising through social media or search engine can effectively reduce the leading retailer’s information advantage, and thus be an important driving force for its strategic decision to open itself up. Not only does the advertising option directly make small sellers more visible to consumers, but also incentivizes the online retailer to open its platform and dramatically increases small sellers’ exposure, indirectly contributing to an even more prominent long tail phenomenon in e-commerce.

2 - **TV Viewing and Advertising Targeting**

Yiting Deng, Assistant Professor, University of Notre Dame, 379 Mendoza College of Business, University of Notre Dame, South Bend, IN, 46556, United States, ydeng@nd.edu, Carl F Mela

Television (TV), the predominant advertising medium, is being transformed by the micro-targeting capabilities of digital video recorders (DVRs) and set-top boxes (STBs). Though micro-targeting is common on the Internet, TV represents a much more substantial share of consumer time and attention, suggesting even greater potential for micro-targeting communications. Accordingly, this paper uses a proprietary, household-level, single source data set to develop a second-by-second show and advertisement viewing model, using this approach to forecast consuming exposure to advertising and the downstream consequences for sales. We find that micro-targeting simultaneously lowers advertising costs and increases advertising views among brands’ currently targeted consumers, and that these advantages are amplified when advertisers are allowed to buy real-time as opposed to up-front. However, most advertisements are not profitable in the short-term, suggesting that an advertisement schedule that maximizes profits in the short-run typically involves fewer advertisements than those observed in the observed. Overall, we find considerable targeting gains.

3 - **Cumulative Effects of Media**

Justin Kim, Managing Partner, Sapien mPHASIZE, 274 Riverside Ave, 1st Flr, Westport, CT, 06880, United States, jkim@ sapien.com

Operationalizing the shape and duration of prolonged media effects on brand performance has played a pivotal role in marketing mix modeling (Tellis, 2006). The paper studies (1) a variety of different formulations of carryover effects that have been utilized in the advertising research in the past few decades (Leon, 1995; Gijsenberg et.al, 2009), and compares their implications from the marketing analytics practitioner standpoint of view. Findings show that there exist significant differences in the suggested business recommendations depending upon which functional form and its estimated parameters are used in the transformation, especially in the context of media resource allocation optimization (Gupta and Stenbergh, 2008). (2) In addition, the paper examines how the application of time varying coefficients framework (Franses, 1998; Ramen, et.al, 2011) as a model-based alternative can provide flexibility in the parameterization as well as it can generate additional managerial insights in media planning decisions. Empirical testing is conducted using the data from three different industries, Telecom, Pharmaceutical, and FMCG. (3) Finally, the current research also extends the resultant generalizations to digital media tactics (Honish, 2011) while addressing the intrinsic challenges in online media, and discuss the directions which future research should take.

**FD16**

**5J, 5th Floor**

**Sustainability**

**Contributed Session**

Chair: Lin Boldt, Clark University, 950 Main Street, Worcester, MA, 01610, United States, lboldt@clarku.edu

1 - **Public-Private Cooperation for Urban Logistics**

Mei-Ting Tsai, Associate Professor, National Chung Hsing University, 250 Kuo Kuang Road, Department of Business Administration, Taichung, 40227, Taiwan, mtsai@dragon.nchu.edu.tw, Jiana-Fu Wang

Urban logistics significantly supports economic activities, while bringing negative impacts on the traffic and the environment. In this study, we investigate how the public-private synergies make the urban logistics sustainable by developing an urban freight consolidation center (UFCC). Instead of delivering freights to retailers within cities by each of their suppliers, the idea is to consolidate the freight at an UFCC which is located at a city access, and then continue the last-mile delivery using energy-efficient vehicles. This meaningful and innovative policy needs public and private joint efforts. From the private sector’s perspective, retailers are concerned that the consolidation activities would increase the operation time and cost. In terms of the public sector, how to develop an incentive scheme to attract private sector’s participation is an essential issue. Therefore, this research aims to remove the concerns of both parties. First, we apply the cross-docking operation and simulation technique to determine what makes UFCC work more efficiently and, thus, reduce the time spending in it. Second, we propose a government funding initiative based on the value of emission reduction which is priced by an emission trading model. While the public sector compensates the UFCC project due to its social benefit, and the private sector accepts the insignificant transshipment time as the corporate social responsibility, public-private cooperation for UFCC is a win-win solution to urban logistics.

2 - **Is Organic Enough? Information Disclosure as Policy Instrument to Benefit Firms and Empower Consumers**

Lin Boldt, Assistant Professor, Clark University, 950 Main Street, Worcester, MA, 01610, United States, lboldt@clarku.edu, Jing Zhang

Advances in technology has made data critical for consumer decisions more available, and governments are advocating for an open approach to encourage private sector disclosing relevant information to create more efficient market and empower consumer choices. However, firms may be reluctant to disclose due to cost or other concerns, and it is not always clear what information are needed by consumers. Policy makers need to develop mechanisms that help decide what information firms should disclose, and ideally prove the effectiveness of disclosure to key stakeholders before deciding whether a disclosure is recommended or mandated. This research aims to meet this need through choice experiments and statistical modeling. In this research, we focus on information disclosure in organic products. Although well-known certification logos of organic labeling are favored by consumers (Janssen and Hamm 2012; Kiesel and Villas-Bous 2007), consumers find the complex organic labeling hard to understand. Through three studies, we show that feed origin makes a difference in people’s choice of eggs more so than USDA certification label and generic organic label; a price premium can be claimed by labeling the feed origin from USA, and if feed origin labeling is mandated by law, a higher price premium could be claimed for feed from USA.
The impact of foreign products on domestic counterparts in emerging markets.

In emerging markets, domestic firms commonly face heavy competition from global brands. In the meantime, foreign brand entries are often times governed by the local country’s regulations. For instance, for the movie industry, many countries including China set tight restrictions on importing foreign movies in order to protect their own domestic movie industries. In 2012, China, the world’s second largest film market, lifted its film import quota by 70%, raising the number of imported revenue-sharing movies per year from 20 to 34. On the one hand, with high budgets and sophisticated producing technologies, imported movies may easily become blockbusters and take much revenue away from domestic movies, resulting in a strong negative competition effect. On the other hand, imported movies may also draw huge crowds to cinemas and cultivate people’s interests in movies, leading to a positive market-expansion effect which could benefit Chinese domestic movies. Further, these two effects may change dynamically over the course of a domestic movie’s life span. Therefore, it is critical to understand the dynamics of the impact of foreign products on their domestic counterparts in emerging markets. In this research, we address the above research issues by adopting a dynamic linear model in a hierarchical Bayes framework to investigate the dynamic effects of imported movies on Chinese domestic movies at both the movie and daily level. Moreover, we examine whether and how the dynamic competition pattern was affected by the regulation policy change on the film import quota in 2012. Our findings suggest that the competition market expansion effects simultaneously exist between Chinese domestic movies and their imported counterparts, and the dominant role of these two effects dynamically changes over time. This research has important managerial implications to film distributors and exhibitors on the new product release timing, pricing, and revenue generation, and sheds light on the impact of the regulation policy change on domestic product performances in emerging markets.

Bayesian updating their Dirichlet process (DP) prior beliefs. A standard DP-based model does not account for individual heterogeneity so we adopt the hierarchical DP (Hth et al. 2006) to allow us to share information between individuals. The data shows that customers are always active on daily deal websites but very cautious when purchasing deals. They view multiple deals before purchase, and they rarely go back to purchase previously viewed ones (that might still be active). When a purchase does occur, the majority of purchases are completed within 30 minutes of the consumer first viewing the deal. These empirical findings motivate us to model the purchase decision in this context as an optimal stopping problem. In addition, the data also suggest that customers are learning about the deals as time passes; the likelihood of deal viewing is decreasing while the purchase likelihood is increasing over time. These features of the data motivate us to incorporate consumer learning into the model as well. We then contrast results obtained from models that make various assumptions regarding consumer forward-looking behavior and learning.

### 4 - Can Advertising Messages Change the Content of Mass Media? An Examination of the Dove Real Beauty Campaign

Jun Bum Kwon, PhD Student, Rotman School of Management, University of Toronto, 55 Charles Street West, APT 604, Toronto, ON, M5R 1B6, Canada, junbum.kwon12@rotman.utoronto.ca

Mass media affects, and reflects, modern culture and society. This study explores whether advertising messages can change topics reported in mass media. Specifically, this paper explores whether Dove’s real beauty campaigns in the U.S., U.K., and Canada increased the incidence of real beauty-related topics in newspapers in those countries relative to newspapers in Australia and New Zealand, where the campaign started later. Using a topic model (Blei, Ng and Jordan 2003; Taddy 2012), I group all the beauty sentences into 8 to 10 beauty topics in each analyzed country, including one or two topics related to real beauty. The number of sentences labeled as real beauty topics increases during the month(s) of the real beauty campaign. This is not driven only by reporting on the Dove campaign: The significant impact on real beauty topics holds even after dropping all the articles which mentioned Dove in any sentence. Overall, these results suggest that advertising can affect the topic mass media choose.

### 3 - Consumer Confidence, Monetary Expenditure and Time Use over Economic Cycle

Lan Luo, University of Southern California, 3660 Trousdale Parkway, ACC306, Los Angeles, CA, 90089, United States, lluo@marshall.usc.edu, Botao Yang, Brian T. Ratchford

In this research, we examine how U.S. consumers spend their time and money conditional on their outlook on the U.S. economy. We collect a consumer panel data that track approximately 300 U.S. consumers on how they spend their time and money in seven major activity categories (including personal care, work, and leisure) on a monthly basis from January 2014 to January 2016. We also construct multiple measures of consumer confidence indexes to monitor these consumers’ feelings about the state of the US economy and their personal financial situations. To our knowledge, this is the first study that collects individual-level panel data on time and money. We plan to construct a dynamic panel data model to investigate how consumers adjust their time and monetary expenditures conditional on fluctuations in the economic climate. Our study also aims to provide a better understanding of demand elasticities and price sensitivities across the major activity categories of our daily lives. Our findings can provide useful marketing implications for firms across a large range of industries (e.g., personal health, travel, entertainment).

### 2 - Learning in Daily Deals with Dirichlet Prior

Manthai Hu, Chinese University of Hong Kong, Cheng Yu Ting Building, Room 1105, Shatin, Hong Kong, mhandhui@baf.cuhk.hk, Pradeep Chintagunta, Chu Dang

Daily deal sites continue to grow in popularity. In this paper, we examine the first-time purchase behavior of consumers of Groupon, a well-known daily deal site. In particular, we look at consumers who subscribe and logon to the service in the period between January and March 2011 in the U.S. market for restaurant deals. The data provide the complete clickstream within consumers’ browsing sessions. We augment these data with detailed information of the content of the web pages browsed to obtain individual-level data on deal characterstics, viewing and purchasing behavior. This paper provides a method to study the consumer purchase behavior when they are uncertain about the utility from future deals. The main challenge is a lack of a priori knowledge of the appropriate functional form for the utility distribution. Absent such knowledge, we pursue a nonparametric strategy. Consumers learn about the utility distribution by

Bayesian updating their Dirichlet process (DP) prior beliefs. A standard DP-based model does not account for individual heterogeneity so we adopt the hierarchical DP (Hth et al. 2006) to allow us to share information between individuals. The data shows that customers are always active on daily deal websites but very cautious when purchasing deals. They view multiple deals before purchase, and they rarely go back to purchase previously viewed ones (that might still be active). When a purchase does occur, the majority of purchases are completed within 30 minutes of the consumer first viewing the deal. These empirical findings motivate us to model the purchase decision in this context as an optimal stopping problem. In addition, the data also suggest that customers are learning about the deals as time passes; the likelihood of deal viewing is decreasing while the purchase likelihood is increasing over time. These features of the data motivate us to incorporate consumer learning into the model as well. We then contrast results obtained from models that make various assumptions regarding consumer forward-looking behavior and learning.

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proposed model. Developed by combining the RBV and RM theories. A sample composed of resources or to deploy available resources. An integrated research model will be needed when consumers are willing to share information with firms. While other domains (e.g. information systems) have tried to explain why people are unwilling to disclose information, their measures are not always consistent with how consumers actually behave (privacy paradox). According to the privacy calculus consumers trade off both negative and positive consequences of the collection of personal information. In order to understand why, and predict when, consumers disclose information we believe it is important to properly measure consumers’ privacy calculus. In accordance with its nature and our aim of prediction, we develop a formative scale (index) to measure the privacy calculus. Based on prior literature and interviews with firms and consumers, we operationalized the privacy calculus, and formulated an initial list of indicators, covering all elements relevant for customer-firm relationships. After validating our list of items using consumer and expert opinions, we conducted a larger, online survey (n = 300), in which respondents indicated whether they were willing to disclose personal information for a specific data-driven application. Based on this survey we removed any indicators consumers consider as duplicates or as irrelevant. Our formative scale allows firms to predict why consumers accept or refuse information disclosure beforehand, rather than explaining afterwards why consumers refused.

2 - The Linkage Between Strategic Competitive Capabilities and the Relationship Quality: A Combined View of RBV and RM
Shihyu Chou, National Taiwan Normal University, 162 Heping East Road, Section 1, Taipei, 106, Taiwan, sychou@ntnu.edu.tw, Ya-Ting Kuo

Due to the proliferation of lean philosophy and the emerging of many professional logistics service providers, the outsourcing of logistics operations in a firm has become an apparent trend. However, to effectively differentiate from other LSPs, a logistics service provider (LSP) needs to develop long-term relationships with customers and foster strategic capabilities such as flexibility and collaboration to generate competitive advantage as well. This study takes a combined view of the RBV (Resource-based View) and RM (Relationship Marketing) theories to examine the linkages between LSPs’ capabilities in flexibility and collaboration and the relationship quality perceived by customers of logistics services. Relationship marketing (RM) can be defined as all marketing activities directed towards proactively creating, developing and maintaining committed, interactive and profitable exchanges with valuable customers or partners over time. The RM theory considers that firms make relational investments on the relationships with customers to promote the levels of relationship quality with customers, which in turn consolidate long-term relationships with customers. On the other hand, the resource-based view (RBV) theory assumes that the competitive advantages of a firm are determined by the application of a bundle of valuable resources. Capabilities are a special form of organizationally embedded non-transferable firm-specific resource that can be used to improve the productivity of other resources or to deploy available resources. An integrated research model will be developed by combining the RBV and RM theories. A sample composed of Taiwanese firms in different industries will be used to test the hypotheses in the proposed model.
3 - The Impact of Reward-Based Promotions: Which Sales Strategy is More Effective for Retail Companies, Price Discounts or Rewards that Give Extra Points?

Hiromichi Nakagawa, Nakamura-Gakuen University, 5-7-1, Befu, Jonan-ku, Fukuoka, 814-0198, Japan, hironaka@nakamura-u.ac.jp, Takahiro Hoshino

A frequent rewards program is a sales promotion strategy used by retailers worldwide. Retail companies often award extra points to promote particular products: product-based rewards promotion. If consumers are rational, price discounts should be preferred to earning equivalent amounts of points, because actual money is highly liquid. However, previous studies show that awarding extra points is more effective in bringing in higher sales than offering price discounts. A question arises, which sales strategy is more effective for retail companies, price discounts or rewards that give extra points? This study examines effectiveness of price and product-based rewards promotion strategies in increasing the retail sales of a product. We estimated price elasticity and product-based rewards promotion elasticity, in processed food product categories, by modeling a zero-inflated negative binomial regression on scanner data collected from 101 stores of a grocery store chain. We emphasize here that there are differences between our study and extant research, in running a generalized linear model, using a fixed effect model: products, dates, stores, and inclusion of magnitude effects such as unit price, cut-rate, and reward ratio. We find that a product-based rewards promotion has more elastic demand than the price elasticity of demand for a product promotion with a low cut-rate equivalent to reward ratio. However, product-based rewards promotion elasticity is lower than price elasticity of a product promotion with high cut-rate equivalent to reward ratio. These findings provide further empirical support for the assertion on utility elasticity of demand for a product promotion with a low cut-rate equivalent to reward ratio. The perceived value of extra product promotion is higher than that of price-off promotions for low price level products. These results have implications for retailers in that these companies should run rewards based promotions rather than price-based promotion when promotion level is low.

4 - Optimal Promotional Mix and Pricing Strategy with Risk Averse Buyers

Ruibing Wang, City University of Hong Kong, Tat Chee Avenue, Kowloon, Hong Kong, Hong Kong, Ruibiwang2@my.cityu.edu.hk, Wei-yu Kevin Chiang, Xiojuan Puyang

We carry a few features in or a market where consumers, who differ in their product valuations. The idiosyncratic valuation for each customer is initially unknown to potential consumers and the firm. To increase the awareness of the product's existence, the firm has two promotion strategies, i.e., advertising campaign (HAC) and referral reward program (RRP). These two strategies possess distinct features on market reach, consumers' information structure, and cost implications. Specifically, HAC refers to a basic publicity which makes consumers aware of the product's existence only. In contrast, emerging to be an increasingly popular marketing strategy, RRP refers to an incentive-based strategy, which offers rewards to the existing customers for bringing in new buyers through consumer-to-consumer referrals. Whereas both strategies allow previously ignorant consumers to learn of a product's existence, due to source credibility and the nature of communications, only those who become aware of the product's existence through referrals will learn their own product valuation, i.e., be informed, before purchase. Uninformed consumers have no base for a consumption decision based on their perceived level of uncertainty and their risk attitude. HAC is generally more costly with extensive market reach, while RRP on the other hand can potentially reduce the wastage on promotional expenditure due to its "pay for performance" nature. We plan to investigate the most profitable combination of these two promotion strategies and their corresponding optimal pricing.

2 - Scale Development: Customer Perceived Cognitive Legitimacy

Miriam Lohrmann, Research Associate, German Graduate School of Management and Law, Heilbronn, Germany, miriam.lohmann@ggs.de, Tomas Bayon

New ventures face the problem of surviving and becoming established. Consequently, to survive and become successful a new venture has to focus on gaining cognitive legitimacy from their customers (Townsend et al., 2010). Cognitive legitimacy depends on the spread of knowledge about the new venture, product and management and is achieved when organizations are understandable, i.e., there is an increased awareness of the new venture and therefore a lower level of uncertainty within the organization (Altricht and Fud, 1994, Shepherd and Zacharakis, 2003). Previous research has not concentrated on the underlying definition of cognitive legitimacy from a customer's perspective and has not regarded this construct as a dependent variable. In particular, a measurement scale on customer perceived cognitive legitimacy (CPL) was related to a new venture's first product offering is missing. Therefore, we develop a new scale to measure CPL. Two studies are conducted to gain a reliable and valid CPL-scale. A pretest examines the correspondence between the definition of CPL and the generated items to refine the scale. Study 1 empirically tests the construct validity of the reduced item pool. In study 2 the reliability and the construct validity of CPL will be verified. Results will be presented at the conference.

3 - On the Determinant of Consumers’ Judgmental Correction when Exposing to Ads in Sequence

Chung-Chiang Hsiao, Associate Professor, NTNU, Graduate Institute of Management, 162, Sec 1, HePing E Road, Taipei, 10610, Taiwan, cchsiao@ntnu.edu.tw, Yi-Wei Chien

Much research in consumer judgment has employed the advertising setting to investigate how a variety of persuasive variables may influence attitudes toward products. In the design of such studies, even though multiple ads are generally deployed in sequence to mirror marketing scenarios in the field, researchers normally treat the target ad in isolation of the ads that surround it (i.e., filler ads). Examining persuasive variables in the target ad alone seems useful to disentangle some important persuasion effects. However, considerable attitudinal effects might also be attributed to factors external to the target ad, and many of these effects have not been thoroughly addressed in the marketing literature. That is, when consumers encounter ads in sequence (as typically delivered in a series of radio, magazine, TV, or social media commercials), perceptions of the target product might not only be affected by persuasive variables specifically manipulated by marketers in the target ad itself, but might also be unobtrusively biased by accessible concepts or ideas activated by the contextual ads. Two studies in the current research examined how ads in sequence might bias target judgments by serving multiple roles as contextual stimuli and as agents for activating corrections. In Study 1, context ads contained taglines highlighting potential biases of celebrity. Participants corrected for the (asymptomatic) effects of celebrity in subsequent target ads. In Study 2, target ads contained taglines highlighting potential biasing features of context ads. Participants did correct for the contrastive effects of the prior ads. Implications for marketing practice were discussed.
endogenous effects from contextual and correlated effects by conducting a randomized two-stage experiment to elicit subjects’ willingness to pay (WTP) for fitness trackers. We analyze preference changes between the first and second stages using a spatial econometric approach that helps identify the peer effects we seek. By controlling for correlated and contextual effects, our experimental approach is able to clearly identify significant endogenous effects. Moreover, we collect data on source expertise and tie strength. We provide insight into the way in which communication networks emerge. More specifically, the decision to seek information from a specific other is informed by characteristics of the relationship between the seeker and her peers based on the perceived credibility. Our findings suggest that face-to-face peer influences, where peers are regarded as experts, are significant in revising others’ preferences (successful practices such as Yelp and TripAdvisor are examples). We also contribute to the methodological literature on estimating social learning effects as we introduce a new method of estimating peer effects using spatial econometrics.

3 - Scarcity Backfires: When Scarcity Leads to Harder and Less Satisfying Decisions
Meng Zhu, Johns Hopkins University, 100 International Dr, The Johns Hopkins Carey Business School, Baltimore, MD, 21202, United States, mengzhu@jhu.edu, Yuechen Wu, Rebecca Rattner

Scarcity has been found to alter consumers’ preference distribution for options in a choice set by polarizing their liking towards the favorite items (Zhu and Rattner 2015) or elevating preference for the scarce item (Brock 1968; Verhallen and Robben 1994). In this research, we show that scarcity polarizes preferences only when consumers have distant initial preferences towards the options in the choice set. When consumers have close initial preferences towards the options in the choice set, scarcity leads to preference convergence, consequently increasing decision difficulty and decreasing decision satisfaction. We find that the preference polarization and preference convergence patterns occur because scarcity focuses consumers’ attention on the primary (vs. secondary) attributes of the options to make a decision. We provide further process evidence by showing that consumers faced with scarcity spend a greater proportion of their time examining the primary versus secondary evaluative cues, and that the preference convergence and the increased decision difficulty arising from scarcity can be attenuated by experimentally expanding consumers’ attention on secondary attributes of options.

4 - Understanding Heterogeneous Preference in Seat Choices
Simon Blanchard, Georgetown University, Mendoza School Of Business, 37th & O Street NW, Washington, DC, 20057, United States, sjb247@georgetown.edu, Tatiana Dyachenko, Keri Kettle

Consumers are often faced with choices that require them to tradeoff their locational preference with the need to maintain sufficient personal space (e.g., movie theaters, airplanes, classrooms). We introduce a Bayesian methodology that allows for the identification of the heterogeneous drivers of locational choices faced by consumers in crowded environments. We illustrate the usefulness of the methodology via a Monte Carlo simulation and an experiment of movie theater seating.

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**SA07**

3B, 3rd Floor

**Consumer Behavior: Preference I**

*Contributed Session*

Chair: Simon Blanchard, Georgetown University, Mendoza School Of Business, 37th & O Street NW, Washington, DC, 20057, United States, sjb247@georgetown.edu

1 - Need and Intertemporal Choice: A Dual Goal Hypothesis
Xianchi Dai, Associate Professor of Marketing, Chinese University of Hong Kong, Room 1111, Cheng Yu Tung Building, Chinese University of Hong Kong, Hong Kong, China, xianchi@baf.cuhk.edu.hk, Canice Kwun, Ayelet Fishbach

While existing research suggests that people high (vs. low) in need are more impatient in their intertemporal choices, we show that under certain conditions the reverse is true. We further propose a dual-goal hypothesis to explain the two sided effects of need on intertemporal decisions. We propose that high need activates two goals: actualization goal and quantity goal. The actualization goal concerns the feasibility of getting the need satisfying object: A person of high-need wants need-satisfying target ASAP. The quantity-goal concerns how much one can get the need-satisfying object. The proposed dual-goal framework can systematically predict when need state leads to greater preference for immediate gratification and when it leads to greater patience in intertemporal choices. 5 studies supported our proposition. These studies revise current understanding on how need affects patience.

2 - Modeling Product Choices in a Peer Network
Di Fang, Assistant Professor, University of Arkansas, 217 Agriculture Building, Fayetteville, AR, 72703, United States, difang@uark.edu

Consumers make decisions in a world of uncertainty with imperfect information and only partially formed preferences for attributes they know little about. They search for information as a means of reducing uncertainty and improving the likelihood that they will be satisfied with their purchases. Research in a range of fields has shown that peers are critical in shaping preferences and choices (Manski 2000; Sacerdote 2001; Zimmerman 2003; De Giorgi, Pellizzari, and Redadelli 2010; Kuhn et al. 2010; Richards, Hamilton and Allender 2014). Moreover, clear identification is necessary in order to isolate the precise mechanism through which peer effects operate. As Manski (1993) demonstrated, the identification of endogenous peer effect can be problematic because peer effect is often tangled with other effects such as contextual effect and unobserved effect. We disentangle with other effects such as contextual effect and unobserved effect. We disentangle
This study reveals that the extent of readers' interest in a summary or entire reported low or no interest when they read the summary, interest was found to a summary, their interest did not increase. However, even when a subject dependent variable. When subjects reported offensive or distasteful statements in “It was easy to read”) and knowledge acquisition (e.g., “It was informative”) positively related to self-relevant (e.g., “It related to me”) and insights about neighborhood, asymmetric price and asymmetric share effects as well as the intensity of competition. These findings support researchers in calibrating their research designs and to check the plausibility of their findings.

3 - Pricing Strategies with Reference-Dependent Preferences
Zhihui Xiao, University of Minnesota, 3-150 CSOM, UMN, 321 - 19th Avenue South, Minneapolis, MN, 55455, United States, xiaox169@umn.edu

Often, the prices of individual products do not follow classical economic dictums in that they do not track individual cost and demand in a fine-grained manner, e.g., with “class” prices, a large number of different products are first divided into much smaller numbers of classes, and a single price attaches to all the products within a class, even when their costs and demands are self-evidently quite different. The “friction/transaction” costs of discovering and implementing individual prices have been offered as the reason; oddly, information technology advancements that have greatly reduced such friction costs have had little impact on the practice. I propose that a deeply embedded customer tendency to judge prices from an expected level, and their desire to avoid prices above this level leads firms to utilize class prices in certain specified circumstances.

2 - Empirical Generalizations on Cross-Price Elasticities
Johannes Auer, University of Tuebingen, Naukerstr 47, Tuebingen, 72074, Germany, johannes.auer@uni-tuebingen.de

The domain of pricing has seen two important developments over the last years. Firms, in particular in the retail sector, are facing more and stronger competition, in part fueled by the surge in popularity of private labels. In addition, research on pricing issues has benefited from several important modeling advances (e.g., price endogeneity or heterogeneity). Both developments, however, are not reflected in our knowledge about the key measure of price competition (i.e., the cross-price effect). Hence, we do not know how cross-price effects have been shaped by these developments over the last years. To address this void, we provide empirical generalizations using a meta-analysis of prior econometric estimates of cross-price effects. As effect size, we use the cross-price elasticity, which is the percent change in demand of one product due to the percent change in price of a different product. This metric is easy to interpret and helps comparing findings from studies with different demand measures (e.g., market share, sales and choice share). Based on 7310 elasticities from 115 studies, we find an overall cross-price elasticity of .28. We also show that elasticity estimates significantly differ across categories and that cross-price elasticities have decreased in magnitude over the past four decades. In addition, the study reveals the effects of omitting variables (e.g., advertising) in the research methodology and provides insight about neighborhood, asymmetric price and asymmetric share effects as well as the intensity of competition. These findings support researchers in calibrating their research designs and to check the plausibility of their findings.

2 - Modelling the Return on Advertising Investments for the Optimization of Media Campaigns
Muhammad Sibtain Hamayun, Research Scientist, GroupM, 18, Cross street, 048423, Singapore, 048423, Singapore, sbtain.hamayun@groupm.com, Saeed Bagheri

Prediction of return on advertising investments (ROI) inarguably plays a pivotal role in the effective optimization of media campaigns. These predictions serve as benchmarks that help evaluate the efficacy of media plans. Furthermore, they also help generate insights into demographic tendencies towards advertising channels for various product categories across markets. The focus of this research is modelling ROI of media campaigns using a variety data sources including but not limited to various WPP data assets, 3rd party socio-economic-demographic information available around the world, GM’s proprietary global panel (operational in 50+ country and largest of its kind in the world), etc. All this information is merged and consolidated together to arrive at an ROI value. The proposed approach is implemented in a universe with 22 (offline and online) channels, hundreds of product categories and sub-categories and spanning 33 markets. Unlike previous works on ROI predictions, the analysis presented in this research does not rely on reach curves and cost data. The first contribution of this work is a data reclassification approach based on category definitions and the distribution of ROI across these categories. This is followed by a decision tree based algorithm for modelling the ROI data to enable predictions based on market, channel, product category, product subcategory and year. Simulation results demonstrate the effectiveness of the proposed approach when compared to other popular regression methods.

3 - Incorporating Deep Learned Visual Semantic Features into Models of Consumer Choice and Brand Perception
Liu Liu, Stern School of Business, New York University, Leonard N. Stern School of Business, New York University,, 40 West 4th Street, New York, NY, 10012, United States, liu@stern.nyu.edu, Yuxin Chen, Daria Dzyalbashawa

Consumer psychology has long recognized that aesthetically appealing objects represent a genuine source of value (Pol et al. 2015). The aesthetics and design of product and how product is displayed and presented play an important role in consumers’ purchase decisions. They also communicate brand identities and shape consumers’ perception of the brand. We hypothesize that incorporating visual features in models of consumer product choice and evaluation can aid managers in marketing decisions such as predicting demand and understanding brand perceptions and thus help firms design and launch new products, create visual advertising, and target consumers. Images of products are widely present, for example product images are posted on retail websites or shared by consumers on social media. While several papers have mined user generated content in the form of text (forums, product reviews), very little research has attempted to mine product images. While text can reveal a lot of information about consumer needs and perceptions, we demonstrate that images are able to capture additional information, beyond text, particularly in product categories in which the aesthetic appeal of a product design is an important criterion for evaluation. In this work, we combine deep learning with choice model to learn the aesthetic appeal of product design and display, and examine its effect on consumers’ choices and brand perception. We train deep neural networks to extract visual semantic features and estimate consumers’ preference on them with a large set of product images. Our result indicates visual attractiveness of product affects product sales. Models which incorporate this information has more power on forecasting consumer choices.

4 - Managing Default Risk under Trade Credit in a Channel: Supplier vs. Retailer-Implemented Big-Data Analytics
Yu-Chung Tsao, Professor, National Taiwan University and Science and Technology, Taipei, Taiwan, yctsao@mail.ntust.edu.tw

In this study, we consider a supplier-retailer channel in which the provision of trade credits to customers incurs the default risk. The length of the credit period, big-data analytics (BD-A) effort, and order quantity are determined to maximize the profit of either the supplier or retailer. We consider that BD-A can be used by the supplier or retailer to mitigate the default risk. The aim of this study is to identify the party (supplier or retailer) that should implement BD-A in the channel. The results indicate that when the retailer is dominant in determining the length of the credit period, the retailer would prefer that the supplier implements BD-A. In this situation, the retailer will choose to implement BD-A only in cases where the supplier shares the costs of BD-A with the retailer. When the supplier is dominant in determining the length of the credit period, the supplier would prefer for the retailer to implement BD-A, regardless of whether the supplier shares the cost of BD-A. We also observe that the cost of BD-A leads to an extension of the credit period, an increase in the amount ordered, and greater effort in BD-A, which consequently increase the profits of channel participants. Finally, the implementation of BD-A by retailers increases the length of the credit period, the quantities ordered, and the effort invested in BD-A, compared to situations in which the supplier assumes the task of implementing BD-A.
1 - Paying Incumbents and Customers to Enter an Industry by Buying Downloads
Pai-Ling Yin, Stanford University. 366 Galvez Street, SIEPR, Stanford, CA, 94305. United States, pyin@stanford.edu, Tim Bresnanah, Xing Li
Success breeds success in many mass market industries, as well known products gain further consumer acceptance because of their visibility. However, new products must struggle to gain consumer’s scarce attention and initiate that virtuous cycle. The new phenomena, mobile apps, has these features. Success among apps is highly concentrated, in part because of the “top apps lists” recommend apps based on past success as measured by downloads. Consequently, in order to introduce themselves to users, new app developers attempt to gain a position on the top app lists by “buying downloads,” i.e., paying a user to download the app onto her device. We leverage a private dataset of one platform for buying downloads and identify the return from this investment. $100 invested will improve the ranking by 2.2%. To understand the investment rationale for buying downloads, we build a model that accommodates (1) the impact of buying downloads on top list rank, (2) optimal investment in buying downloads, (3) an empirical distinction between app diffusion generated by bought downloads and diffusion from organic downloads, and (4) a rich set of app-specific heterogeneities. We quantify the app-specific structural coefficients by estimating the model using time-series ranking positions of 2,755 free iOS apps. We find the median value of one organic download is 65% of the cost of buying one download, implying a huge marginal cost of buying downloads. App developers lose money during the initial days after release. The coefficients are correlated with ex-post quality, measured by user ratings, but uncorrelated with ex-ante observed app characteristics, suggesting that developers face a great deal of ex-ante uncertainty about the outcome for their apps when they enter the market. We then employ our model to estimate the diffusion delay resulting from the visibility problem in the mobile app industry.

2 - Application Usage and Advertising Response
Baohong Sun, Dean’s Distinguished Chair Professor of Marketing, Cheung Kong Graduate School of Business, 601 Lexington Avenue, Suite 2640, New York, NY, 10022, United States, bhsun@cgsb.edu.cn, Lin Ma
Although mobile applications account for 86% of consumer’s time on mobile devices, and in-app advertising spending is eclipsing that of mobile web, little is known about whether mobile shopping. In this study, we develop an integrated model of mobile application usage and in-app advertising response. Recognizing mobile’s ubiquitous and multitasking nature, both actions in our model are driven by consumers’ simultaneous involvement in multiple types of activities. The model accounts for the dynamic evolution of these involvements, and distinguishes their effect on advertising response from the direct contextual effect of mobile applications. Using a unique panel dataset on application usage and ad response, we find salient temporal patterns and persistence of consumer’s underlying involvements. We find that higher involvement in Entertainment, Utility, or Information activities decreases consumers’ interest in advertisements, while higher Social involvement increases the interest. In contrast to the effects of the underlying involvement, contextual effect estimates show that Information applications actually present a favorable context for ad clicks, while Social applications provide an unfavorable context. We are the first to connect consumers’ mobile application usage with their in-app ad response. Simulation shows that incorporating such knowledge into ad targeting can improve click-through rates by more than 200%.

1 - The Influencing Factors of Online Consumers’ Return Satisfaction
Yan Ma, Zhongnan University of Economics and Law, South Lake Avenue, Wuhan, 430073, China, 953582061@qq.com
With the development of the Internet, the transactions of the commodities turned out to be digitized; however, the non face-to-face transactions led to one main problem that commodities possibly do not meet the expectation of consumers, and will then inevitably result the return problem. How to improve the consumers’ return experience and build their trust has become the focus of business considerations. Based on the research model of the influencing factors of online consumers’ return satisfaction, the author studied 1002 after-sales review samples. Through compiling and labeling the sample data, the author quantifies the consumers’ emotion by emotion analysis and then analysis by multiple linear regressions, the paper provides a base for businesses to improve the quality of return service by validating and explaining the research model.

1 - Linking Mobile Shopping to Product Returns: Know Your Unfavorable Customers
Yufei Zhang, Michigan State University, 1725 Nemoke Trail, Haslett, MI, 48840, United States, zhanyu@broad.msu.edu, Chen Lin, Jeongwen Chiang
Mobile shopping heightens the practical and theoretical importance of product return in marketing. Extant literature has focused on the effect of return policy and product return on future purchases. However, the missing puzzle is “who are the customers returning products?” Thus, the authors empirically demonstrate customer characteristics and behavior that might lead to higher probability of product returns in PC and mobile platforms. Our multi-level model reveals mobile shoppers and existing customers are less likely to return products due to the interactive design of mobile site and previous experience, but late night shopping evokes a higher level of returns.

2 - Mobile Marketing Communications for Online-to-Offline Shopping
Yifan Dou, Fudan University, Fudan University, Shanghai, China, yfdou@fudan.edu.cn, Fue Zheng, Xueming Luo
Brick-and-mortar stores have been focusing on pricing-oriented strategies (e.g., price matching) to compete against online retailers. Little is known whether offline retailers can win back online-only or multi-channel shoppers via enhancing marketing communications. This research-in-progress addresses this question with a field experiment from a representative multi-channel retailer. We consider three approaches to improve marketing communications in the form of promotional message: 1) alleviating loss aversion on travel costs, 2) incentivizing social shopping motives, and 3) specifying product category. Our results provide managerial implications for offline retailers to refine their marketing practices by personalizing communications with customers of different channel preferences.
3 - Mobile Sweepstakes Promotion
Fue Zeng, Wuhan University in China, Department of Marketing,  Wuhan, China, zfe@ sina.com, Yuchi Zhang, Xueming Luo
Marketers often use sweepstakes as an initial promotional content and follow up with subsequent promotional offers. However, it is unclear whether such sequential promotions are effective. Using two-period multi-promotions randomized field experiments, we show that the engagement benefits of initial sweepstakes (vis-a-vis coupon) can mitigate purchase acceleration and lift incremental sales of follow up coupons. Also, propensity score analyses reveal that sweepstakes asymmetrically affect active and dormant participants; dormant customers may have more residual benefit from engagement activities of sweepstakes and experience a greater sales lift. Conditional on sweepstake participation, the follow up coupon is more effective than without it for dormant users, but not for active users. All these limited marketing resources to behaviorally target dormant customers with the sweepstakes-Coupon sequential promotions: initial sweepstakes customers targeted with subsequent coupons. Further comparisons between sweepstakes with a scratch game and those without it suggest that customer engagement may be a plausible explanation to our results. The documented findings may change sequential promotion practices with respect to sweepstakes, coupons, and retargeting offers.

4 - The Digitalization of Loyalty: Capitalizing Mobile Loyalty Programs to the Offline Purchase
Sungho Park, Arizona State University, spark104@asu.edu, Yoon Seock Son, Wonseok Oh, Sang Pil Han
Despite the rapidly shifting trend of customer loyalty programs from plastic card schemes to mobile application-based initiatives, a marked gap remains in our understanding of the economic and marketing value of mobile-oriented campaigns. Using an individual-level transaction dataset from a multinational loyalty program provider, we examine the effect of mobile loyalty programs on customers' purchasing behaviors. The results indicate that mobile application adoption reduces customers' inter-purchase time (IPT) by 13.4%. Yet, this effect differs significantly depending on the types of mobile application adopted and consumer characteristics. In terms of IPT, firm-specific mobile loyalty apps outcompete meta loyalty apps, with the former lessening IPT by 16.3% and the latter achieving only a 5.5% reduction. The effect of mobile apps on IPT is more pronounced among light and moderate users than among heavy users. Further findings also reveal that customers' IPT engagement levels, measured by the frequency of app login, is significantly associated with the effect of mobile app adoption on IPT. The greater a customer's engagement with mobile loyalty apps, the shorter the IPT. An intriguing empirical issue that surrounds the reward redemption pattern is that consumers tend to redeem their reward points more aggressively after they have switched to mobile loyalty programs. Mobile app adoption also exerts spillover effects, in which customers visit numerous brands and stores under a multi-vendor loyalty program that allows point sharing across different brands. Finally, the findings provide marketers with several insights into how they can maximize the benefits of mobile loyalty initiatives.

2 - Tweets as Geographical Canaries: Message-Communities and the Spatial Distribution of Retweeting Behavior
Nina Jalali, Assistant Professor of Marketing, University of North Carolina Charlotte, 9201 University City Blvd, Charlotte, NC, 28223, United States, nyahyapo@uncc.edu, Purushottam Papata
Twitter is increasingly becoming a medium where people talk about brands via tweets. The literature (Fournier and Avery 2011, Malhotra et al 2011) suggests that the benefit of such social media marketing (SM) efforts is to stimulate additional conversations about the brands which can complement the brands' promotional efforts. An additional benefit of tweets - and one that has not yet been investigated - is that the volume of retweets generated by tweets can provide insights into the extent of consumer interest in the tweets. Even richer insights can be gained by understanding the spatial distribution of retweet volumes. For instance, a tweet on conservation may resonate in San Francisco (the most environmentally-conscious US city according to B B C) while that related to conservatism may appeal to Mesa, Arizona (the most conservative US city per The Economist). Such insights can then be used for better targeting of marketing resources to behavoirally target dormant customers with the use of spatially differentiated marketing resources.

3 - Followees in Mobile Network: An Assessment of the Influence Value
Kyungmin Choi, KAIST, Seoul, Korea, Republic of,
knc@business.kaist.ac.kr, Daegon Cho
This article introduces a new perspective on estimating mobile subscribers' influence value by examining social influence of the subscribers' churn. Drawing on the literature (e.g., Hagozzi and Dholakia 2006), we approach the problem of interest. However, the underlying motivation on user generated content both impact an individual's social media rebroadcasting decision. It is worth noting that most mobile operators mainly give preferential treatment to subscribers making a large number of calls; however, our results highlight that the followers who receive a large number of incoming calls are still important by having a significant influence value on their neighbors, which is inferred from a well-known phenomenon in online social media platforms. This finding can also provide managerial implications to practitioners by boosting retention of followers may create "hidden value" by reducing churn rate.

4 - Ideology Matching, Message Congruency and Social Media Rebroadcasting
Angela Xia Liu, Tsinghua University, Weill Cornell Medical College, Egypt, 14635 335, SEM, Beijing, 100084, China, liux@sem.tsinghua.edu.cn, Ying Xie
Existing literature has established that image-related utility plays an important role in individuals' social media participation behavior. The content posted or shared by an individual in her social media channels reflects the image she would like to project in public. As one of the most fundamental dimensions of differences between people, ideology affects individual actions in a variety of contexts, especially in the domain of idea marketing where ideological standing plays an essential role. In the current study we are interested in exploring the role of self-projected ideological orientation in an individual's social media rebroadcasting behavior. In particular, is an individual more likely to share content the more similar ideological orientation she has to the content contributor? Furthermore, is she more likely to share content when it reflects a similar ideology disposition as she possesses? Using a sample of Tweet data on the color of a house in the data set provided by a large mobile network operator, we treat a group of subscribers who receive a greater number of calls (incoming calls) than they make (outgoing calls) as followers. We run a series of logistic regressions to assess the spatial effect of the followers' influence on the followers' churn decision. Our results consistently show that the subscribers connected to followers are more likely to churn than those who are not connected to followers. For instance, a follower's ideological leaning is likely to affect their neighbors' churn decision. It is worth noting that most mobile operators may create "hidden value" by reducing churn rate.
We build an analytical model to study seller’s optimal strategy selling on daily deal websites, i.e., Groupon. We study the interactions between online and offline markets. We derive the optimal online price and maximum deal size for the cases with and without customer loyalty constraints and given maximum deal size. In a case without capacity limit, we show counter-intuitively that it may be optimal for a seller to set a maximum deal size even if there is no capacity limit. Moreover, online daily deal offers may be set 20% better than the single offline channel. We further discuss the impact of capacity limits on the selection of optimal strategy. We find that selling out capacity may be not optimal for sellers even through the capacity is tight. When the seller’s capacity is in a medium level, sellers need to control the demand within the capacity by adjusting the price and upper bound limit. If price-control and size-control are both available for sellers, price-control is superior to size-control.

2 - The Effect of Consumer Online Price Search on Pricing Behavior of Firms

Wiebke Keller, University of Tuebingen, Tuebingen, Germany, wiebke.keller@uni-tuebingen.de, Anna Smolnik, Dominik Papis

The advent of different online price comparison mechanisms has stirred an ongoing debate on whether an increase in price transparency indeed makes markets more efficient, as economic theory would predict. This discussion was supported by empirical studies focusing on different online price comparison mechanisms; however, the results have been mixed. Recently, regulators have implemented mechanisms to increase price transparency, with the goal of reducing price dispersion and ultimately prices. For instance, German gasoline stations have to report all price changes instantaneously to a central database. We construct various spatial measures of price dispersion as dependent variables. The results suggest that an increase in price information indeed reduces price dispersion across gas stations. In contrast, however, we find that prices tend to increase as consumers become more informed. Furthermore, brand strength moderates several of these effects.

3 - Comparing Online And Offline Price Dispersion: A Meta-analytic Review

Sanjoy Ghose, Lubar School of Business, University of Wisconsin-Milwaukee, Milwaukee, WI, sanjoy@uwmu.edu, Yijuan Liu

Price dispersion, defined as the magnitude of price variation for any physically identical product items, which is either spatial across sellers at one point in time, or temporal (prices vary within a seller over time), are examined in both conventional bricks-and-mortar stores and e-commerce contexts with either pure-play E-tailers or multi-channel stores. Baye, Morgan, and Scholten (2006) reveal that both online and offline price dispersion are sizable, pervasive, and persistent — and do not purely stem from subtle differences in goods or services. In this study, the authors conduct a Meta-Analytic review on 113 comparisons of online and offline price dispersion across 23 studies between 1998 and 2012. A logistic regression is performed to ascertain the effects of product popularity, price structure, competition, seller heterogeneity, and measurement of price dispersion on the likelihood that online price dispersion is higher than offline price dispersion. The model is statistically significant, which explains 60.9% (Nagelkerke R sq.) of the variance in the comparisons. Online price dispersion is lower than offline price dispersion, for popular items, for products including Shipping and Handling fees, and for the market with the higher level of competition. Meanwhile, if we control for the seller heterogeneity, or utilize the relative measures (including coefficient of variation and percentage of price difference), online price dispersion tends to be higher than offline price dispersion. The study sheds light on the future research on price dispersion and helps market practitioners to differentiate consumer value-based pricing strategy in online and offline contexts.
1 - Viewership of Original TV Programs and their Online Streaming
Hiroshi Onishi, Assistant Professor of Marketing, Tokyo University of Science, Tokyo, Japan, holnishi@umich.edu

The viewership of online video streaming services such as Youtube, Netflix, Hulu and etc. has been increasing and becoming more and more important for the advertising circle, in contrast with the declining viewership of TV programs. In fact, TV networks have been providing the online streaming services of their own programs and contents on their proprietary websites in order to attract more viewers. They are also placing ads both in the original TV programs and in the online streaming programs to exploit their profit opportunity. This research focuses to sports programs which are one of the most popular categories among the online streaming contents. I investigate similarities and differences of viewer behaviors between original TV programs and the online streaming programs. I use a unique data set from the Japanese viewers of the 2014 Sochi Winter Olympic Games where audiences watched the same live programs of the games both on the TV and the online streaming, as well as on a VOIP(video on demand) service afterwards. I find that there is a strong spillover effect from the TV viewing to the online video viewing behavior, especially to the VOD viewing. I also examine how the factors such as time slots, air times, popularities of the games and results affect the viewers’ decisions of watching programs on which platforms. I then discuss managerial implications for TV networks.

2 - Online Advertising: The Role of Forced Ad Exposure on Consumer Emotions and Ad-Skipping Behavior
Xinying Hao, The University of Texas at Austin, Dept of Marketing CBA I 306C, J University Station B6700, Austin, TX, 78712, United States, xinying.hao@mccombs.utexas.edu, Garrett Sonnier, Frenkel Ter Hofstede

Ad avoidance behavior is an increasingly important problem for social platforms that rely on advertising revenues. A common tactic employed by platforms is to impose a period of forced ad exposure. For example, YouTube typically requires viewers to watch the first 5 seconds of an ad after which the viewer can choose to skip the ad and proceed to the desired content. In this paper, we develop a model that quantifies the effects of forced ad exposure on consumers’ emotions and ad-skipping behavior when watching online video advertisements. We use facial recognition technology to measure emotions in a completely unobtrusive way, avoiding more measurement effects. Our Bayesian dynamic generalized linear model captures the temporal trajectory of consumer emotions under forced and unforced ad exposure conditions as well as the dynamics of the consumer’s ad-skipping behavior. Our preliminary results indicate that forced ad exposure largely ignites contempt and disgust and suppresses feelings of surprise. Surprise and anger cause a decrease in the skipping probability while contempt, disgust and sadness increase the risk of losing an audience’s attention. Moreover, we find a high carry-over effect in the skipping propensity, which indicates it is important to capture viewers’ attention in the opening seconds. Our results provide implications for ad developers, advertisers and online video platforms.

3 - Are Online and Offline Advertising Substitutes or Complements: Empirical Evidence from U.S. Food Industries
Xi He, University of Connecticut, 12 Eastwood Road, Storrs, CT, 06269, United States, xhhe@uconn.edu, Rigoberto A. Lopez, Yizao Liu

Previous work on online advertising (ONLA) assumes that it is a substitute for rather than a complement of offline advertising (OFFLA), as found in traditional media. However, empirical evidence for this premise is lacking. Determining the direction and quantifying the substitution or complementarity between ONLA and OFFLA in the food industries is of interest to policy makers who are concerned with the effectiveness of bans on traditional media advertising, such as TV advertising, and to managers who are seeking to achieve target sales by minimizing advertising cost via the right mix of ONLA and OFFLA. This paper investigates the substitution between online advertising and offline advertising as well as the impact of the introduction of new media technology on the cost of advertising. We estimate an advertising translog cost function at the product brand level with monthly observations between 2005 and 2011 for each of three industries: beer, ready-to-eat cereal, and carbonated soft drinks. As in previous work, we find that traditional media (TV and print) advertising are close substitutes across industries. Surprisingly, however, we also consistently find that online advertising is a complementary substitute for both broadcast and print media advertising. This may be explained by online advertising’s targeting younger market segments and acting as a reinforcement of TV and print media advertising exposure. Further results show that in general the adoption of ONLA has lowered the cost of advertising for achieving a sales target and that its complementarity effect is weakening over time.

4 - Tedium Effect in Advertising: Evidences from the Crowdfunding Industry
Xi Li, University of Toronto, Toronto, ON, Canada, xlli1@rotman.utoronto.ca, Xin (Shane) Wang, Mengshi Shi

Tedium effect in advertising refers to the reduced effectiveness of advertising when consumers receive an excessive amount of exposure to advertising. One possible reason for tedium effect is that long exposures may decrease the recipient’s agreement with the message. We investigate the tedium effect in advertising using data for online crowdfunding projects listed in Kickstarter website. Our data covers 8,327 music projects in three major markets including New York, Los Angeles, and Texas. We analyze the effect of advertising on the success rate of these crowdfunding projects. Using machine learning techniques, we extract several relevant measures of videos and texts, such as the duration of the video, the information richness of the video, the content of the video, and the polarizations of words. The results provide the evidence that supports the tedium effects when watching Kickstarter project advertisements. Moreover, the tedium effect depends on a number of video characteristics such as project uncertainty and the stake of investment. Our results not only provide new insights for the tedium effects from a large scale empirical data, but also offer useful guidelines for the optimal design of advertising in the digital age.
1 - Anticipating Relationship Vulnerability and Consumer Switching Risk in Business-Consumer Relationships
Sadrad Cenophat, Europa-Universitaet Viadrina, Frankfurt Oder, Germany, cenophat@europa-uni.de, Tomas Bayon

In an arena of intensive competition, marketing scholars and practitioners acknowledge that consumer switching represents a major challenge for businesses (Hughes & Weiss, 2007; Neslin, Gupta, Kamakura, Lu, & Mason, 2006). To anticipate switching risk, a profound understanding of switching - that goes beyond the critical incidents such as, low service quality, satisfaction with service failure, and price (Bolton, 1998; Keaveney, 1995) - proves crucial (Stewart, 1998). By analogy with Morgan and Hunt (1994), one can argue, just as medical science should predict illness before it occurs, marketing science should be able to anticipate and measure dysfunctional business-consumer relationships (B2C) in order to mitigate switching risk. While the critical incidents may appear to be the situation leading to switching risk, it seems consequential that the predisposition/sensitivity of B2C to the occurrence/harm of these incidents is of considerable relevance. Building on dispositional theory (Kleinmuntz, 1967), this study argues, consumers’ traits such as, perfectionism (Kopalle & Lehmann, 2001), and transient novelty seeking (Hirschman, 1980) explain such predisposition (i.e. relationship vulnerability RV). A model depicting the nature, antecedents, and consequences of RV will be tested. The study hypotheses that higher RV lowers commitment that, in return, increases switching risk (Morgan & Hunt, 1994). Using CB-SEM, this research predicts the maintenance of B2C before their inception. Based on this model, practitioners can wisely dedicate resources to a particular group of customers and mitigate switching-risk accordingly.

2 - How Customer Satisfaction Affects Loyalty
AiJing Xing, Dr, Tohoku University, Sendai, 980-0853, Japan, sdxingaijing@sina.com, Nobuhiko Terui, Pallassana K Kannan

The paper investigates nonlinear relation of customer satisfaction to loyalty. The relationship is measured by using customer satisfaction index model in the way of extending it to include nonlinear function on the basis of behavior. We propose possible functional forms on how satisfaction affects loyalty, where we propose the model that reflects intrinsic characteristics of nonlinear effects, such as saturation-attainable limit of effectiveness, non-constant marginal return, and asymmetric response between satisfied and dissatisfied customers, in a parsimonious way. As for our contribution to modeling literatures, we propose nonlinear structural equation model that includes nonlinear terms of endogenous latent variable, and provide an efficient algorithm of MCMC in terms of multi-move sampler by using Gibbs sampling. The empirical analysis by using actual survey data shows (1) the hierarchical Bayes models borrowing other’s data are better than independent model using their own data in the sense of not only goodness of fit measures and also increasing numbers of significant model estimates, (2) nonlinear models perform better than linear models, (3) nonlinear model includes asymmetric marginal returns and attainable limits is supported as the best one. We obtain managerial implications for loyalty management: (i) there are attainable limits to the level of loyalty in terms of satisfaction; (ii) customer’s loss aversion response is lower; (iii) return of satisfaction is asymmetric between satisfied and dissatisfied customers, i.e., increasing for dissatisfied customers and decreasing for satisfied customers, (iv) direct effect of satisfaction is more significant than indirect effect through recommendation intention generally. Finally, we derive managerial implications for efficient loyalty program. We also evaluate the efficient loyalty program under assumptions of fully and limited access to customers.

3 - Does Customer Satisfaction Always Create Shareholder Value?
An Empirical Study of the American Customer Satisfaction Index
Gian Chen, PhD Candidate, Pennsylvania State University, 132 Beagle Run Court, State College, PA, 16801, United States, qcu20@psu.edu, Zhe Chen, Duncan Fong, Rui Wang

Customer satisfaction has been valued as an asset in the marketing literature because it can benefit firm’s shareholder value and bring excess stock return. However, the importance of the heterogeneous and dynamic nature of the relationship between customer satisfaction and shareholder value has not been given sufficient attention. The issue is critical because for more precise investment strategies, investors need accurate answers beyond the positive association between customer satisfaction and shareholder value. In this study, the authors employ new Bayesian models to investigate the association. Results indicate that customer satisfaction does not have a homogenous positive effect on the shareholder value. Instead, its impact varies across firms and changes over time. The inter-firm difference is generally more significant than intra-firm temporal difference. Furthermore, large firm size and high market concentration tend to strengthen the association between customer satisfaction and shareholder value. Therefore, firm heterogeneity and dynamic nature of the association are important factors to consider when customer satisfaction is used to predict firms’ financial performances and guide investment strategies.

4 - The Effects of Hierarchical Status Levels in Loyalty Programs:
A Regression Discontinuity Analysis
Tammo A Bijmolt, University of Groningen, Faculty of Economics and Business, P.O. Box 800, Groningen, 9700AV, Netherlands, T.H.A.Bijmolt@rug.nl

Numerous firms have introduced a loyalty program that explicitly differentiates between customers by means of hierarchical status levels. Typically, these programs assign customers to status levels (e.g. silver, gold, platinum) based on past purchase behavior, and next provide increasing levels of tangible and intangible benefits to them. The underlying idea of hierarchical loyalty programs is that current status level and its changes therein over time have an impact on customer purchases. In this project, we examine this premise. We use a rich and unique database that contains longitudinal information for the period 2008-2014 about customers’ share-of-wallet (SOW) and status levels in a hierarchical loyalty program of a world-leading supplier of agricultural products (B2B context). The firm approximates on a yearly basis the customers’ SOW by dividing the expenditures at the focal firm by the estimated total expenditures (based on firm size, type of crop, location, etc.). Hence, the customer does not know his/her exact SOW used for classification to the status levels, which prevents strategic behavior of just making a specific status threshold. This program structure perfectly matches the conditions to treat the data as quasi-experimental and apply the regression discontinuity design methodology. Overall, the results show only small to moderate effects of the status thresholds. The presentation will discuss details on the methodology and provide insights on the theoretical and managerial implications of the outcomes.

SB03
Customer Relationship Management II
Contribution Session
Chair: Tammo A Bijmolt, University of Groningen, Faculty of Economics and Business, P.O. Box 800, Groningen, 9700AV, Netherlands, T.H.A.Bijmolt@rug.nl

1 - Anticipating Relationship Vulnerability and Consumer Switching Risk in Business-Consumer Relationships
Sadrad Cenophat, Europa-Universitaet Viadrina, Frankfurt Oder, Germany, cenophat@europa-uni.de, Tomas Bayon

2 - How Customer Satisfaction Affects Loyalty
AiJing Xing, Dr, Tohoku University, Sendai, 980-0853, Japan, sdxingaijing@sina.com, Nobuhiko Terui, Pallassana K Kannan

3 - Does Customer Satisfaction Always Create Shareholder Value?
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SB04
Promotion II
Contribution Session
Chair: Michal Herzenstein, University of Delaware, Department of Business Administration, 319 Alfred Lerner Hall, Newark, DE, 19716, United States, michal@udel.edu

1 - Strategic Revenue Sharing with Daily Deal Sites:
A Competitive Analysis
Sajeesh Sajeesh, City University of New York, New York City, NY, s.sajeesh@baruch.cuny.edu, Pradeep Bhardwaj

2 - Modeling Customer Experience for Acquired and Retained Customers, when Receiving Free Samples
JeeWon (Brianna) Choi, Doctoral Student, Georgia State University, 3348 Peachtree Road NE, Suite 204, Atlanta, GA, 30326, United States, jchoi43@gsu.edu, V. Kumar, Anita Pansari

Majority of firms use free product samples to boost short-term sales and to attract new customers. Prior research has established the positive effect of free samples on firm sales at an aggregate level. However, the effectiveness of free samples on customer experience and customer engagement at the individual customer level remains unaddressed. Therefore, in this study, we frame a problem that investigates the efficacy of distribution of free samples on customer experience with the firm’s products. We also evaluate the consequence of customer experience on customer engagement and the moderating impact of marketing mix and prior customer experience on the effect of customer experience on customer engagement. We use longitudinal customer level data for a health and beauty aids category from a multinational firm. We study the impact of free samples on both customer acquisition and customer retention. We find that the effect of free samples on customer experience varies depending on the type of sampled product (new vs. existing product of the company) and customer’s prior transaction history. Further, we find that customer experience motivated by free sample enhances customer’s engagement with the firm. We provide relevant managerial implications in using free product samples to enhance customer experience among both prospects and existing customers, and efficient marketing resource allocations to increase the level of customer engagement.
Intention. The results show that the uniqueness of bottles and consumers’ volume of bottles whose uniqueness are different, and answers the purchase intention. We conclude that the individuals’ subjective probability about their winning gamble is amplified as the draw timing gets closer. In doing so, we used the daily library lottery sales data for one year from 1590 stores. We assumed that the changing pattern of sales data from Sunday to Saturday can be a good proxy measure of the changing pattern of subjective probability at any given periods. In addition, we examine the impact of external factors such as lucky store, temperature, and income on the lottery sales from Sunday to Saturday. Different from the previous experiment based research by using the lowest probability of an event as 0.01, our research provides insight based on the analysis of a real case lottery data having an extremely low probability (i.e., 0.000000027) to win the first prize. In general the sales on Saturday (draw day) seem to be amplified by 14 times compared to that of Sunday (a day after draw). Lucky stores boosted sales asymmetrically by 14% (Guryan et al. 2008) with more sales on Friday and Saturday. High temperature (over 25 Celsius degree) drives individuals to purchase more tickets but with marginal increase of 1%. Individuals in high income tend to purchase more lottery tickets (108%) but tend to enjoy delayed consumption with lower ratio of Saturday to Sunday (2.33) compared to those in low income district (7.38).

3 - Diagnosing Consumer Emotional Reactions on the Basis of Facial Expressions

Gilles Laurent, Professor, INSEE, 27, avenue Claude Vellefaux, Paris, 75011, France, glaurent@insee.com, Raphaelle Lambert-Pandraud, Bernard Gourvennec, Lydie Belaud

Our substantive question bears on the impact of age on consumer emotional reactions to historically-dated stimuli. Concretely, will an older consumer feel a stronger positive emotion when shown a movie star first encountered in the consumer’s youth than when shown a contemporary star? We compare results obtained with a recently developed software measuring emotional valence to well-established psycho-physiological measures (skin conductance, heart-beat, pupil dilation) and to classical face-to-face survey measures. The new software analyzes video recordings of the consumer’s face while watching the photograph of a star (after a preliminary baseline period watching a blank screen). Each consumer sees successively photographs of twenty-four movie stars who became popular in different periods. Our presentation comprises four steps. First, we discuss how to build a synthetic indicator on the basis of the fifteen scores per second provided by the software. We show how the scores observed during exposure to a photograph must be corrected to take into account what the scores were during the baseline period. We compare this correction to those done for skin conductance, heart-beat, or pupil dilation. We show how scores must also be corrected for consumer idiosyncrasies. Second, we show to what extent these scores correlate with measures of emotion provided by psycho-physiological measures and by face-to-face questioning. Third, we analyze how scores of emotional valence are impacted by characteristics of the stimulus and of the consumer (e.g. gender of both). Fourth, we investigate the mediating role of the consumer’s recognition of the star.

SB05

INFORMS Marketing Science Conference – 2016

3 - Uncertainty and Consumer Promotion

Sungchul Choi, University of Northern British Columbia, School of Business, 3333 University Way UNBC, Prince George, BC, V2N 4Z9, Canada, schoi@unbc.ca, Xin Ge, Republic of, janglee@korea.ac.kr, Hee-Kyoung Ahn

Since Kahneman and Tversky (1979) has suggested the decision weight as opposed to the stated probability, numerous research has confirmed the s-shaped weighting function that illustrates the discrepancy between objective and subjective probability (Kahneman and Tversky 1979; Prelec 1998; Tversky and Kahneman 1992; Wu and Gonzales 1996). We investigate how the individuals’ subjective probability about their winning gamble is amplified as the draw timing gets closer. In doing so, we used the daily library lottery sales data for one year from 1590 stores. We assumed that the changing pattern of sales data from Sunday to Saturday can be a good proxy measure of the changing pattern of subjective probability at any given periods. In addition, we examine the impact of external factors such as lucky store, temperature, and income on the lottery sales from Sunday to Saturday. Different from the previous experiment based research by using the lowest probability of an event as 0.01, our research provides insight based on the analysis of a real case lottery data having an extremely low probability (i.e., 0.000000027) to win the first prize. In general the sales on Saturday (draw day) seem to be amplified by 14 times compared to that of Sunday (a day after draw). Lucky stores boosted sales asymmetrically by 14% (Guryan et al. 2008) with more sales on Friday and Saturday. High temperature (over 25 Celsius degree) drives individuals to purchase more tickets but with marginal increase of 1%. Individuals in high income tend to purchase more lottery tickets (108%) but tend to enjoy delayed consumption with lower ratio of Saturday to Sunday (2.33) compared to those in low income district (7.38).

1 - The Effect of Consumer Emotion on Volume Judgment and Purchase Intention

Haruka Kozuka, Graduate School of Keio University, Tokyo, Japan, haruka.11.kozuka@gmail.com

This article examines whether consumers’ positive affect and arousal can increase accuracy of volume judgment regardless of bottle shape. Additionally, the author examines how consumers’ emotion influence on purchase intention. In a laboratory experiment, some participants are manipulated in positive and high arousal condition, and the others received no treatment. Each participant judges the volume of bottles whose uniqueness are different, and answers the purchase intention. The results show that the uniqueness of bottles and consumers’ positive emotion promotes accurate volume judgment, but arousal increases accuracy of volume judgment regardless of bottle shape. Furthermore, arousal increases purchase intention for the bottles whose uniqueness are high. This study suggests that consumers in high arousal condition can perceive volume accurately being unaffected the uniqueness of bottle and prefer to the bottles whose uniqueness are high.

2 - Asymmetric Impacts on Subjective Probability: A Case of Lottery

Janghyuk Lee, Associate Professor, Korea University, Hyundai Motor Hall #521, An-am-ro-jang-won, Seoul, 02841, Korea.

Since Kahneman and Tversky (1979) has suggested the decision weight as opposed to the stated probability, numerous research has confirmed the s-shaped weighting function that illustrates the discrepancy between objective and subjective probability (Kahneman and Tversky 1979; Prelec 1998; Tversky and Kahneman 1992; Wu and Gonzales 1996). We investigate how the individuals’ subjective probability about their winning gamble is amplified as the draw timing gets closer. In doing so, we used the daily library lottery sales data for one year from 1590 stores. We assumed that the changing pattern of sales data from Sunday to Saturday can be a good proxy measure of the changing pattern of subjective probability at any given periods. In addition, we examine the impact of external factors such as lucky store, temperature, and income on the lottery sales from Sunday to Saturday. Different from the previous experiment based research by using the lowest probability of an event as 0.01, our research provides insight based on the analysis of a real case lottery data having an extremely low probability (i.e., 0.00000027) to win the first prize. In general the sales on Saturday (draw day) seem to be amplified by 14 times compared to that of Sunday (a day after draw). Lucky stores boosted sales asymmetrically by 14% (Guryan et al. 2008) with more sales on Friday and Saturday. High temperature (over 25 Celsius degree) drives individuals to purchase more tickets but with marginal increase of 1%. Individuals in high income tend to purchase more lottery tickets (108%) but tend to enjoy delayed consumption with lower ratio of Saturday to Sunday (2.33) compared to those in low income district (7.38).

4 - When Self-Promoting Women Find Success in Crowdfunding

Michal Herzenstein, University of Delaware, 20 Orchard Rd., 319 Alfred Lerner Hall, Newark, DE, 19716, United States, michalh@udel.edu

Crowdfunding has been hailed as democratizing fundraising because participation requires a relatively small amount of capital. In this research we examine the decision weights extends across genders of project leaders. Given that 35% of the projects in our sample (13,533 in total) are posted by women leaders, this question has a significant economic consequence. Past research show that in order to achieve leader self-promotion is perceived as qualified, competent, confident, and assertive, but also be likeable. The former is easily achieved by qualified women who actively engage in self-promotion. But this activity, which benefits men, is detrimental to women’s likability because it is perceived as inconsistent with a woman’s behavior. In this work, we extend the existing literature and compare certain monetary promotions and uncertain promotions, and (c) certain monetary promotions and uncertain non-monetary promotions. This current research is the first to juxtapose uncertain monetary promotions (e.g., price discounts) and uncertain non-monetary promotions (e.g., free gift). Furthermore, while not the main focus of this work, we extend the existing literature and compare certain monetary promotions and uncertain monetary promotions. We find that (1) an uncertain price discount is as effective as a certain price discount equivalent to the most desirable incentive involved in the uncertain discount at driving consumers’ purchase intent; (2) consumers perceive an uncertain price discount as more attractive than an uncertain free-gift promotion is mediated by the perceived relevance associated with the lowest possible outcomes in the uncertain promotions (deep vs. shallow) moderates the attractiveness of the promotions such as that the gap becomes deeper, it increases the attractiveness of an uncertain free-gift promotion, but not that of an uncertain price discount; and (3) the perceived relevance associated with the promotions mediates the above-described moderating effect. We discuss the important theoretical and managerial implications of these findings.

SB06

INFORMS Marketing Science Conference – 2016

3G, 3rd Floor

Special Topics

Session Chair: Przemyslaw Jezierski, University of California-Berkeley, University of California-Berkeley, Berkeley, CA, 94708, United States, przemekj@haas.berkeley.edu

1 - The Dynamics of Wholesale and Retail Pricing

Ron Borkovsky, University of Toronto, Toronto, ON, Canada, ron.borkovsky@rotman.utoronto.ca, Limin Fang

Retailers are able to exert significant market power in setting prices in many consumer product categories–both because the retail sector has become more concentrated over time and because retailers can price as local monopolists in any given market. In this paper, we explore how a manufacturer strives to achieve dominance in the face of the retailer’s market power to affect the evolution of manufacturers’ shares in a given market category. Specification 1 explores how a retailer might strive to prevent any given manufacturer from becoming overly dominant. Accordingly, we explore how a manufacturer strives to achieve dominance in the face of the competing interests of both a rival manufacturer and the retailer. We study this within the context of a dynamic oligopoly model in which two forward-looking manufacturers set wholesale prices and a forward-looking monopolist retailer sets retail prices, and in which consumers face switching costs. We compute equilibria of the model using the homotopy method.
2 - Can Trivial Attributes Provide Sustained Preference Advantage?
Charan Kamal Bagga, Visiting Assistant Professor, Tulane University, 7 McAlister Dr, New Orleans, LA, 70118, United States, charan.k.bagga@gmail.com, Niraj Dawar

A trivial attribute has been conceptualized as a product attribute that appears valuable but on closer examination is irrelevant in creating the implied benefit. Examples include Pantene's use of vitamins in shampoo. Dial-for-Men's use of pheromones in body wash etc. (Broniarczyk and Gershoff 2003, Consumer Reports 2011). Contrary to conventional marketing wisdom, it has been demonstrated that meaningful differentiation can be created by trivial attributes. Missing from prior work on trivial attribute differentiation is an understanding of whether such differentiation is sustainable in the event of competitive retaliation. Understanding sustained competitive advantage in the context of trivial attributes is crucial, as competitors can and often will retaliate against first-mover trivial attribute differentiators. This is expected as trivial attributes are relatively easy to create and deploy. We examine when and why the competitive advantage provided by a trivial attribute to a differentiating brand holds in the event of competitive retaliation. We construct a multitude of experimental action-reaction settings to examine the sustainability of trivial attribute differentiation. The manipulated factors across different experiments include the category dominance of the first-mover and the retaliating brands, and the nature of competitive retaliation (i.e., same trivial attribute, a different trivial attribute, a more attractive trivial attribute, and price retaliation). We contribute theoretically to the areas of differentiation and consumer pricing and provide new insight on how competitive dynamics play in consumers' cognitive representations of the market place. We contribute methodologically by providing implications for firms on how to deploy, or react to trivial attribute differentiation.

3 - The Influence of Package Design on Consumers' Preference and Purchase Intention of Eco-Products
Meltem Kiyyi Calli, Okan University, Tuzla Campus, IBB Akfirat Tuzla, Istanbul, Turkey, meltem.kiyyicalli@okan.edu.tr

Package and label provide certain information on product features for customers along with a creative industrial design. That's why the package may draw the customers' attention to the product and direct them to look at the product features in detail. Therefore, packages are commonly used as a marketing communication tool by companies. The companies conduct many researches on the design of their products' package in order to stimulate the attention of the customers. This study investigates how the package design influences the customers' preference and purchase intention towards two eco-products selected from food and cosmetics categories. The prototypes of the packages of these eco-products are experimentally designed based on Rule Developing Experimentation (RDE) methodology. RDE refers to a systematized solution-oriented business process of experimentation, which designs, tests and modifies alternative packages in a structured and it is based on conjoint analysis approach. The experimental design calls for different unique combinations and each respondent tests a different set of combinations based on RDE. Besides, they fill in a questionnaire, which consists of rating scale questions in order to evaluate their preference and purchase intention. A total number of 470 respondents' answers are investigated in order to identify their reactions on the package design. A regression model is used to estimate the absolute contribution value of each element in respect of respondents' ratings. The organic products or in other words the eco-products are gaining popularity in the society and this paper explores for the first time the influence of the package design on consumers' preference and purchase intention of two eco-products selected from different categories. The optimal packaging solutions are analyzed on an aggregated, segmented and individual basis and the findings are compared.
**SB09**

**Health Science I**

**Contributed Session**

Chair: Qiang Liu, Purdue University, Krannert School of Management, 403 W. State Street, West Lafayette, IN, 47907-2056, United States, liu6@purdue.edu  

1. **A Structural Model of Correlated Learning and Late-Mover Advantages: The Case of Statins**  
Hyunwoo Lim, Ajou University, Wonchon Dong, San 5, Suwon, Korea, Republic of, hyunwoo.lim@gmail.com, Andrew Ching

When Lipitor entered the statin (a class of anti-cholesterol drugs) market in 1997, some incumbent drugs had already obtained strong clinical evidence to show their efficacy in preventing heart diseases. However, despite its lack of such important evidence, Lipitor immediately became the most commonly used statin among new patients. To explain this puzzle, we propose a theory of correlated learning and indirect inference by physicians. We introduce a concept of “efficiency ratio”, which measures how efficiently a drug can convert reduction in cholesterol levels to reduction in heart disease risks. We assume physicians are uncertain about drugs’ efficiency ratios, and allow the physicians’ initial prior belief to be correlated across drugs. With correlated prior perceptions, a new clinical trial’s information on a drug’s efficiency ratio can update physicians’ belief on other statins’ efficiency ratios. Physicians then infer each statin’s ability in reducing heart disease risks based on the perceived efficiency ratio and its ability in reducing cholesterol. Consequently, correlated learning may allow late entrants to gain late-mover advantages by free-riding on the clinical evidence and informative marketing activities of the incumbents. To estimate our model, we use a data set on market shares, patients’ switching rates and discontinuing rates, as well as detailing and media coverage from 1993 to 2004. Our estimation results show that correlated learning about statins’ efficiency ratios is strong. This, together with the fact that two late entrants, Lipitor and Crestor, are more effective in lowering cholesterol levels, allow them to gain late-mover advantages. Moreover, we find that intensive detailing efforts (via its informative and persuasive roles) also contribute to their successes.

**SB09**

**Marketing Science II**

**Contributed Session**

Chair: Anita Luo, Georgia State University, Department of Marketing, 35 Broad Street NW, Atlanta, GA, 30303, United States, aluo@gsu.edu  

1. **Time-Varying Marketing Mix Modeling**  
Kaifeng Zhao, Research Scientist (Data Analytics), GroupM, Singapore, Singapore, zhao.kf.math.hit@gmail.com, Saeed Bagheri

Marketing Mix Models (MMM) is an increasingly popular class of models to capture and measure marketing strategy effectiveness. It investigates the dynamic relationship between marketing strategy and market reaction (reflected by revenue or sales among others). However, there are few prior works taking into account the evolution of this relationship over time. This relationship plays a crucial role in understanding the instant market response and helping adjust the marketing strategies in a timely manner. In this work, we utilize time-varying coefficients for both fixed and random effects by introducing a semi-parametric time-varying MMM (TVMMM) model. The resulting approach incorporates both a parametric sub-model which rigidly controls the overall model, and a non-parametric sub-model which is known to be more flexible. Furthermore, we address lack of interpretation of non-parametric methods by Seasonal Decomposition of Time Series by Loess (STL) to further decompose the estimated time-varying effects into seasonality, trend and randomness. The proposed approach is validated using a dataset capturing two products’ sales over three years. Numerical experiments show superior performance of TVMMM in terms of both model fitting and predictive accuracy. In summary, our approach can provide more analytical insights into the evolution of marketing strategy effectiveness over time.

2. **The Value of “Content” in User-Generated Content**  
Xiao Liu, New York University, Stern School of Business, New York University, New York, NY, 10013, United States, xliu@stern.nyu.edu, Dokyun Lee, Kannan Srinivasan

How do consumers process information from user-generated “content” (UGC) to help with their purchase decisions? How can marketers leverage “content” information from user-generated “content” to learn consumer preferences? We propose content analysis of consumer product reviews to discover 1) product features consumers care about 2) consumers’ evaluation of product features 3) information consumers use from product reviews to make purchase decisions and 4) the information spillover effect (or “halo” effect) across products of the same brand. Then we create a learning model where consumers use price, ratings, and multi-dimensional content in reviews as signals to update their product quality beliefs. This research contributes to the literature by going beyond volume and valence of product reviews but extracting content information from them and exploring new and important quality-signaling mechanisms.

3. **Can Yelp Reviews Predict Restaurant Survival? Deep Learning of Online Word of Mouth**  
Xiao Liu, New York University, Stern School of Business, New York University, New York, NY, 10013, United States, xliu@stern.nyu.edu, Dokyun Lee, Kannan Srinivasan

In 2015, the restaurant industry generates more than $700 billion in sales and jobs for one in 10 workers in the U.S. (National Restaurant Association). Despite its high impact on U.S. economy, the restaurant industry is also well known for its high failure rate. Nevertheless, research on restaurant failure has been sparse. In this paper, we examine whether Yelp reviews could be used as one of the leading indicators of restaurant failure. In particular, we use deep learning text mining method (with origins in computer science) to analyze more than 1 million Yelp reviews from about 25,000 restaurants. Tracking the survival of these restaurants over the last decade (from 2004 to 2015), we aim to identify leading predictors of restaurant failure based on Yelp reviews. While extant text mining methods used in marketing cannot use review texts to generate predictions directly, our deep learning method can directly link text mining of consumer reviews to restaurant survival. Another unique advantage of our deep learning text mining method is that it is based on the alphabets rather than words. As a result, the use of seeding words (a typical source of potential bias and subjectivity in text mining) is not required. The general method used in this research is also directly applicable to reviews in other languages such as Chinese. To our knowledge, this is among the first large-scale empirical research on restaurant survival. We are also among the first to introduce deep learning text mining into the marketing literature.

4. **The Effect of Marketing Causes from the Perspective of Consumer Comments using Text-Mining**  
Anita Luo, Assistant Professor, Georgia State University, Department of Marketing, 35 Broad Street NW, Atlanta, GA, 30303, United States, aluo@gsu.edu, Krishna Pulipati

According to National Center for Charitable Statistics, charity giving in the United States totaled $358 billion in 2014, with 72% of contributions from individuals. Although charity rating sites such as Charity Navigator provide some basic accountability and transparency performance metrics, it is essential to understand public sentiment to assess charity organizations with enriched information. We examine the effectiveness of a charity organization by text-mining the unstructured data of consumer comments responding to posts regarding various charities within the organization. To do that, we first categorize various causes posted by the charity organization into different categories based on key word searches, then we extract key words reflecting the sentimental emotional vs. rational responses as well as positive vs. negative responses from the comments. Methodologically, we use text mining to train and mine the public comments, and build a statistical model to examine how various charity causes could generate different responses from the public. By linking the various causes to the assessment and response of the public support, we gather valuable information such as why the public is more sentimentally in favor of certain causes, while other causes fail to ignite public passion, and whether emotional or rational sentiment plays a larger role in evaluation. With the proposed method, charities and the public can make informed decisions on how to advocate such charity causes more effectively, and truly serve the public good as well as the long-term reputations of the charity organizations.
2 - Firm Competition For Sales Force Owned Customer Loyalty
Axel G. Stock, University of Central Florida, Dept of Marketing
CBA, PO Box 161400, Orlando, FL, 32816-1400, United States,
Axel.Stock@ucf.edu, Somnath Banerjee

Firms often recruit sales representatives to build relationships with customers and sell them products over time. In such a case of relationship marketing, customers build loyalty not only towards the firm but also towards their sales representatives. However, since the loyalty generated from customer-salesperson relationships are often “owned” by the sales person they can be lost if the sales person moves to another firm. In this context, firms competing in the market compete for both customers as well as sales reps with the objective of poaching customers that are loyal to the sales reps. We employ a two period game theoretic model of duopolistic competition to study optimal firm strategy in this scenario. Our analysis reveals that while under some conditions the possibility of poaching of sales reps decreases firm profits, interestingly, under many other conditions the possibility of poaching of sales reps can actually increase firm profits. This result is driven by the fact that while possibility of poaching of sales reps increases employee retention and wage costs, it also leads to a strategic benefit in form of softening of competition for acquisition of new customers. Our finding implies that contrary to general beliefs, the presence of anti-employee poaching regimens like Non-Compete clauses or the use of tact to collusion to not poach each other’s employees may hurt firms under some conditions. We also find that if the intensity of competition in such a market is high then firm profits follow an inverted-u relationship with respect to product profit margins. We report some empirical evidence for this result.

2 - Mobile App Platform Choice
Yongdong Liu, University College London, yongdong.liu@ucl.ac.uk
The market for mobile apps represents an enormous business opportunity. The success of an app platform largely relies on a great variety of innovative apps. Given the existence of multiple app platforms, fundamental questions in the app industry are how heterogeneous app developers choose which app platform to enter and which market designs benefit the platform expansion. Combining machine learning techniques and structural estimation, this paper studies these questions using a unique and big 2-year panel data set covering entire Apple and Google app stores. I find that Apple and Google app stores exhibit different competition structures across high-type and low-type apps. Counterfactual experiments investigate market policies regarding platform designs.

3 - Engaging and Targeting Consumers on Mobile: Connecting Mobile Promotions to Foot Traffic
Zhuping Liu, University of Texas, zhuping.liu@phd.mccombs.utexas.edu, Frenkel Ter Hofstede, Vijay Mahajan

We examine the impact of mobile promotions on foot traffic to shopping malls through a spatio-temporal point process. Consumers may be targeted based on their individual historical behavior (“behavioral targeting”) or based on their current locations (“location-based targeting”). We model app launch and shopping mall visit as “events” which may mutually excite or inhibit while behavioral targeting and location-based targeting are externally controlled by firms. The exciting and inhibitory effects are location-dependent, which allows us to study how mobile couponing and mobile targeting influence consumers’ shopping mall choices and to investigate the role of location on consumer engagement.
3 - The Consideration Process: Insights from Modeling Clickstream Data
Yifan Zhang, Pennsylvania State University, 408A Business Building, State College, PA, 16801, United States, yxz192@psu.edu, Arvind Rangaswamy, Daniel Ringel, Bernd Skiera

We use clickstream data from a price comparison website to characterize the evolution of consumers’ consideration process, and to determine how consumers’ use of decision aids (e.g. filters, sorting, reviews) affects the expansion and contraction of their consideration sets. We study the online decision processes of thousands of consumers while they explore different brands and products before making a choice. We propose a discrete-time Hidden-Markov model in which different degrees of consideration are specified as ordered hidden states, and consumers transit from one state to another by maximizing utility. We estimate the model via Bayesian analysis with data augmentation. Our results are robust across different product categories and offer several categories. For example, we find that the consideration process is not unidirectional, i.e., it is not a funnel. Although consumers have a tendency to converge toward a consideration set, they also exhibit a tendency to back-exit and switch between them again. This expansion of seemingly settled consideration sets suggests the possibility of a “no choice” option within consideration sets that becomes more salient for some consumers as they obtain more information during search. We also identify which decision aids play an important role at each consideration state - for example, we find that consumers in a low convergence state at time t are more likely to converge toward their consideration sets if they had previously used search boxes and price alarms (i.e., in time periods 1 to t-1). We conclude by describing the managerial and theoretical implications of our research.

4 - Consumer Information Search and Purchases: A Behavioral Dynamic Model
Zhenling Jiang, Washington University in St Louis, 605 Leland Ave Apt 506, St Louis, MO, 63130, United States, zjiang26@wustl.edu, Tat Y Chan, Hai Che, Souwei Wang

We develop a dynamic search model to study how consumers search and make purchase decisions. Using data from an online retail platform, we observe three robust behavioral patterns: 1) Within a consumer’s search set, the first sampled option as well as the last one are more likely to be purchased than the ones in the middle. 2) The conversion rate is convex increasing with the number of options sampled. 3) The click-through rate and conversion rate of sellers are only weakly correlated. It is hard to rationalize these behavioral patterns with traditional search models; therefore, we modify Weitzman’s sequential search model and incorporate a new behavioral factor - the psychological cost if there is no reward after the search effort. Our model also allows a consumer’s expected value of benefit to be a seller he/she is interested in purchasing, rather than the actual value after search. Model estimation indicates that the proposed model can generate the observed behavioral patterns and outperform other search models. Based on the results, we further investigate how this online retail platform can help consumers to conduct effective product searches and improve conversion rate.
Construal level theory describes the way people look at or attend to objects or events (Trope & Liberman, 2010). When confronted with a store full of chocolate products, consumers may either perceive the shop as entirely one of chocolates, or they may attend to the single chocolates. The former indicates a high-construal level (i.e., a focus on the global, abstract or superordinate features of an object), whereas the latter indicates a low-construal level (i.e., a focus on local, concrete or subordinate features; Forster & Dannenberg, 2010). Research has shown that a low construal level promotes succumbing to consumption temptations, whereas resisting temptations and exercising effective self-control is facilitated by high construal levels (Fujita et al., 2006). A determinant of whether we use high or low construal levels while attending to objects or events is the perceived psychological distance towards the object or event. We use increasingly higher levels of construal when attending to objects as the psychological distance from the self to the object increases (Trope & Liberman, 2010). The four dimensions of psychological distance: temporal, spatial, social and hypothetical. In the present research we identify a fifth dimension: cultural distance. Similarly as objects extended, in terms of psychological distance, we show that objects that are close in cultural distance lower construal level. Applied within the marketing sphere, we show in three experiments that brands that are close to consumers’ self in terms of cultural distance (i.e., local as opposed to global brands), lower consumers’ construal level and subsequently their self-control. As such, we provide a concrete branding mechanism (local versus global branding) to impact consumer self-control.

2 - Global or Local Compatibility between Emotional Orientation and Brand Positioning

Yi WU, Tsinghua University, Beijing, China, wuy3.13@sem.tsinghua.edu.cn, Jiaxin He

In the view of consumers’ perception on global brand positioning and local brand positioning, consumers tend to link global brands with more exaggerating, risk-taking and adventurous traits, while local brands with more stable, conservative and risk-avoiding tendencies. In terms of emotional orientation theory, approach emotion, as an active motivation state, stems from success or failure at approaching a threat. Therefore, this paper proposes an orientation-matching relation between approach/avoidance emotion and global/local brand positioning. The research includes 2 experiments. Experiment 1 tests the orientation-matching hypothesis in terms of positive emotion. Happy and calm emotion is tested under the situation of ‘approach’ and the situation of ‘avoidance’ respectively. 119 qualified participants from a university in Shanghai are randomly assigned to one of four conditions in a 2 (emotional orientation: approach vs. avoidance) x 2 (brand position: global vs. local) between-subjects design. In Experiment 2, negative emotions (sad and anxious) is tested to further strengthen our basic hypothesis. Similar study design was adopted. Several novel findings are revealed. Firstly, in terms of global positioning, happy rather than calm emotion induces a higher evaluation and stronger purchasing tendency. Referring to local positioning, the opposite result is found in both positive and negative emotion situations. In addition, moderator effect is tested in experiment 1. It is found that for global brand, consumers’ global identity positively moderates the relation between emotional orientation and brand attitudes. This result contributes to both global branding and emotion literature.

3 - Global Brand Equity, Brand Authenticity and Purchase Likelihood: Evidence from Chinese Consumers

Yi WU, Tsinghua University, Beijing, China, wuy3.13@sem.tsinghua.edu.cn, Jiaxin He

Global brand equity is the value sources that drive consumers’ preference to global brand as a whole. Recently, international academies has paid ever-increasing concern on global branding, among which global brand equity is one of the most important topics that need to be explored immediately. However, while the effect of perceived brand globalness (PBG) on consumer attitude has been examined with global brand equity playing the role of mediating mechanism, limited studies have been conducted on how global brand equity affect consumers’ purchasing likelihood. Based on this consideration, this study selects the two specific global equity dimensions, namely, perceived quality and global myth, and introduces an innovative construct, brand authenticity, to explore how global brand equity affects consumer attitudes via brand authenticity. Specifically, six global brands from China and western developed countries were chosen as study objects. An online survey was conducted to explore Chinese consumers’ evaluations on related constructs, with Morhart et al. (2015)’s PBA scale adopted to measure brand authenticity. The data was processed via the Structural Equation Modelling technique and revealed several novel findings: (1) perceived quality and global myth positively affect credibility, similarity, and familiarity (i.e. the four dimensions of PBA) respectively; (2) perceived quality and global myth enhances brand purchase likelihood via the indirect effect of brand authenticity; while only the former poses direct positive effect on brand purchase likelihood; (3) to Chinese local consumers, the indirect and total effects of perceived quality to brand purchase likelihood are higher in local global brands than in foreign global brands. Furthermore, Both the theoretical and practical implications are discussed.
4 - How Perceived Novelty of Cultural Elements Affects Willingness to Buy Global Brand Products: The Mediating Role of Cultural Compatibility

Jiaxun He, Professor, East China Normal University, No. 3663, Zhongshan Road (N.), Shanghai, 200062, China, jxhe@dbm.ecnu.edu.cn, Yi Wu

Currently both the academic and practical circles urgently require innovative perspectives to propel the theoretical research on global branding, which has been paid ever-increasing attention. This paper selects global brands that blend Chinese cultural elements as study objects to explore how perceived novelty of these cultural elements affects Chinese consumers’ purchase likelihood. The authors propose a conceptual model, in which cultural compatibility plays as a mediator while global identity and local identity as moderators. Specifically, several hypothesis are generated: (1) perceived novelty directly affects product purchase likelihood; (2) cultural compatibility partially mediates the effect posed by perceived novelty on product purchase likelihood; (3) global identity positively moderates the effect of cultural compatibility on purchase likelihood, while local identity negatively moderates the same effect. A survey with 309 validated respondents was conducted and data analysis supported all the hypotheses. This paper contributes theoretically in several ways. Firstly, the novel construct, perceived novelty, is introduced as a new perspective to explain why consumers tend to buy global brand products. Secondly, the mediator, i.e., cultural compatibility has been raised and examined as the mechanism of action of perceived novelty. Thirdly, further evidence is provided to validate global identity and local identity as consumer-level moderators in forming global brand attitude. Practically, innovatively adopting and blending local cultural elements in products when entering and expanding emerging markets should be an important strategy for global brands to enhance consumers’ purchase likelihood. The key point lies in exploring possible methods that effectively blend cultural elements.

5 - A Threshold Model for Discontinuous Preference Change and Satiation

Nobuhiko Terui, Professor, Tohoku University, Faculty of Economics and Management, Kawauchi Aoba-Ku, Sendai, 980-8576, Japan, terui@econ.tohoku.ac.jp, Shohei Hasegawa, Greg M Allenby

We develop a structural model of horizontal and temporal variety seeking using an economic factor model that relates attribute satisfaction to brand preferences. The factor model employs a threshold specification that triggers preference changes when consumer satiation exceeds an admissible level but does not change otherwise. The factor model can be applied to high dimensional switching data often encountered when multiple brands are purchased across multiple time periods. The model is applied to two panel datasets, an experimental field study and a traditional scanner panel dataset, where we find large improvements in model fit that reflect distinct shifts in consumer preferences over time. The model can identify the product attributes responsible for satiation, and can be used to produce a dynamic joint space map that displays brand positions and temporal changes in consumer preferences over time.

2 - A Hidden Markov Model to Detect On-Shelf, Out-of-Stocks using Point-of-Sales Data

Ricardo Montoya, Assistant Professor, University of Chile, Republica 701, Santiago, 8370439, Chile, rmontoya@di.uchile.cl

We propose a Hidden Markov Model approach to detect changes in sales patterns due to on-shelf out-of-stocks. We calibrate our model using point-of-sales data from a major retailer and monitor the states of the shelf. We test the proposed approach on a field study. The proposed approach performs well in predicting out-of-stocks combining high detection power and low false alerts.

3 - Optimal Supply Chain Structure and the Impact of Durability

Ramarao Desiraju, Professor, University of Central Florida, College of Business Administration, BB2 Room 308 B, Orlando, FL, 32816, United States, rdesiraju@ucf.edu, Ngan Ngoc Chau, Pradeep Chintagunta

This paper explores the relative optimality of three different channel structures in the context of a durable product market. Market saturation and consumers’ forward looking behaviors are taken into account in our two-period analytical model. Key insights include identifying the conditions where vertical integration may be preferred to selling through channel partners. Our analysis adds to the analytical literature on channel structures that focuses on a static (one period) setting.
This paper aims to explore how consumers from western developed countries evaluate "made-in-China" products. Theoretically, we proposed that the construct of macro country image should be consisted of two dimensions, i.e., political and economic macro country image. To further examine this hypothesis, we conducted a large-scale online survey. The results indicated that (1) and (2) both dimensions are positively associated with the complaint tendency in China.

We study how risk perception of the risky attributes of products can be affected by peer influence. Risky attributes can prevailently occur because of technological constraints (e.g., attributes are uncertain inherently due to technical restrictions) or incomplete information (e.g., consumers shop through Internet and cannot fully verify the attributes). In pilot study, we find empirical evidence that decision makers' risk perceptions can be influenced by peers' choices. To study this further, we develop a choice model wherein preference and perception are embedded. To empirically test the model, we conduct two-stage conjoint experiments in which respondents make decisions on various products before and after peer influence. Our results reveal that consumers' preferences and risk perceptions of attributes in their choices are influenced by peers. Additionally, we find that diversity of opinions from peers play a crucial role in consumers' decision making process. The findings also have important implications for policy makers and managers.

Many relevant contextual factors can influence consumers' product evaluations. In some settings, target judgments are assimilated toward the context; in other settings, target judgments are contrasted away from the context. The Range Overlap Model (DROM: Chien, Wegener, Hsiao, and Petty 2010) proposes that assimilation occurs when the context's range overlaps with the target's range on the relevant judgment dimension; however, when the dimensional ranges of contexts and targets do not overlap, shared features are simply not available and contrast would more likely occur. The current research extends the DROM to examine whether this model can be applied to explain context effects, no matter whether targets are ambiguous or unambiguous, and whether targets and contexts are within the same product category or not. We have conducted a 2 x 2 (the ambiguity of target: familiar/new) x 2 (the context of target: context/category non-target category) x 2 (dimensional range: overlap/non-overlap) betweensubjects factorial design and the results demonstrate that it is the range overlap/non-overlap that determines the occurrence of assimilation and contrast, irrespective of target's ambiguity and target-context category congruency. The findings suggest that the DROM can resolve previous conflicts, develop new predictions, and pose a greater generality. This study also offers important implications to marketing managers. For example, when choosing an ideal retailing location or inserting an ad within a magazine, marketing managers should consider whether the ranges of surrounding stores overlap with the target's range, or whether the contextual ads' ranges overlap with the target's range, disregarding target's ambiguity and target-context category congruency.
Customer Lifetime Value

There are many different cellphone plans falling into two categories: prepaid plans and plans with agreement, which has minimum value for service time and fee. The prepaid plans belong to non-contractual settings, while plans with agreement belong to semi-contractual settings. In the past most of the telecommunication services belong to non-contractual settings, but now most of the telecommunication services have minimum value for service time and fee. Consumers have to pay the excess part. In other words, most of the nowadays telecommunication services are semi-contractual settings. So why do the operators adopt the plans with agreement in semi-contractual settings? Does the cellphone agreement have an influence on the customer lifetime value? Why does this happen? To our knowledge, there is little previous work studying customer lifetime value in semi-contractual settings. This research presents an empirical investigation of the role cellphone agreement plays on influencing customer lifetime value with the method of difference-in-differences and then analysis the theoretical reasons. The empirical data are drawn from one main telecommunication service operator in China, including consumer monthly charge data from 2011Q1 to 2011Q4. We study the monthly charge data with cellphone agreement and cellphone treatment group, and those data without agreement as control group. The empirical results show that the cellphone agreement have an influence on the consumer lifetime value. Overall, the findings of our research offer some insights for customer lifetime value modeling in the semi-contractual settings.

2. A Multichannel, Cross-Selling and Discount Framework to Improve Customer Lifetime Value

Wenyu Jiao, PhD Candidate, ESSEC Business School, Paris, France, wenyu.jiao@essec.edu, Nicolas Gladay

Multichannel retailers need to develop effective tools for customer segmentation and resource allocation and the relationships between long-term profitability of multichannel activities need to be investigated. Previous studies have examined how customer acquisition methods and marketing activities affect customer’s purchase channel selection, cross-selling, and purchase. However, up to the best of our knowledge, no research provides a framework to understand long term customer-firm relationship in a multichannel context. To bridge this gap in the literature, we propose a framework to investigate: (1) what are the potential drivers for building long term customer-firm relationship in a multichannel context? (2) What are the long-term effects of marketing activities, channel choice and cross-selling in a multichannel context? And (3) how to segment customers and impact their value? We investigate the effects of multichannel marketing activities and cross-selling on Customer Lifetime Value (CLV) and provide an integrated framework to understand customer behavior in a multichannel context. Our study confirms that multichannel customers have a higher CLV than single channel customers and that first purchase amount correlates with CLV. But we also unveil surprising findings: (1) cross-selling and discount usage do not have a linear relation with CLV but reports inverse U-shaped effects on CLV and (2) first purchase channel does not correlate with CLV. Our research concludes by proposing an approach to identify high-value customers and improve resource allocation within channels and marketing activities.

3. Predicting Buyer Behavior for Customer Relationship Management: A Pareto/NBD Approach with Category-Based RFM Data

Yuki Nakayama, Osaka Prefecture University, Gakuen-cho 1-1, Sakai, 5998531, Japan, nakayama@eco.osakafu-u.ac.jp, Kousuke Inoue, Nagateru Araki, Katsuki Tanaka

Predicting buyer behavior is fundamental for customer relationship management (CRM). In particular, retail stores dealing with products of multiple categories face difficult tasks in CRM, since their customers are diverse in their buying behavior. Some categories are fast-moving, others are seasonal and some are both. In our research, we deal with the problem of predicting buyer behavior of a retail store offering products of multiple categories. Our model is a natural extension of the Pareto/NBD Approach. In the model, opportunities for transactions are continuous and the store has noncontractual relationship with customers (Fader and Simonoff 2010). The category-based RFM (recency, frequency and monetary value) data to estimate each buyer’s latent behavioral characteristics relating to recent visit, purchase frequency and spending tendency in a hierarchical Bayes framework (Abr 2009, 2011). The special feature of our approach is a sub-model for the monetary value where Tobit-type censored regression is used, since the individual expenditure for some product category could be zero. We can calculate the customer lifetime value for each buyer based on the estimated behavioral characteristics. Our approach is demonstrated with ISM Durables Goodset Dataset 1, and compared to the existing models of this field.
In this research, the authors explore how the integral yet objectively uninformative factor of the sound of a word—specifically, phonetic structure—can bias subjective assessment of risk in investment decisions. While expected utility theory predicts equal preference among names given other factors as constants, we propose that how comfortable a word sounds (based on phonetic structure) has the ability to influence whether people invest more or less in the marketplace. One's confidence and subsequent investment decision is attributed to the perceived fit between high (low) phonetic comfort and high (low) probability of success. To test this hypothesis, we first create a coding schema measuring phonetic comfort of named entities, and examine as the dependent variable one's confidence in these names versus their objective (i.e., statistical) success probabilities. Using quantile regression via twofold analyses including controlled real-world data, results show a significant influence of phonetic structure on decision-making while introducing a unique moderating factor in the level of risk. We test the role of an entity's name, a purportedly irrelevant factor in its likelihood of success, within the marketplace (utilizing investments in risky wagers) and via incentive-compatible controlled experiment. We measured people's confidence in the investment task via amount invested. Results indicate that the level of confidence in an investment is significantly influenced by the name of the entity on which the investment is made. Specifically we find that the phonetic structure of the name-based on how comfortable it feels to say—has a differential influence on one's investment in more versus less certain (risky) entities. Consequently, in decisions with greater (less) risk and reward for individuals, marketers may benefit by conveying names low (high) in phonetic comfort. In sum, findings show how risky decisions are affected by the seemingly uninformative factor of the sound of a word, resulting in significant monetary and behavioral implications for individuals and firms.

3 - The Sound of a Word and its Subjective Influence on Risk Assessment

Keith A. Botner, Assistant Professor of Marketing, Lehigh University, Rauch Business Center, 422, 621 Taylor Street, Bethlehem, PA, 18015, United States, keith.botner@lehigh.edu.

Arul Mishra, Himanshu Mishra

In this research, the authors explore how the integral yet objectively uninformative factor of the sound of a word—specifically, phonetic structure—can bias subjective assessment of risk in investment decisions. While expected utility theory predicts equal preference among names given other factors as constants, we propose that how comfortable a word sounds (based on phonetic structure) has the ability to influence whether people invest more or less in the marketplace. One’s confidence and subsequent investment decision is attributed to the perceived fit between high (low) phonetic comfort and high (low) probability of success. To test this hypothesis, we first create a coding schema measuring phonetic comfort of named entities, and examine as the dependent variable one’s confidence in these names versus their objective (i.e., statistical) success probabilities. Using quantile regression via twofold analyses including controlled real-world data, results show a significant influence of phonetic structure on decision-making while introducing a unique moderating factor in the level of risk. We test the role of an entity’s name, a purportedly irrelevant factor in its likelihood of success, within the marketplace (utilizing investments in risky wagers) and via incentive-compatible controlled experiment. We measured people’s confidence in the investment task via amount invested. Results indicate that the level of confidence in an investment is significantly influenced by the name of the entity on which the investment is made. Specifically we find that the phonetic structure of the name-based on how comfortable it feels to say—has a differential influence on one’s investment in more versus less certain (risky) entities. Consequently, in decisions with greater (less) risk and reward for individuals, marketers may benefit by conveying names low (high) in phonetic comfort. In sum, findings show how risky decisions are affected by the seemingly uninformative factor of the sound of a word, resulting in significant monetary and behavioral implications for individuals and firms.

2 - Quality Information Disclosure and Consumer Reallocation in the Service Industry: Evidence from Healthcare

Tae Jung Yoon, Assistant Professor, University College London, London, United Kingdom, t.yoon@ucl.ac.uk

Information disclosure about seller quality is common in many markets and is presumed to benefit consumers by allowing them to identify high quality firms. In service industries, there are two competing effects, reallocation and service quality improvement, which determine whether information disclosure is beneficial or harmful. Since sellers are often capacity-constrained in service industries, information disclosure about seller quality may reallocate consumers in urgent need to low quality sellers. This reallocation can be problematic when low quality sellers are relatively poor at servicing difficult cases. However, low quality sellers may respond to information by improving their service provision. Therefore, the net impact on consumers depends on the magnitude of these effects. In this paper, I study this problem in the context of a healthcare policy change which was to publish cardiac surgery report cards in New Jersey. Under the assumption that surgeon quality did not change, I find that the report cards had a detrimental impact on patient welfare due to reallocation of high risk patients to low quality surgeons. This damage is due to the fact that low quality surgeons are relatively poor at treating high risk cases. However, entries, exits, and quality improvement of surgeons had a positive effect on patient surgical outcomes, which benefited all patients. Therefore, the net impact of the publication of the report cards on patient welfare was beneficial.

3 - Hospital Advertising

Tongil Kim, Assistant Professor, Emory University, 1300 Clifton Rd NE, Atlanta, GA, 30322, United States, tl.kim@emory.edu, Diwakar S KC

Advertising is an important marketing tool for for-profit and non-profit organizations in various industries. In the healthcare industry, however, advertising can be a controversial topic which often attracts legislators’ and government agencies’ attention. Hospital advertising has been part of the controversy though its effectiveness has never been formally studied. This paper is the first to assess the impact of hospital advertising on patient demand. Using detailed patient-level data from Massachusetts, advertising data, and other publicly available data, we estimate the impact of hospital advertising on patients’ choice of hospital and find significant heterogeneity in the patient response to advertising. Patients also prefer to traveling shorter distances to hospitals. We show that advertising can act as a force compensating for the distance, allowing hospitals compete for patients outside their vicinities. A counterfactual analysis confirms that patients choose much closer hospitals if advertising is banned.

1 - Empirical Investigation of Spatial Externalities in Product Arrangement on Retail Shelf

Prakash Satyavageswaran, Doctoral Candidate, Indian School of Business, AC9 15, FPM Office, Gachibowli, Hyderabad, 500032, India, prakash_satyavageswaran@isb.edu, Sudhir Voleti

A product's position on the shelf relative to other products in the category is an important yet understated factor affecting product demand. We present a parametric demand model that interprets the location of shelf facings as a set of (potentially irregular) lattice data. Thereafter, we deploy spatial econometric techniques to (a) jointly estimate shelf position-dependent demand parameters for all the stock keeping units in the focal category, and (b) use these demand model estimates downstream to arrive at shelf-space arrangements that improve sales outcomes. Using one year’s sales data on 4 different planograms from 25 stores in a regional grocery chain in the frozen chicken category, we empirically investigate the (a) existence, (b) source, (c) range, and (d) monetary value of spatial externalities in product demand. We find substantial sales impact (averaging 12% of sales) due to spatial demand externalities. The downstream application with improved arrangements results in incremental sales of, on average, 7.25%. We contribute in methods terms by viewing shelf-facings as a lattice in space and applying a spatial econometric model that nests special cases corresponding to different sources and ranges of spatial dependence. Further, we demonstrate a block-diagonal spatial weights matrix scheme to get around the limited degrees of freedom available from just one store’s planogram. In substantive terms, our analysis is empirical in contrast to analytical and experimental studies that dominate the literature in this sub-area. Our second substantive contribution, of managerial interest, is in utilizing spatial demand parameters as inputs to a simple optimization routine.
SC11  INFORMS Marketing Science Conference – 2016

2 - The Effect of Assortment Layout and Categorization Congruency on Purchase Intention

Robert Roederkerk, Assistant Professor of Empirical Research Methods, Rotterdam School of Management, Erasmus University, Burgemeester Oudlaan 50, Rotterdam, 3062 PA, Netherland, roederkerk@rsm.nl, Donald R Lehmann

Whereas an assortment layout provides an external categorization of products, consumers have their own internal categorization. Using experimental data from a biscuit category, this paper examines the effect of the congruency between these two categorizations on purchase incidence. Results from Bayesian mediation analyses show that higher congruency increases purchase incidence via two routes. On the first pathway, congruency has a positive effect on the perceived variety of the assortment, which in turn positively affects purchase incidence. On the second pathway, congruency reduces the perceived complexity of the assortment organization, and that reduction increases purchase incidence. The route via perceived complexity is generally stronger than the route via perceived variety. However, these effects are asymmetrically moderated by product knowledge; whereas higher knowledge strengthens the effect of congruency on perceived variety, it has no effect on the relationship with perceived complexity. Furthermore, the authors illustrate how these insights can be used to optimize the layout of an assortment. The optimal layouts increase congruency, expected utility, and consequently expected purchase incidence.

■ SC11

5D, 5th Floor

Working Paper XXII

Contributed Session

Chair: Dean Eckles, MIT, 77 Massachusetts Ave; E62-541, Cambridge, MA, 02139, United States, informes@deaneckles.com

1 - The Effect of Observing the Service Interaction of Peers

Yang Wang, PhD Candidate, Rice University, 2540 Prospect St., Unit F, Houston, TX, 77004, United States, yang.wang@rice.edu, Alexander Chauhdry

The current research paradigm of social influence in customer satisfaction in the digital age focuses on peer effects in the expectation formation stage. We propose that the broad class of publicly observable service interactions can also have satisfaction externalities for customers who observe these interactions. We test the social influence of observable peer service interactions in the context of managers’ response to online reviews. At the time of writing her review, a focal customer has already purchased and experienced the product or service. Even so, managers can still influence focal customers post-consumption satisfaction through their responses to other customers’ reviews. Through a novel natural-experiment, we find empirical evidence using a dataset of more than 17 million hotel reviews that publicly stated satisfaction is positively (negatively) influenced by managers’ response to negative (positive) reviews of previous customers. In addition, we apply latent Dirichlet allocation methods to model the tailoring of manager response to customer reviews. We find that response tailoring to negative (positive) reviews enhances (exacerbates) the positive (negative) effect on subsequent opinion.

2 - Estimating Effects in Networks with Peer Encouragement Designs: Effects of Receiving Feedback on Facebook

Dean Eckles, MIT, 77 Massachusetts Ave; E62-541, Cambridge, MA, 02139, United States, informes@deaneckles.com, René Kizilcec, Eytan Bakshy

Peer effects, in which the behavior of an individual is affected by the behavior of their peers, are central to social science. Because peer effects are often confounded with homophily and common external causes, recent work has used randomized experiments to estimate effects of specific peer behaviors. These experiments have often relied on the experimenter being able to randomly modulate mechanisms by which peer behavior is transmitted to a focal individual. We describe experimental designs that instead randomly assign individuals’ peers to encourage behaviors that directly affect those individuals. We illustrate this method with a large peer encouragement design on Facebook for estimating the effects of receiving feedback from peers on posts shared by local individuals. We find evidence for substantial effects of receiving marginal feedback on multiple behaviors, including giving feedback to others and continued posting. These findings provide experimental evidence for the role of behaviors directed at specific individuals in the adoption and continued use of communication technologies. In comparison, observational estimates differ substantially, both under- and over-estimating effects, suggesting that researchers and policy-makers should be cautious in relying on them.

■ SC12

5E, 5th Floor

Working Paper XXIII

Contributed Session

Chair: Sylviya Hristakeva, Boston College, 140 Commonwealth Ave, Chestnut Hill, MA, 02467, United States, sylvia.hristakeva@bc.edu

1 - Cost-information Transparency in Markets with Strategic Consumers

Tianxin Zou, Washington University in St. Louis, 5936 Pershing Avenue, Saint Louis, MO, 63112, United States, tzou@wustl.edu, Baojun Jiang, K. Sudhir

Nowadays consumers can readily obtain firms’ cost information from online information-sharing websites or intermediaries. We develop a dynamic model to analyze how such cost-information transparency affects a firm’s optimal pricing strategy and profits. Other things being equal, if consumers know or believe a firm’s marginal cost to be high, they will expect the firm’s future price to not drop as significantly as when the firm’s cost is low, making them more likely to purchase the product right away rather than wait until later. Without cost-information transparency, consumers do not know the firm’s true cost but know that a low-cost firm may mimic a high-cost firm’s pricing strategy to induce consumers to make immediate purchases. Information transparency removes the information asymmetry about the firm’s cost. We show that cost-information transparency may either benefit or harm consumers and the firm ex post. However, both the firm and consumers are better off in expectation, so cost transparency may foster the firm’s innovation investment and ex ante leads to a win-win situation for the firm and the consumers. Our analysis also reveals that when the firm faces competition from future entrants, its profit may be independent of its cost for a range of cost values. Further, cost-information transparency decreases the firm’s price and tends to benefit the firm more in markets with lower entry barriers.


Sylviya Hristakeva, Boston College, 140 Commonwealth Ave, Chestnut Hill, MA, 02467, United States, sylvia.hristakeva@bc.edu

Producers frequently provide financial incentives to retailers in order to gain distribution for their products. These payments often take the form of vendor allowances: lump-sum transfers to retailers that do not directly depend on volume. To quantify the size of vendor allowances and their effects on product assortment and welfare, I develop a framework to identify lump-sum transfers using only data on retail prices, sales, and assortments. Without making any assumptions about producer and retailer bargaining, set estimates of vendor allowances are recovered. Additionally, by assuming that producers make take-it-or-leave-it offers, point estimates can be obtained. Lower bounds from set estimates imply that, on average, vendor allowances amount to at least 5% of retailer revenues. I apply model estimates to simulate how market outcomes change in the absence of vendor allowances. Counterfactual simulations predict that retailers fare worse, product variety is reduced as retailers replace “niche” products with “mainstream” options, but consumers nevertheless are better off. Small producers, which offer high-velocity products, increase market distribution and profits, but, absent marginal cost data, consequences for large producers are uncertain.

■ SC13

5F, 5th Floor

Mobile Marketing Session 6: Consumer Psychology

Content: Mobile Marketing: General

General Session

Chair: Xueming Luo, Temple University, Fox School of Business, Philadelphia, PA, 19122, United States, luoxm@temple.edu

Co-Chair: Yiping Song, Fudan University, ypsong@fudan.edu.cn

1 - Self Regulation and Weigh Loss Goal Pursuit

Yiping Song, Fudan University, ypsong@fudan.edu.cn

Goals drive human behaviors. According to regulatory focus theory, a classic theory on goal pursuit, on the way to goals there are two independent self-regulatory orientations, promotion focus and prevention focus. Promotion-focus people are more motivated by accomplishments and aspirations, while prevention-focus people care more on safety and responsibilities. Also, there are two different goal instructions: do things right (goal implementation) vs. do the right things (goal reinforcement), which could be more effective for goal achievement. Thus, our study seeks to investigate the effects of regulatory fit and how different goal instructions can further boost the effects of regulatory fit in goal achievement (weight loss) with two field experiments.
2 - Shake Hard Play Hard: How Hedonics and Risk Shape Consumer Behavior After a Major Disaster
Shi Jia, University of Hong Kong, jiaa@hkbu.hk, Jianmin Jia, Christopher K. Hoce, Baba Shiv
We use geophysical and individual-level mobile application, telecommunication, and internet usage data of 157,358 victims of the 2013 Ya'an earthquake (Ms 7.0) to diagnose the effects of the experiencing real risk on consumer behavior. We test the hypothesis that hedonic activities have an important role in promoting psychological recovery and ameliorating perceived risk, the negative psychological state inflicted by the disaster. Rather than reduce the scope of human activity, higher earthquake intensity yielded graded increases in communications (e.g., social networking, messaging), functional (e.g., informational tools), and hedonic (e.g., music, videos, games) behavior after the earthquake. However, only increased hedonic behavior reduced perceived risk during recovery.

3 - Weather Forecast and Sales Promotions
Chenxi Li, Fudan University, lichenxi89@gmail.com, Kristina Wittkowsky, Fue Zheng
Weather forecast influences consumer behavior. Consumers access the weather forecast information to plan their activities - including their shopping activities - in accordance with the projected weather conditions. Weather forecast information determines the shopping behavior of approximately 60% of consumers in the U.S. Consumers' interest in weather forecast is currently at its height due the current and ongoing debate over climate change, as well as the increase in dramatic, unusual weather conditions. Consequently, the weather-forecast application on smartphones is one of the most often used applications. Hence, by tailoring marketing activities to and using marketing tools in accordance with weather forecast information allows for targeted marketing. That is, by combining marketing activities with weather forecast information, marketers can effectively influence consumer behavior at the time when weather is on the customers' minds and they plan their consumption activities accordingly. The goal of this project is to test whether and how ad copy with sunny and rainy forecasts can influence the responses to hedonic and utilitarian promotions.

4 - Designing for Touch and Endowment on Mobile Devices
Philipp Naegelein, Ludwig-Maximilians-University, naegelein@lw.uni.muen, Martin Spann
A key difference between mobile devices and desktop computers is the opportunity for consumers to experience objects through digital touchscreens. Based on a randomized field experiment in a mobile retail setting, this study measures the causal impact of interactive presentation formats on product choice. Specifically, we analyze how zoom and multiple product images may invoke touch-induced ownership effects and increase product choice. In addition, we run a laboratory experiment to study the underlying mechanisms that link digital touch to perceived ownership and choice. This study contributes to the understanding of how retailers can enhance mobile user experience and influence consumer behavior.

■ SC14
5f, 5th Floor
Managing Consumer Engagement Online
Contribution Session
Chair: Myoung-Jin Chae, Georgia Tech, 800 West Peachtree Street NW, Atlanta, GA, 30308, United States, jinmychae@gmail.com
1 - Is a Picture Worth a Thousand Words? An Empirical Study on Visual Content and Social Media Engagement
Yiyi Li, The University of Texas at Dallas, 800 West Campbell Road, SM32, Richardson, TX, 75080, United States, yiyi.li@utdallas.edu, Ying Xie
Psychophysics research has shown that human brain process images 60,000 times faster than it does text, and ninety percent of the information sent to the brain is visual. Therefore, it is not surprising to see recent trends towards visual marketing thanks to the popularization of smartphones and the improvement in Internet speed. For example, Instagram, one of the fastest growing online mobile photo-sharing service, has gained over 400 million users within 5 years and over 40 million photos are shared on the platform on average every day. The idiom "A picture is worth a thousand words" has become the new maxim among marketers. Despite the fact that visual content might catch more attention and get processed faster, how it affects people's intention to interact with the content remains an unanswered question that is of ultimate interest to marketers. In this study, using a large data set of Twitter and Instagram posts related to airline industry, we empirically examine how visual content affects the number of likes and shares achieved by social media posts. We find that Twitter posts with images are shared and liked significantly more times than those without images after controlling for tweet content and poster characteristics. But not all images are created equal: the effect is moderated by the quality of the image as well as the relationship between the image and the text. The analysis on Instagram posts yields similar results. These findings shed light on how marketers may enhance their visual marketing strategy and spread their information more efficiently.

2 - Understanding the Effect of “Real-Time” Social Media Messages on Consumer Engagement
Myoung-Jin Chae, Doctoral Candidate, Georgia Tech, 800 West Peachtree street NW, Atlanta, GA, 30308, United States, jinmychae@gmail.com, Omar Rodriguez-Vila, Sundar G Bhadravati
The practice of real-time marketing (RTM) messages has grown significantly during the past several years, along with the rise of brands’ marketing activities on social media such as Facebook or Twitter. However, little academic research exists to help understand the effect of RTM on relevant brand outcomes. This research contributes to the academic literature by understanding characteristics of real-time messages on social media and systematically looking at the effect of real-time messages on consumer engagement. Also, we explore how brands can use real-time messages more effectively with appropriate contents. For analysis, a database of Facebook and Twitter messages from 35 brands in the food and beverage industry in Mexico and USA was collected. First, we introduce two types of RTM practices based on the level of improvisation: planned RTM and improvised RTM. Second, despite the increase in use of RTM in practice, we find that on average the use of RTM has a negative effect on all three metrics of consumer engagement in social media (Facebook) in terms of likes, shares, and comments. We hypothesize that RTM messages are less engaging because they require more efforts to interact, are more difficult to understand, are less creative, and are less differentiated from other brands compared to non-RTM messages. Finally, we explore message and context factors that could lead RTM messages to be more engaging. This study guides brand managers on how brands can design and develop real-time messages more effectively.

■ SC15
5f, 5th Floor
Online Shopping and Purchase Behaviors
Contribution Session
Chair: Wei Zhang, Iowa State University, 3123 Gerding Business Building, Ames, IA, 50011, United States, wzhang@iastate.edu
1 - Investigating the Effects of Self-Presentation at Online Social Network Sites and Brand Pages on Offline Purchase Behavior
Prasanta Bhattacharya, Doctoral Student, National University of Singapore, Singapore, Singapore, prasanta@comp.nus.edu.sg, Pratikshan Q. Phan, Singapore, Singapore
The emergence and rapid growth of social media platforms, and particularly social-media-based brand communities have spurred significant popular interest in recent times. However, despite the growing economic importance of brand presence on social media, little is understood about whether and how user engagement with these brand communities benefit product sales in the real world. In this study, we leverage two large real-world datasets from a popular social network site (SNS) and an Asian fashion apparel brand. By analyzing and comparing RTM behaviors of the SNS brand page members, we find that users of RTM messages are more likely to purchase products on social media platforms and more likely to purchase these products in the real world. These findings are robust to a variety of social network site and brand page factors.

2 - Online Social Shopping: Impact of Social and Commercial Activities on User Behaviors
Ashish Kumar, Aalto University, School of Business, PO. Box 21230, Helsinki, 00076, Finland, ashish.kumar@aalto.fi
In recent years firms are building online social communities not only to engage with their customers but also to facilitate shopping experience giving rise to the phenomenon called online social shopping. In this ever changing digital world therefore, the understanding of users’ behaviors in an online social shopping environment becomes critical not only for better management of their online social activities but also for understanding the economic impacts of online self-presentation, but also present newer ways of performing behavioral targeting of online users.
3 - Retargeting Pornography: How Adult Content Affects Purchase Decisions
Radoslaw Karpienko, WU Vienna University of Economics and Business, Welthandelsplatz 1/d2/a, Vienna, 1020, Austria, rkarpien@wu.ac.at, Anatoli Colicev

In a recent press release, Pornhub - a popular adult website - announced that it had registered 21.2 Billion visits in 2015, with over 40% of the traffic originating from the US. Although such statistics do not allow specific conclusions about individual behavior, they highlight that pornography has become a significant player in the online arena. From a marketing perspective, a key question is whether marketers should utilize the vast audiences of adult websites to promote their actions. However, the consumption of adult content is a rather neglected topic in marketing, and we are not aware of any study linking sexual cues to real-world behavior. In the present study, we analyze if the consumption of online adult content drives subsequent purchase decisions. We build on research in consumer psychology, showing that sexual cues lead to increased willingness to engage in risky activities (Arizley & Loewenstein, 2006), drive preference for status products (Janssens et al., 2011), and can even result in an urgency to consume anything due to increased temporal impatience (Van den Blergh et al., 2008). Unlike previous studies, we use highly detailed real-world data on the browsing history and online purchases for over 40,000 US households. We test our conceptual model using Panel Vector Auto Regression (PVAR), which allows for unobserved individual-level heterogeneity. Our preliminary results show that consumption of adult content Granger causes purchase decisions. In addition, we find feedback loops between our key variables, which imply switching behavior between adult content and online purchases. Our study extends emergent research on context-specific retargeting and behavioral influences in consumer decision making. In particular, we contribute to marketing literature by providing key insights about the impact of sexual cues on purchase decisions in a real-world setting. Furthermore, we discuss if and when companies should consider targeting users of adult websites. Hence, our results provide key managerial implications for the online marketplace.

4 - How the Device Consumers use Matters in Online Shopping
Wei Zhang, Assistant Professor of Marketing, Iowa State University, 3123 Gerdan Business Building, Ames, IA, 50011, United States, wzhang@iastate.edu, Ajay Kalra

We use data from an online hotel reservation site to compare how purchase behavior differs among users of three types of devices: computers, tablets and smartphones. We develop a two-stage model to describe consumers' decisions. The first stage identifies the factors that influence which device consumers use. In the second stage, we model how information is processed leading to a buy/no-buy decision. We find that tablets and computers are more likely to be used when the vacations involve relatively longer stays in far-away destinations. We observe that the decision-making process differs for devices with respect to quality sensitivity, influence of other-user recommendations, and the impact of the default rankings of alternatives presented to the consumers. Our policy experiments suggest that customizing the ranking algorithm to the device used can increase the focal firm’s profit by approximately 5%. Methodologically, we extend the latent instrument variable approach to scenarios where choices are correlated.

5J, 5th Floor
Working Paper XXIV
Contributed Session with Extended Paper
Chair: Jingjing He, Zhongnan University of Economics and Law, na, Wuhan, China, hejj1601@163.com

1- The Impact of Landlord Trust of Online Short Rental on Order Quantity in the Sharing Economy
Jingjing He, Zhongnan University of Economics and Law, Wuhan, China, hejj1601@163.com, Hong Peng

This paper aims to study the impact of landlord trust of online short rental on order quantity in the sharing economy. It divides the landlord’s online trust into three dimensions of goodwill, honesty and ability and discusses the influence of each trust dimension on order quantity. Through a detail analysis of the second-hand data collected on the Xiaozhu short rental website, it shows that goodwill, honesty and ability will affect the order quantity, and the order quantity increases with the increase of the trust dimension. Finally, the author gives some suggestions to the building of online landlord trust system according to the result.
INFORMS Marketing Science Conference – 2016

V

Vadakkepatt, Gautham TC10
Vakratas, Demetrios FC17
Valenti, Albert TC02
Van der Lans, Ralf TB08
van Heerde, Harald FC01
Van Hoeve, Willem-Jan TB02
Venkatesh, R TB16
Verbouwen, Frank TC03
Verhoef, Peter FC13, SA03
Verniers, Isabel FC09
Villas-Boas, J, Miguel FD05
Viswanathan, Madhu FC10
Viswanathan, Vijay SB03
Voleti, Sudhir FC04
Vozl, Julian FA05

W

Wallin, Ann SC07
Wan, Echo Wen FB05
Wang, Chih-Chien TA15
Wang, Feng FC01
Wang, Gang TD14
Wang, Hansheng SA14
Wang, Helen SI TC09
Wang, Hui TD13
Wang, Jiana-Fu FD16
Wang, Jing FB02
Wang, Jeff Jianfeng FB03
Wang, Li TB03
Wang, Luming FB09
Wang, Li TB04
Wang, Lei TD01
Wang, Paul TC06, TD06
Wang, Peng TA07
Wang, Qiao SC07
Wang, Qi FB04
Wang, Rui SB03
Wang, Ruibing SA04
Wang, Shi TB08
Wang, Tiffany SC05
Wang, Wei-Lin FC17
Wang, Xinchen TD04
Wang, Xin (Shane) TB08,
FC16, SB01
Wang, Xinfang TD09
Wang, Xing TA04
Wang, Yang TD10, FC14
Wang, Yu TD02
Wang, Yushong TA02
Wang, Yi FA01
Wang, Yajin FA16
Wang, Yanwen FB13
Wang, Youwei SB15
Wang, Ze TC14
Wang, Zhen TC02
Watanabe, Isamu SA10
Wedel, Michel TD16
Weinberg, Charles FC10
White, Katherine TA07
Wichmann, Julian TB03
Wireringa, Jaap FC17, SA03
Wies, Simone FC09
Wiesel, Thorsten FC13
Wilbur, Kenneth FC13
Witkowski, Kristina SC13
Wloemert, Nils FC10
Wu, Banggang TD16

Wu, Chunhua TC05, FB13
Wu, Chi-cheng FD08
Wu, Chunhua FC10
Wu, Fang TD09
Wu, Jianan TA14
Wu, Qingsheng TC12
Wu, Ruhai TB02, TD15, FA02
Wu, Yi SC01, SC04
Wu, Yinglu TA14
Wu, Yuechen SA07
Wu, Yifan FA10
Wu, Yi SC01
Wu, Jin, Chu TC12

X

Xi, Chen FC14
Xia, Lan TA05
Xiao, Li TC01
Xiao, Zuhui SA08
Xie, Guang-Xin SC04
Xie, Jinhong TB16
Xie, Jinhong TD14
Xie, Ying TD13, FB16, FC17,
SA14, SC14
Xing, Aijing SB03
Xiong, Guiyang TA16, FA05
Xiong, Hui FA09
Xu, Linli FC13
Xu, Lizhen SC03
Xu, Xiaoyan TA07
Xu, Xiyang SB07
Xu, Yan TB10

Y

Yada, Katsutoshi TC03
Yamada, Masataka TB09
Yamamoto, Hikaru FD14
Yan, Bingyu FB10
Yang, Botao FA17, SA02
Yang, Cathy (Liu) TB07
Yang, Hongsu BK16
Yang, Jeremy TB16
Yang, Nan SB02
Yang, Sha FA06, FA17, FC14
Yang, Yoldaen Ym-hsiou TA15
Yang, Ying FD03
Yang, Zhiqiu TD06
Yao, Dai TD06, FD15
Yao, Kai TA16
Yao, Song TB13
Yao, Yao TB06
Ye, Jun TB04
Ye, Qian TA14
Yildirim, Gokhan TC02
Yilmaz, Tuba TD04
Yim, Chi Kin (Bennett) FB05
Yim, Sean FC02
Yoo, Shijin TD04
Yoon, Tae Jung SC09
Yorkston, Eric FA14
You, Ya TC14
Yu, Haojun FA02, FD11
Yuan, Cheng SC03
Yun, Wonjoo FC04

Z

Zeithammer, Robert FA08
Zeng, Fue FC13, FD13, SA13, SC13
Zentner, Alejandro FC15
Zervas, Giorgos TA13
Zettelmeyer, Florian FA08
Zhang, Cheng FA05
Zhang, Jiongtao TC04
Zhang, Juanjuan TD01
Zhang, Junru FB16
Zhang, Jianxing TA03
Zhang, Jing FD16
Zhang, Jonathan TA16
Zhang, Kaifu FA09
Zhang, Lingling TB02
Zhang, Mengxia SB10
Zhang, Qiuyu (Jason) FA01
Zhang, Qiang FB17
Zhang, Sha FD15
Zhang, Wei FD10
Zhang, Wanshang FA04, FD05
Zhang, Wei SC15
Zhang, Xue FD11
Zhang, Xubing FD01
Zhang, Xing FC05
Zhang, Xinyan FD14
Zhang, Yuefei SA13
Zhang, Yan SA04
Zhang, Yuchi SA13
Zhang, Yifan SB15
Zhang, Yuchi FC13
Zhao, Haizhong TB16
Zhao, Kaili FB10
Zhao, Min TB05
Zhao, Ping TA04, FD05
Zhao, Ying TA06, TB05
Zhao, Yi TA06
Zheng, Eric FC15
Zheng, Fue SA13
Zheng, Xin TA02
Zheng, Xu FC02
Zheng, Xiaona TB02
Zheng, Xu FB03
Zheng, Yilong FB04
Zheng, Weijun TD15
Zhou, Bobby FA17
Zhou, Chen FD02
Zhou, Hongming TD05
Zhou, Jing SA14
Zhou, Xinyue TB14
Zhu, Hanlu TA04
Zhu, Juanjun TA09, TC16
Zhu, Meng FB05, SA07
Zhu, Rui FB05
Zhu, Ting FB13
Zhu, Yan SC03
Zhuang, Hejun FD06
Zhuang, Mengzhou TC15
Zhuang, yingcong FD14
Zou, Deqiang TA04
Zou, Lili Weni FB05
Zou, Xiang TD15

U

Uetake, Kosuke FC05
Unmesh, U.N. FC02
Uppal, Abhinav FD06
## Session Index

### Thursday, 8:30am – 10:00am

- TA01 Advertising I
- TA02 Channel I
- TA03 Retailing I
- TA04 Marketing Strategy I
- TA05 Consumer Behavior I
- TA06 Choice Models I
- TA07 Marketing Ethics
- TA08 Pricing I
- TA09 New Product I
- TA10 Decision Making I
- TA11 Working Paper I
- TA12 Working Paper II
- TA13 Information Online I: Advertising, Search, and Reviews
- TA14 UGC — Dynamics
- TA15 Online Advertising I
- TA16 Mobile Recommender Systems

### Thursday, 10:30am – 12:00PM

- TB01 Advertising II
- TB02 Channel II
- TB03 Retailing II
- TB04 Marketing Strategy II
- TB05 Consumer Behavior II
- TB06 Choice Models II
- TB07 Conjoint Analysis
- TB08 Pricing II
- TB09 New Product II
- TB10 Decision Making II
- TB11 Working Paper III
- TB12 Working Paper IV
- TB13 Advertising Effectiveness
- TB14 UGC - Business Impact
- TB15 Online Advertising II
- TB16 Emerging Online Technologies

### Thursday 1:30pm – 3:00pm

- TC01 Advertising III
- TC02 Channel III
- TC03 Retailing III
- TC04 Marketing Strategy III
- TC05 Consumer Behavior III
- TC06 Choice Models III
- TC07 Gary Lilien Practice Prize Competition Rehearsal
- TC08 Pricing III
- TC09 New Product III
- TC10 Decision Making III
- TC11 Working Paper V
- TC12 Working Paper VI
- TC13 Marketing & Innovation
- TC14 UGC-Consumer Response
- TC15 Paid Search Advertising
- TC16 Product Returns in e-Commerce

### Thursday, 3:30pm – 5:00pm

- TD01 Advertising IV
- TD02 Channel IV
- TD03 Retailing IV
- TD04 Marketing Strategy IV
- TD05 Consumer Behavior IV
- TD06 Choice Models IV
- TD07 Gary Lilien Practice Prize Competition Rehearsal
- TD08 Pricing IV
- TD09 New Product IV
- TD10 Decision Making IV
- TD11 Working Paper VII
- TD12 Working Paper VIII
- TD13 Networks
- TD14 UGC and Social Media
- TD15 Search Advertising: Bidding
- TD16 Mobile Marketing

### Friday, 8:30am – 10:00am

- FA01 Brands I
- FA02 Competitive Strategy I
- FA03 Retailing V
- FA04 Marketing Strategy V
- FA05 Consumer Behavior V
- FA06 Structural Economic Models
- FA07 Gary Lilien Practice Prize Competition Presentations
- FA08 Pricing V
- FA09 Product Management
- FA10 Probabilistic Selling
- FA11 Working Paper IX
- FA12 Working Paper X
- FA13 The Role of New Technology in Online Advertising
- FA14 UGC Content and Impact
- FA15 Online Ad Effectiveness
- FA16 Social Influence I
- FA17 Behavioral Modeling in Marketing (BMIM)

### Friday, 10:30am – 12:00PM

- FB01 Brands II
- FB02 Competitive Strategy II
- FB03 Retailing VI
- FB04 Marketing Finance I
- FB05 Psychological and Behavioral Consequences of Scarcity versus Abundance
- FB06 Structural Models
- FB07 Gary Lilien Practice Prize Competition Presentations
- FB08 Meet the Editors I
- FB09 Innovation
- FB10 Entertainment I
- FB11 Working Paper XI
- FB12 Working Paper XII
- FB13 Mobile Marketing Session 1: Structural Models and Mobile Marketing
- FB14 Social Media — Crowdfunding
- FB15 Business Impact of Online Advertising
- FB16 Social Influence II
- FB17 Information Online I: Advertising, Search, and Reviews
INFORMS Marketing Science Conference – 2016

Friday 1:30pm – 3:00pm

FC01 Brand Equity
FC02 Competitive Strategy III
FC03 Sales Force I
FC04 Marketing Finance II
FC05 Consumer Search & Consideration
FC06 New Methods in Structural Estimation
FC07 Gary Lilien Practice Prize Competition Presentations
FC08 Pricing VI
FC10 Entertainment II
FC11 Working Paper XIII
FC12 Working Paper XIV
FC13 Mobile Marketing Session II: Omnichannel Targeting and Field Experiments
FC14 Social Media and Their Impact
FC15 Multichannel Marketing I
FC16 Social Influence III
FC17 Pharmaceutical Marketing

Friday, 3:30pm – 5:00pm

FD01 Brand Extensions
FD02 Competitive Response and Spillover Effects
FD03 Sales Force II
FD04 Modeling Marketing Outcomes in Emerging Markets
FD05 Consumer Behavior: Learning
FD06 Game Theory
FD07 ISMS Doctoral Dissertation Winners
FD08 Pricing VII
FD09 Information, Institutions and Collaboration: Analyzing Strategic Decisions in Health Care Markets
FD10 Social Value Marketing Strategy
FD11 Working Paper XV
FD12 Working Paper XVI
FD13 Mobile Marketing Session III: Personalization and Field Experiments
FD14 Building and Leveraging Social Influence
FD15 Multichannel Marketing II
FD16 Sustainability

Saturday, 8:30am – 10:00am

SA01 Advertising V
SA02 Dynamic Models I
SA03 Customer Relationship Management I
SA04 Promotion I
SA05 Consumer Behavior: Perception I
SA07 Consumer Behavior: Preference I
SA08 Pricing VIII
SA10 Marketing Analytics I
SA11 Working Paper XVII
SA12 Working Paper XVIII
SA13 Mobile Marketing Session IV: Promotion Strategies and Field Experiments
SA14 Spreading Social Messages
SA15 Online Pricing
SA16 Technology and Marketing

Saturday, 1:00pm – 2:30pm

SC01 Global Branding
SC02 Dynamic Models III
SC03 Customer Relationship Management III
SC04 International Marketing
SC05 Consumer Behavior: Perception III
SC06 Customer Lifetime Value
SC07 Consumer Behavior: Preference III
SC09 Health Science II
SC10 Working Paper XXI
SC11 Working Paper XXII
SC12 Working Paper XXIII
SC13 Mobile Marketing Session 6: Consumer Psychology
SC14 Managing Consumer Engagement Online
SC15 Online Shopping and Purchase Behaviors
SC16 Working Paper XXIV

Saturday, 10:30am – 12:00PM

SB01 Advertising VI
SB02 Dynamic Models II
SB03 Customer Relationship Management II
SB04 Promotion II
SB05 Consumer Behavior: Perception II
SB06 Special Topics
SB07 Consumer Behavior: Preference II
SB08 Meet the Editors II
SB09 Health Science I
SB10 Marketing Analytics II
SB11 Working Paper XIX
SB12 Working Paper XX
SB13 Mobile Marketing Session 5: Application and Customer Engagement
SB14 Network Effects
SB15 Online Consideration and Choice
SB16 E-Commerce