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 112-117).
- 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 112) — the session code for your presentation will be shown along with the room location. You can also refer to the full session listing for the room location of your session.

The Session Codes

TA01

Room number. Room locations are also indicated in the listing for each session.

Time Block. Matches the time blocks shown in the Program Schedule.

The day of the week

Time Blocks

Thursday

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

Friday

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

Saturday

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

Thursday, 8:30am - 10:30am

■ 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 Mende

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 under positive ad-self-concept incongruity, individuals showed lower attitude 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.

■ TA02

3A, 3rd Floor

Channel I

Contributed Session

Chair: Nevena T. Koukova, Lehigh University, 621 Taylor Street, College of Business and Economics, Bethlehem, PA, 18015, United States, nkoukova@lehigh.edu

1 - Research on the Influence Mechanism of Monetary and Non-Monetary Manufacturer Incentives to Distributor's Salesforce: Lessons from China

Zhenhuan Shao, Tongji University, Shanghai, China, shaozhenhuan@haistand.com.cn, Xin Zheng, Deyong Kong

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, manufactures often provide 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 manufacture'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 salepeople'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 outline 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, 401120, 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, 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 manufacturer, the 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 heterogeneity often 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 Hoteling 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 on voluntary effort from the dominant retailer. For the weak retailers, both manufacturer types propose a linear pricing without any expectation for effort. However, while the dominant manufacturers create channel diversification and provide supportive investments to weak retailers to mitigate the dominant retailer's power, the weak ones opt for information sharing and assortment management arrangements. These findings are contingent on the degree of product quality differentiation between manufacturers, the effectiveness and costliness of effort from retailers as well as the extent of preference heterogeneity

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.

■ TA03

3H, 3rd Floor

Retailing I

Contributed Session

Chair: Shibo Li, Indiana University, Kelley School of Business, BU328D, 1309 East Tenth Street, Bloomington, IN, 47405, United States, slicmu@yahoo.com

1 - Does Regulatory Focus Moderate Retail Shopping Behaviours?

Gopal Das, Assistant Professor, Indian Institute of Management Rohtak, M.D University Campus, Rohtak, 124001, India, gopal.das@iimrohtak.ac.in

This paper examines the moderating role of regulatory focus orientation on consumer retail shopping behaviours including shopping values, impulsiveness, shopping duration, repurchase intention, and word of mouth communication. Theoretical propositions were developed based on relevant literature. A structured questionnaire is used to collect data across several retail formats (n = 300). Statistical techniques such as MANOVA, and t-test were used to analyse the data. Results reveal that promotion-focused shoppers show higher levels of hedonic shopping values, and impulsiveness, whereas prevention-focused shoppers report higher levels of utilitarian shopping values, shopping duration, repurchase intention, and word of mouth communication. Discussion of the results and their theoretical and managerial implications, limitations of this study and its future research scopes are further discussed. Keyword: Regulatory focus, impulsiveness, shopping values, shopping duration, repurchases intention, word of mouth.

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, gwliu@tju.edu.cn, 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 over 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 hurts 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 suggest that the dominant retailer's power shift 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

Shibo 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.

■ TA04

3D, 3rd Floor

Marketing Strategy I

Contributed Session

Chair: Songting Dong, University of New South Wales, School of Marketing, UNSW Business School, Sydney, NSW, 2052, Australia, dongst@gmail.com

1 - Beyond Words: The Impact of Firms' Customer-Targeted Communications on Product Recall Efficacy

Vivek Astvansh, Doctoral Candidate, Ivey Business School, 684 Platt's Lane, London, ON, N6G 3B2, Canada, vastvans@uwo.ca, Kersi Antia, Xing (Shane) 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.g.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, Heitanen and Kajalo, 2011). Blue ocean strategy lacks a systematic route to envisage product or service innovations (Borgianni, 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 repertory 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.

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 base product system. We also identify several avenues for future research on the role of accessories, which has hitherto been neglected in the literature.

4 - Using Trade in to Target Profitable Customers

Songting Dong, Senior Lecturer, University of New South Wales, School of Marketing, UNSW Business School, Sydney, NSW, 2052, Australia, songting.dong@unsw.edu.au, Ping Zhao, Deqiang Zou

Operational data from a leading online retailer in China suggest that, letting customers trade their electronic products in on the retailer's online portal helps attracting new customers and increasing the expenditure of the existing customers. Moreover, we found that, more valuable customers and less valuable customers may have different traits that can be captured by the products that they trade-in. It is then possible to target the more profitable customers in the trade-in process, and better attract/maintain these customers by fine-tuning the trade-in strategy. In an experimental study, we develop an incentive-aligned method to test the effect of different trade-in strategies on customers' responses, based on which we propose the optimal trade-in strategy to maximize the firm's profit.

■ 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. I. 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 core attributes is superior to peripheral attributes, promotion-focused individuals will form a more positive evaluation than their prevention-focused counterparts. On the other hand, since prevention-focused individuals construe information at low levels, they may assign more weights to peripheral attributes (i.e., lower-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, liqiuling_2006@163.com, Chanthika Pornpitakpan, Joseph Sy-Changco, Junsong Chen

Purpose - This research hypothesizes and analyzes the correlation between sachet-product usage/attitudes 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 use, 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, Piecemeal 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 bring back the jackets. The company then recycle and reuse some of the materials in new productions. While significant research effort has been devoted to understand the impact of Corporate Social Responsibility (CSR), little research has examined consumers' responses 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 2 (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 responsibility 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

3G, 3rd Floor

Choice Models I

Contributed Session

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

1 - Gaussian Process Dynamic Choice Models

Ryan Dew, PhD Student, Columbia University, 521 W 112th Street, Apt 62, New York, NY, 10025, United States, ryan.dew@columbia.edu, Asim Ansari, Yang Li

We know from both the behavioral and quantitative literatures on choice dynamics that preferences for brands, and sensitivities to marketing variables such as prices and promotions, change over time, especially when the considered time horizon is long. In this paper, we model dynamics in response parameters using a novel Bayesian nonparametric framework based on Gaussian process (GP) priors. Specifically, we model the parameters of a discrete choice model via individual-specific latent functions of time. Uncertainty over these latent functions is specified using hierarchical correlated GP priors. This hierarchical GP approach allows us to infer heterogeneity in the individual-level trajectories while simultaneously learning the aggregate dynamics in the market place. In this way, our framework extends previous dynamic preference models that use state-space formulations for the evolution of population parameters. Our work makes several primary contributions. First, methodologically, we extend the GP literature by using a hierarchical specification for parameter dynamics in choice models and by accommodating correlations in the parameter trajectories for different parameters via a set of latent independent processes. Second, modeling correlated processes in this way permits a deeper understanding of the forces driving choice dynamics. Finally, our Bayesian nonparametric approach allows us to make minimal assumptions about the temporal patterns in our data, while providing insights about fundamental properties of the underlying dynamic processes, such as their smoothnesses, amplitudes, and periodicities. Moreover, the fact that GPs are closely related to the multivariate normal distribution facilitates their seamless inclusion in standard models as dynamic analogues of the multivariate normal.

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

Wei Miao, National University of Singapore, BIZ 2 Building, Basement B2-03, 1 Business Link, Singapore 117592, Singapore, 118425, Singapore, a0133554@u.nus.edu, Junhong 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 model 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, 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 (whom to send a message, conditional on browsing). The model provides a unified account of user behavior via hierarchical heterogeneity and by allowing error correlation between stages. Estimation uses Bayesian nonparametrics, 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, yizhao@gsu.edu, Ying Zhao

Scanner panel data at household level are typically used to analyze consumer dynamics in most of extent 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 disaggregate 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-from likelihood function, which avoid the complicated and time-consuming data augmentation process for individual choice in Chen and Yang (2007). Second, for continuous-type 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 traditional econometric methods such as BLP(1995), Yang, Chen and Allenby (2003,QME), and Jiang, Manchanda and Rossi (2009,JE).

■ TA07

3B, 3rd Floor

Marketing Ethics

Contributed Session

Chair: You Chan Kevin Chung, University of Wisconsin-Madison, School of Business, 975 University Ave, Madison, WI, 53706, United States, kychung@bus.wisc.edu

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@u.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 examine 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 selfish 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

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The prevalence of privacy 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 “naïve” 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 their strategic considerations.

3 - The Risk of Virtue: How Corporate Social Responsibility Influences Consumer Financial Risk-Taking

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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., “.01% 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 situationally 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, Keehyung Kim, Noah Lim

This paper seeks to understand the relational factors that may aﬀect the decisions 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 quality 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 resultsshow 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.

■ TA08

5A, 5th Floor

Pricing I

Contributed Session

Chair: Jinzhao Du, Fuqua Business School, Apt 506, 910 Constitution Dr., Durham, NC, 27705, United States, jinzhao.du@duke.edu

1 - The Benefit of Additional Benefits in Customer-Driven Pricing Mechanisms

Lucas Stich, University of Munich, Amalienstrasse 34, Munich, 80799, Germany, stich@lmu.de, Florentin Krämer, Klaus Schmidt, Martin Spann

Pay What You Want (PWYW) and Name Your Own Price (NYOP) are customer-driven pricing mechanisms that give customers (some) pricing power. Both have been used in service industries with high fixed capacity costs in order to appeal to customers by reducing prices without setting a reference price. Their participatory and innovative nature provides a basis for additional monetary benefits that do not accrue to posted-price sellers. In a first set of laboratory experiments, we compare the functioning and performance of these two pricing mechanisms, exogenously varying whether additional benefits accrue to sellers using PWYW and NYOP. PWYW can be very successful if there is an additional benefit and if marginal costs are not too high. It is a very aggressive competitive strategy that achieves almost full market penetration. NYOP is a less aggressive strategy that can also be employed if marginal costs are high. It reduces price competition and segments the market. In a second set of laboratory experiments, we show that additional benefits can arise endogenously through word-of-mouth yielding NYOP sellers more profitable than their posted-price competitors. PWYW sellers effectively monopolize the follow-up market segment through word-of-mouth, but are unable to translate their high market share into profits. We discuss possible reasons for this difference and elaborate on other types of benefits that can play a role in the PWYW context.

2 - Discovering Profitable Pricing Rules in the Retail Industry

Luis Aburto, University of Chile, Republica #701, Santiago, Chile, laburto@dii.uchile.cl, Marcel Goic

Traditional approaches for pricing decisions in the retail industry involve the use of transactional data to estimate a demand system as a function of all prices available in the category. Conditional on the demand system, store managers can decide the price levels to all products in the assortment to maximize sales or profit over the complete product category. There are several challenges in this process. To capture cross-elasticities, demand systems tend to be highly parameterized and possible endogeneity of prices might lead to parameters with signs different than expected. Additionally, when solving for optimal prices, first order conditions frequently suggest extreme solutions which are beyond of what managers consider reasonable. As a consequence managers add constraints of business rule to guide the solution and incorporate some tactical and strategic factors that are not feasible to explicitly include in the demand model. In this article we describe a data-driven methodology to help managers to identify business rules that are likely to lead to better performance. To do so, we extend association rules techniques to search in historical transactional data those combinations of prices that tend to be present when the overall performance of the category is better. When applying this methodology on two years of transactional data for a for a latinoamerican wholesaler supermarket chain, we found several pricing rules between products that its violation reduces category revenue dramatically. Based on a simulation of the use of the rules in a test period we estimate that profits of the company could increase for about 7 million dollars in a year. Business rules identified through our methodology are easy to implement and can help managers not only to make more profitable pricing decisions but also to make more consistent decisions.

3 - Strategic Intertemporal Pricing for Efficient Product Adoption when Buyers are Heterogeneous in Evaluation Costs

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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. We investigate how the buyers' heterogeneity in evaluation cost influence the firm's intertemporal pricing strategies.

4 - Price Customization in Two-Sided Media Markets

Jinzhao Du, Fuqua Business School, Apt 938, 900 Slateworth Drive, Durham, NC, 27703, United States, jinzhao.du@duke.edu, Wilfred Amaldoss, Woochoel 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 on only one side of the market can multi-home, then the results crucially hinge 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

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@xjtlu.edu.cn

1 - Relation Between Idea Quality and Idea Implementation and its Contingency Factors in Idea Crowdsourcing Context

Yiyan Li, City University of Hong Kong, Kowloon Tung, Hong Kong, China, liyiyan@cityu.edu.hk, JianJun Zhu, Wa Chan

Idea crowdsourcing allows firms to reach the best 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, are surprisingly rare. 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 improvement.

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 Shi

Firms facing budget constrains 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

Lixian Qian, Xi'an Jiaotong-Liverpool University, 111 Ren'ai Road, Suzhoug Industrial Park, Suzhou, 215123, China, lixian.qian@xjtlu.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: Qitian Ren, 435 W 119th Street, Apt 1H, New York, NY, 10027, United States, qren17@gsb.columbia.edu

1 - Random Regret Minimization Model Versus Random Utility Maximization Model: When to Use What in Marketing

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In contrast to a popular random utility maximization (RUM) paradigm, Chorus (2010) has recently proposed a new econometric, multinomial, and multi-attribute discrete choice model called random regret minimization (RRM) model based on regret theory. Here, the fundamental underlying decision mechanism is that individuals make decisions so as to minimize the anticipated regret arising from the foregone alternatives outperforming the chosen alternative at attribute levels. Though discrete choice modeling is a prominent research area in marketing, there has been limited research on empirical applications of RRM and scrutiny on the appropriateness of one model against the other. We test the validity of RRM model against linear-additive RUM model and systematically elucidate the conditions where which model would be a better solution for analyzing consumer choices, based on consumer behavior theories, via simulation and experiments. Substantial prediction difference between the models from the simulation study highlights that the two models address different aspects offering different insights of consumer decisions. In addition, online experiments conducted on US-nationwide database suggest that one model may outperforms the other in two ways. First, when consumers are primed on regret, for example, by explicitly being asked to think about how they might feel if they have made a wrong choice, or informed to expect the outcomes of the alternatives, the RRM model may work better than the RUM model. Second, for a certain type of consumers, such as promotion-focused consumers, unlike the prevention-focused, the RUM significantly outperforms the RRM. In sum, the results from this research indicate that whilst the RUM has been a powerful paradigm for analyzing consumer choices for decades, it might not always be the most appropriate method to investigate consumer decisions; there may be situation-specific and individual-specific boundary conditions for RUM being more suitable than RRM, or vice versa.

2 - Extension of Case Based Decision Theory to Incorporate Consumers' Learning

Kanoko Go, Graduate School of Business and Commerce, Keio University, 1-23-23-203 Takanawa, Minato-ku, Tokyo, 108-0074, Japan, go.kanoko@gmail.com, Mai Kikumori, Yutaka Hamaoka

The adoption of a new product is uncertain decision for consumers. Especially when the product is complicated or really new they cannot decompose the product into attributes. To model consumer decision-making under uncertain situations, Gilboa and Schmeidler (1995, 2001) proposed Case-Based Decision Theory (CBDT); a decision rule that chooses a best act based on its past performance in similar cases. Our previous study (Go, Kikumori, Hamaoka 2015) clarified that the CBDT model fitted better than the multi-attribute decision (MAD) model for consumers' adoption decision of a really new product under limited information access. In reality, consumers would search information on a new product to reduce uncertainty. Although CBDT assumes consumers learn form their experience, it neglects learning from external information. To overcome this limitation, this study tries to extend CBDT model to incorporate consumers' learning. Based on learning theory, some hypotheses were proposed that includes, through information search and learning, (1) uncertainty of similarities between a new product and products in memory will be reduced and (2) utilization of decision rules (CBDT to MAD) will be affected by provided information types: information on objective attributes and subjective satisfaction for similar products. They were tested through a web-based questionnaire survey to student subjects (n=86) on adoption of "Ninebot-one": a really new electric vehicle. We confirmed that both types of information reduced uncertainty of similarity evaluation. We also confirmed that if attribute-based WOM was provided, MAD model fits better, on the contrary, if satisfaction-based WOM was provided CBDT model fits better.

3 - Consumer Learning with Endogenous Signal Precision and its Marketing Implications

Qitian Ren, Columbia University, New York, NY, 10027, United States, qren17@gsb.columbia.edu, Kinshuk Jerath

Consumers often face uncertainty about the utility of a product and conduct search for information before purchasing to reduce this uncertainty. We model this analytically using rational inattention theory. Consumers with limited cognitive resources endogenously choose the precision of the informative signal that they will obtain through their search, with higher precision being more costly. We obtain several interesting implications, including: price and quality are U-shaped in information processing cost, and firms offer return policies only for medium cost. We also explain how behavior such as confirmatory bias, typically considered anomalous, can be optimal.

■ TA11

5D, 5th Floor

Working Paper I

Contributed Session with Extended Paper

Chair: Sridhar Moorthy, University of Toronto, 105 St. Georges Street, Toronto, ON, M5S 3E6, Canada, moorthy@rotman.utoronto.ca

1 - How Do Firms Advertise When Customer Reviews Are Available

Ying Lei, Boston University, 270 Babcock Street Apt 7C, Boston, MA, 02215, United States, ylei@bu.edu

Online consumer product reviews have become very popular and influential in consumers' purchase decisions. I study how competing firms choose advertising and prices when customer reviews are available and when firms may build up loyal customer bases. The model predicts that higher-rated firms are more likely to be dominant in advertising. In other words, online reviews are a complement to firms' advertising. I also analyze an extreme case of the model: an entry game in which an entrant and an incumbent interact. I find that the availability of customer reviews undoes the "fat-cat" effect of a big incumbent with a lot of loyal customers. An incumbent with a high enough ratio of good reviews can successfully deter entry and maintain a high profit. Comparative statics of the theory model can explain the pattern of advertising response to Yelp rating found in the empirical RDD analysis. Intuitively, when the capacity limit of a local business becomes binding, a jump in the display rating will reduce the complemental effect of online reviews on advertising.

2 - Advertising and Price Targeting on The Hoteling Line

Sridhar Moorthy, University of Toronto, 105 St Georges Street, Toronto, ON, M5S 3E6, Canada, moorthy@rotman.utoronto.ca, Shervin Shahrokhi Tehrani

We study two types of targeting in this paper, exogenous targeting and endogenous targeting. By exogenous targeting we mean targeting by product preferences: advertising levels and prices geared to specific consumer preferences. Exogenous targeting presumes observability of consumer preferences (or of factors correlated with them). This is the sort of targeting that is much in the news in contemporary media, and is also the subject of a recent academic literature, e.g., Chen and Iyer (2002), Iyer et al. (2005). By endogenous targeting we mean the subtler, covert targeting that happens naturally, when firms choose different levels of awareness advertising, and optionally follow that up with randomized prices (McAfee 1994, Fershtman and Muller 1993, Boyer and Moreaux 1999). This kind of targeting can happen even when firms are not exogenously targeting anyone. In this paper we examine how these two types of targeting play out along the Hotelling line. We show that exogenous targeting of consumers with a stronger preference for your brand generally entails advertising more and pricing higher; endogenously, this enables the stronger brand to target its "loyalists" while the weaker brand targets "switchers." In general, endogenous targeting creates differentiation, even among homogeneous consumers, while exogenous targeting vitiates it, even among heterogeneous consumers. The targeting strategy game has the characteristics of a Prisoners' Dilemma when exogenous targeting costs are low: while each firm would prefer that neither did any exogenous targeting, the only equilibrium involves both firms doing full targeting, and being worse off as a result (both individually and collectively).

■ TA12

5E, 5th Floor

Working Paper II

Contributed Session with Extended Paper

Chair: Tobias Klein, Tilburg U, Buxusplaats 7, Tilburg, 5038HK, Netherlands, T.J.Klein@uvt.nl

1 - Business Cycle and Product Specificity as Drivers of Deceptive Advertising

Tirtha Dhar, University of Guelph, 66 Hall Avenue, Guelph, ON, N1L 0B2, Canada, tdhar@uoguelph.ca

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.

2 - How to Improve the Timing of Advertising

Tobias Klein, Associate Professor, Tilburg U, Buxusplaats 7, Tilburg, 5038HK, Netherlands, T.J.Klein@uvt.nl, Chen He

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. One reason for this is that measuring 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 allocates all the advertising budget very late, 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.

■ TA13

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 Albuquerque, Professor, INSEAD, INSEAD, Fontainebleau, WY, 55555, 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 ($1.1bn when extrapolating to the US hotel industry as a whole).

2 - Improving E-commerce Margins by Adding Search Frictions

Donald Ngwe, Harvard Business School, dngwe@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 easier than offline. As a result, 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 friction–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.

3 - The Impact of Consumer Objectives on Display Advertising Effectiveness

Paul Hoban, University of Wisconsin, paul.hoban@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 all 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@Simon.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 platforms; our implementation records 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.

■ TA14

5H, 5th Floor

UGC —Dynamics

Contributed Session

Chair: B.P.S. Murthi, University of Texas- Dallas, Marketing, School of Management, SM 32, Richardson, TX, 75083-0688, United States, murthi@utdallas.edu

1 - How Online Reviews Become Helpful: A Dynamic Perspective

Shuya Lu, Doctoral Student, Louisiana State University, 2114 Business Education Complex, Baton Rouge, LA, 70803, United States, slu12@lsu.edu, Jianan Wu, Shih-Lun (Allen) Tseng

Current studies on online user review helpfulness focus on the review quality characteristics as the solo driver. They show that review quality characteristics have salient effects on review helpfulness. However, a review's helpfulness changes across time, due to not only its static review quality characteristics, but also its dynamic voting behavior and ranking among the existing reviews. The understanding of review helpfulness is incomplete without an examination on how these drivers affect review helpfulness jointly across time. We conduct an empirical analysis using data collected from Amazon to understand the dynamic effects of these drivers. We find that the effects on the helpfulness of a review not only change with post life of the review, but also differentiate with the post timing of the review. The characteristics of a review with early post timing contribute to its review helpfulness jointly with its dynamic voting and ranking in its early post life, but have its effects on review helpfulness surrogated into its dynamic voting and ranking in its late post life and continue to impact on review helpfulness. However, the same characteristics of a review with late post timing do not enjoy the same opportunity to contribute to review helpfulness as those reviews with early post timing. The pioneering effect of review characteristics in post timing suggests that companies should cultivate more reviews with better quality characteristics early to leverage higher returns of review helpfulness.

2 - The Dynamics of Online Review Content and Product Sales

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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 evolvement 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 evolvement of review topics over time. We also incorporated these results in a dynamic model to study the impact of review semantic content on movie sales. Our findings provide unique insights into the dynamic nature of online reviews.

3 - Age of the Product and the Dynamics of Online Opinion

Jie Feng, Assistant Professor of Marketing, State University of New York-Oneonta, 224 Netzer Administration Building, Economics & Business Division, Oneonta, NY, 13820, United States, fengj@oneonta.edu, Purushottam Papatla

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 owners learn about the quality of their cars as they age. Our empirical analysis 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.

4 - Understanding the Dynamic Effects of a Firm's Response to Online Reviews: A Panel Vector Autoregressive Model

B.P.S. Murthi, Professor, University of Texas- Dallas, SM 32 Jindal School of Management, 800 Campbell Rd., Richardson, TX, 75080, United States, murthi@utdallas.edu, Jongmin Kim, Qiang Ye

With the increasing importance of online reputation management, more online service providers such as TripAdvisor.com allow managers of firms to respond to customers' reviews. While the impact of online reviews on factors such as sales, customer satisfaction, and online sentiment have been studied, the effect of a firm's response to customer reviews has not been researched adequately. This study focuses on the dynamic relationship between consumer reviews and management responses in the context of an online hotel booking website. Specifically, we seek to understand how much does a firm's response behavior affect future ratings and sentiment scores. Does the type of response (i.e., a generic response versus a specific response) have different effects? Do responses to positive and negative reviews have similar effects? To explore these issues, we employ a panel vector autoregressive (PVAR) model to a rich data of customer reviews of hotels on an online website. The model allows us to assess the dynamic effects of management response after controlling for endogeneity and unobserved heterogeneity. Our results indicate that positive user-generated comments have a positive impact on subsequent consumer ratings as well as sentiment score, whereas negative comments have a negative impact. This result is in contrast to prior research that has failed to show significant effect of management response to positive reviews. Second, results suggest that a firm should use a 'specific' response instead of a 'generic' response for negative reviews. In responding to positive reviews both types of responses have positive effects. We hope our results will help guide management responses to online reviews.

■ TA15

5I, 5th Floor

Online Advertising I

Contributed Session

Chair: Nadia Abou Nabout, WU Vienna University of Economics and Business, Welthandelsplatz 1, Vienna, 1020, Australia, nadia.abounabout@wu.ac.at

1 - Annoying Mobile Advertising Classification and User Attitudes Investigation

Chih-Chien Wang, Professor, National Taipei University, 151 University Rd, Sansia District, New Taipei City, 237, Taiwan, wangson@mail.ntpu.edu.tw, Yolande Yun-hsiou Yang,

Internet advertising is a major revenue source for many websites, content providers, and mobile application developers. The popularity of the Internet and mobile devices has boosted the trends of displaying advertising on mobile phone applications. These ads broadcast the commercial messages to users of mobile device. However, users may be irritated by excessive or inappropriate occurrences of ads. The current research focuses on users' irritation perception toward mobile ads. We conducted two studies to investigate users' irritation perception to mobile advertising. In Study 1, we introduced a real case of a smartphone application whose ads had irritated users. There are a plenty of negative word-of-mouths (WOMs) focus on the annoying ads of this application. We collected and analyzed contents of these negative WOMs. We found that users' complain to the annoying ads can be divided into five types: (i) cannot skip; (ii) clickbait; (iii) accidental clicks; (iv)sensory disturbance; and (v) excessive quantity. These five annoying ad types can be further divided into fifteen sub-types. In Study 2, we conducted 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.

2 - Dynamic Allocation of Video Ads over Multiple Online Videos

Wreetabrata Kar, Research Scientist, Adobe Systems, 385 River Oaks Parkway, Apt. 4044, San Jose, CA, 95134, United States, wkar@adobe.com, Leon Cui, Viswanathan Swaminathan Yun-Jung Chang

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 unscalable. To address this issue, we investigate several heuristic methods to simplify 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.

3 - Television Advertising and the Impact on Online Customer Value

Nadia Abou Nabout, WU Vienna University of Economics and Business, Welthandelsplatz 1, Vienna, 1020, Austria, nadia.abounabout@wu.ac.at, Martin Stange, Bukrhardt Funk

While second screen usage has already become a prevalent way of consumers engaging with TV content, many advertisers do not yet orchestrate their TV and online advertising efforts and still manage them in isolation of one another. Recent research on cross-media effects, however, clearly shows that TV advertising affects online search behavior as well as online shopping. The aim of this study, thus, is to answer the question of how TV advertising affects online customer value along the sales funnel (including visit, registration, conversion, basket size as well as repeat purchase behavior). We, additionally, consider moderation effects of (1) the users' device choice as well as (2) the online referral (i.e., search engine advertising, affiliate marketing, direct type-in etc.). A unique data set provided by an international online drug store that runs extensive TV advertising is used to analyze the effect of TV ads on online customer value. Our results indicate that the probability to register is greater for customers who visit the online shop after being exposed to a TV ad compared to customers who visit the shop's website, but were not exposed to a TV ad prior to their session. However, conversion probabilities, basket sizes, and repeat purchases of these TV-induced users tend to be smaller than the ones of non-TV-induced users. This suggests that online customer value is smaller for these customers. In practice, advertisers are well advised to consider these reduced customer values when calculating the return on investment of TV-induced users.

■ TA16

5J, 5th Floor

Recommender Systems

Contributed Session

Chair: 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

1 - Effectiveness of Recommender System Using Internal and External Data

Kai Yao, Peking University, Changchunyuan, Apt 207, Beijing, 100871, China, jasonyaopku@gmail.com, Ping Tu, Yuxin Chen, Meng Su

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 personalization 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 focal 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, Professor, Waseda University, 1-6-1 NIshiwaseda, Shinjuku-ku, Tokyo, 169-8050, Japan, moriguchi@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 personalized recommendations 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 retarget customer wishlist and shopping cart abandonments 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-nested structure 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.

Thursday, 10:30am - 12:00pm

■ TB01

3C, 3rd Floor

Advertising II

Contributed Session

Chair: Andre Bonfrer, University of Queensland Business School, 506 Joyce Ackroyd Building 37, St. Lucia, QLD 4072, Australia, a.bonfrer@business.uq.edu.au

1 - The Evolution of Advertising Agency Compensation

Sharon Horsky, Hebrew University, Jerusalem, Israel, sharon.horsky@huji.ac.il

Hundreds of billions of dollars pass annually through firms to advertising agencies. A crucial element of this relationship is the design of an effective compensation plan for the advertising agency which aligns the incentives given to the agency with the overall objectives of the advertiser. These compensation plans have undergone radical changes over time. They have evolved from a flat 15% of media billings, a commission rate that has its roots in the mid 19th century, to a mostly "cost-plus" nature nowadays. A striking puzzle concerns the 15% commission rule - How and why did it appear? Why did it persist for over a century? Why did it eventually cease? What are the methods that replaced it in the last few decades? We shed some light onto these issues by examining the evolution of compensation methods along with the structural changes that have occurred in the advertising industry over time including the changes in the functions that the advertising agency fulfilled.

2 - Publisher Selection at Private Ad Exchanges

Sila Ada, Teaching and Research Associate, WU (Vienna University of Economics and Business), Welthandelsplatz 1, Vienna, 1020, Austria, sila.ada@wu.ac.at, Nadia Abou Nabout

Real-time bidding (RTB) is an auction-based ad selling mechanism in real-time and considered to be a revolution for online display advertising: Within milliseconds, single advertising impressions are auctioned off at a so-called ad exchange, the highest bidding advertiser wins the auction, and its ad gets displayed on the website (i.e., publisher) that the impression is generated on. While ad exchanges provide a powerful and efficient platform for ad buyers (e.g., agencies, brands) and sellers (e.g., publishers), many advertisers are still reluctant to buy ad impressions on ad exchanges since they have also become an environment that is characterized by concerns about the quality of the offered inventory (i.e., brand safety, viewability of ads, fraudulent traffic). The industry's current solution to tackle quality concerns is the establishment of so-called private ad exchanges, which rely on rather strict selection of publishers and advertisers that they work with. In contrast, open ad exchanges (e.g., DoubleClick) give almost free access to any interested advertiser or publisher, who would like to buy or sell advertising inventory. As a consequence, publisher selection is at the core of the business of a private ad exchange. However, from various discussions with industry professionals, we found out that no holistic approach seems to exist for publisher selection. With this study, we aim to support private ad exchanges in selecting publishers into their portfolio by analyzing the factors (e.g., user loyalty, viewability) that drive publisher success. To do so, we develop a holistic framework about the drivers of publisher success and draw on numerous data sources (readily available to private ad exchanges) to predict success and identify its most important drivers.

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, yi.lu@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 effort prevents consumers from learning a product with low 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 firm's and the consumers' incentives causes the breakdown 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 signaling cost of the high product potential because only the high potential product can compensate the retail profit loss through an increased market size. 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

Andre Bonfrer, The University of Queensland, St Lucia, 4067, Australia, a.bonfrer@business.uq.edu.au, 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 interact with one 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.

■ TB02

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, wuruhai@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, lzhang@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 both across 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, sunluping@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 by strategically refraining from direct selling. The deterrence effect occurs only when the discount factor (used to calculate the present value of future profits) is relatively large and the manufacturer's direct selling efficiency is relatively 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, Willem-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 their physical branch structure. This model takes into account changes in banking behavior due to this new mobile channel. We use this model to predict the timing and type of transactions across channels. The knowledge from the demand model is then used to design an optimal branch network in terms of capacities, amenities, location, and number of branches. Counterfactuals allow us to evaluate different levels of channel adoption, for example when almost all consumers have adopted mobile banking and consider its effect on not just banking transactions but also the impact on customer loyalty. Our model shows a strong complementarity between the channels. Therefore instead of reducing the number of physical 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, wuruhai@mcmaster.ca, Kairan Liu, Jie Jian

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 retailing 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 ruin the manufacturers' quantity discount strategy. The manufacturer's optimal quantity discount policy can lead to either the equilibrium outcome of retailer overbooking, or the outcome of retailer collaborating. We derive the market condition under which quantity discount and retailer collaboration coexist.

■ TB03

3H, 3rd Floor

Retailing II

Contributed Session

Chair: Jeff Inman, University of Pittsburgh, 372M Mervis Hall, Pittsburgh, PA, 15260, United States, jinman@katz.pitt.edu

1 - Electronic Shelf Labels (ESL) and Their Impact on Prices and Pricing

Sourav Ray, McMaster University, Degroote School of Business, 1280 Main Street, Hamilton, ON, L8S 4M4, Canada, sray@mcmaster.ca, Li Wang, Daniel Levy, Mark E. Bergen

Electronic Shelf Labels (ESL) are a price display technology that is relatively new to the retail technology spectrum. In this paper we investigate the impact of ESL on a retailer's business outcomes, as well as on consumer prices. On one hand, ESL could enhance efficiency by reducing the lead time to price changes as well as the variable price adjustment costs (PAC). The potential of these being passed through as better consumer prices and offers have spurred several jurisdictions to exempt retailers from stringent pricing regulations. On the other hand, ESL may enhance its pricing capabilities and help the retailer claim greater value. This could potentially have a positive impact on its gross margins and help buffer direct price competition. We first consider a point of sale (POS) data in a couple of supermarket chains that implemented ESL. We then estimate the potential operational impact of ESL by studying a secondary dataset from a grocery supermarket to describe the magnitude of retail savings due to the technology. The results show that the impact on customers is contextual, and that there are potentially significant benefits accrued to retailers. In particular, we find that while both the efficiency and value based logics operate, efficiency appears to have a bigger impact in the context of our data. We extend this to some key strategy and policy issues of relevance to marketers. Our approach comports with a growing literature in Marketing and Economics that investigates the micro processes that determine prices in 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 Eisenbeiss, Werner J Reinartz, Julian Wichmann

In times of an economic downswing, 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 induces structural adjustments. In this study, we aim 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 individual level. Extending our model with a latent class framework 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. Wal-Mart 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, labor market, retail prices, 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 exit on consumer 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

■ TB04

3D, 3rd Floor

Marketing Strategy II

Contributed Session

Chair: Beibei Dong, Lehigh University, 621 Taylor St, Bethlehem, PA, 18015, United States, bdong@lehigh.edu

1 - 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.

2 - 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.cn

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 promoted 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 the findings, this research concludes 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

Beibei 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 downgrade 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 surveyed 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 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.

■ TB05

3E, 3rd Floor

Consumer Behavior II

Contributed Session

Chair: Min Zhao, Univerity of Toronto, Univerity of Toronto, Toronto, ON, 1, Canada, min.zhao@rotman.utoronto.ca

1 - The Nature of Emotional Influence in Choice Processes

Huy X Nguyen, University of New South Wales, Sydney NSW, 2052, Australia, h.x.nguyen@student.unsw.edu.au, John H Roberts, Songting Dong

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 that 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 favoritism 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. <!—EndFragment—>

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 Kiyeon 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; Shampanier, Mazar, and Ariely 2007; Thaler 2004; Vohs, 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.

■ TB06

3G, 3rd Floor

Choice Models II

Contributed Session

Chair: Yao Yao, University of Southern California, Marshall School of Business, 3660 Trousdale Parkway, Los Angeles, CA, 90089-0443, United States, yaoyao.chn@gmail.com

1 - Anonymizing Faces while Ensuring Screenability – A Solution for the "Face" Dilemma in Online Dating

Shasha Lu, lecturer, Cambridge Judge Business School, Cambridge Judge Business School, Trumpington Street, Cambridge, CB2 1AG, United Kingdom, fdshashalu@gmail.com, Min Ding

Whilst face image in the online dating profiles plays an important role in screening for potential dates, there is also a strong need to protect the privacy of the dating site users. Consequently, the dating websites are in need of effective ways to incorporate face preference into the screening mechanism while reducing the risk of identification from the use of face image. Building upon the literature on face perception from neuropsychology, we propose two approaches to anonymize face images in a way that retains facial features that will affect face perception and preference, thus protect facial identity of users while screening potential dates based on user's preference for faces. Consistent with the state-of-art face anonymization technology, the proposed approaches are able to screen potential dates without revealing their facial identities and make recommendations to dating site user based on his/her preference for local or global facial features. In the first approach, we first select a set of local facial features (using vertical, horizontal, and curvature facial information) that are unidentifiable, easy-to measure and effectively capture people's face preference, then screen potential dates for the target user based on his/her calibrated preference for the selected local facial features; In the second approach, we first represent the global facial feature of a face image with its similarities with clusters of faces(i.e. face types) that people are familiar with in everyday life (e.g. famous faces). We then screen potential dates based on the similarities between their face images with the face types. An empirical study demonstrates that this face anonymization-based screening framework is able to improve the accuracy of identifying a proper match for users while enabling the users to control the trade-off between screenability and anonymity of the face image.

2 - Latent Purchase Topic Models for Turning Purchase Data Into Shopper Insights

Takuya Satomura, Keio University, 2-15-45 Mita, Minato-ku, Tokyo, 108-8345, Japan, satomura@fbc.keio.ac.jp, Daisuke Nogiwa, Eisaku Sato, Hiroshi Nakamura, Takeshi Moriguchi

Understanding how shopper purchases products in a retail store is of common interest to retailers and manufacturers. Retailers need to analyze customer data to practice in-store merchandising which meets customer needs. Manufacturers also analyze the shopper data to improve their product and to provide retail support activities. We develop statistical models which utilize the purchase data to obtain the shopper insights. The proposed models categorize expansive products and identify individual customer's preference to these products using individual-level purchase history data. The estimated product groups are unobserved ones, which represent the latent co-occurrence of purchase incidence by shoppers. These latent categories are named "Latent Purchase Topic" in our analysis, and used to obtain the insights of shopper behavior. The proposed models are the LDA (Latent Dirichlet Allocation)-type purchase models, which include the customer's characteristics as predictor variables. The advantage of using LDA-type purchase model is the scalability for high dimensional data. The proposed topic models consider the heterogeneity of shoppers and decompose high-dimension data into low-dimension matrices. This reduced dimension is used to comprehend the meanings of latent topics. The estimated parameters for customer's characteristic variables are also used to interpret the latent topics. We apply the proposed models to the customer purchase data of several retail stores and obtained insightful topics as the results of analysis.

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, yaoyao.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 sets out to fill a gap in the marketing literature by proposing a modeling framework to capture the signaling effect</i> and the substitution effect</i> of price in driving consumer demand for luxury products. The proposed model is 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 of price on 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 is. 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.

■ TB07

3B, 3rd Floor

Conjoint Analysis

Contributed Session

Chair: Fred M Feinberg, University of Michigan, Ross School of Business, 701 Tappan Street R5324, Ann Arbor, MI, 48109, United States, feinf@umich.edu

1 - The Role of Discriminability in Conjoint Analysis

Anocha Aribarg, Associate Professor, University of Michigan, Ross School of Business, 701 Tappan Street, R5478, Ann Arbbor, MI, 48109-1234, United States, anocha@umich.edu, Katherine Burson, Richard Larrick

Choice-based Conjoint analysis is a widely used method for determining how much 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 careful 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 processing information 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, yupengc@wharton.upenn.edu

Estimating customers' 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 partworths 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 part-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.

■ TB08

5A, 5th Floor

Pricing II

Contributed Session

Chair: Steven Mark Shugan, University of Florida, 2030 NW 24th Avenue, Gainesville, FL, 32605, United States, steven.shugan@warrington.ufl.edu

1 - Effect of Price on Price Sensitivity: Case Study of the Airlines

Vinay Kanetkar, Chair, Associate Professor, University of Guelph, Dept of Marketing and Consumer Studies, University of Guelph, Guelph, ON, N1G 2W1, Canada, vanetkar@uoguelph.ca

Manager set prices of products and services. How might one study impact of prices on profitability? The impact of price sensitivity on profitability is well understood and explained. However, link between price and price sensitivity is not understood and not explored. In this paper, link between price and price sensitivity (elasticity) studied using analytical methods and empirically. For example, for a linear demand, price and price sensitivity are positively related. On the other hand, there is no relation when demand is log-log form. In general though, it is not possible to suggest link between price and price sensitivity. Using data for the US airlines from 1999 to 2013, we find that the average price paid by customers to price sensitivity is negative.

2 - Conjoint Duel Modeling Using Price Decomposition Analysis

David J Curry, Professor of Marketing, University of Cincinnati, Department of Marketing, 431 Cob, Cincinnati, OH, 45221-0145, United States, david.curry@uc.edu, Xin (Shane) Wang, Feng Mai

Published studies have considered the effect on purchase, stated preference, or willingness-to-pay of revealing information to consumers about product prices and costs. These approaches provide unique reference information for consumers (Mazumdar et al 2005). In this paper we decompose retail prices to reflect a product's relative price components, which we call part-prices (vs. partworths). 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 show that the mean indifference price is lower when part-prices are revealed ($F(1,50)=4.98$, $p<0.03$) 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 information for hundreds of tablet computers and collect price data longitudinally from BestBuy, Walmart, and Amazon. (Data collection: 10-5-15 to 3-01-1; twice per day at 0.00 and 12:00 UTC.) We use hBayes 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, Haibing 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 triangulate with past research using a cross-section approach. Our empirical analysis compares the same exact 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.

■ TB09

5B, 5th Floor

New Product II

Contributed Session

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

1 - Organic Influencer and its Scale in ICT Environment

Masataka Yamada, Marketing, Nagoya University of Commerce and Business, 149-773 Takenoyama, Iwasaki-cho, Nisshin-shi Aichi-ken, 470-0193, Japan, myamada@phd.stern.nyu.edu, Toshihiko Nagaoka

We have been studying consumer innovators and their innovativeness to understand consumers' new product adoption behavior. We realized, however, now that industry had shifted their interest from innovators to influencers to predict consumers' new product adoption behavior in the rapidly progressing ICT environment. The new consumers act in the network which means that they can now see and listen to other people's behavior. They can even influence other people's behaviors and the recipients' responses for their comments and advices. So we assume that industry has nurtured ordinary consumers from born influencers to these new consumers which we call the "organic influencers", excluding professional bloggers. After two decades since the Internet opened the virtual commercial space, it is time to investigate the organic influencers. This study creates a ten item scale to find the organic influencers. To validate the scale, we obtained the net shoppers' review responses of one of the biggest net

shopping stores in Japan. The reviewers are ranked by number of comments, product categories, own fans, and usefulness buttons. Also, using SEM, we investigate the relationship among innovators, organic influencers, market mavens and consumer advocates using representative scale for each construct except consumer advocates scale which we create. Because these constructs are important to understand and implement the new product adoption and diffusion strategies. One of the merits of this study is that this is the first attempt to look into the above four constructs based on a single source data.

2 - Market Demand Models for Preannounced Products

Hwang Kim, Assistant Professor of Marketing, Chinese University of Hong Kong, Room 1134 11F Cheng Yu Tung Building, No. 12,, Shatin, N.T., Shatin, 00000, Hong Kong, kimhwang@baf.cuhk.edu.hk, Jehoshua Eliashberg, Vithala R Rao

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 their 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 products 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 another (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 tracked respondents 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. Surprisingly, 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 development of productive collaborations. Secondly, socio-cultural environment in India has a huge impact on the technology based product commercialization. Other factors are related to technology, IPR issues, transfer channels, and value appropriation. The paper concludes with the important implications of these findings that can enable policy design to facilitate university-industry linkages in India.

4 - Customer and Competitor Knowledge Sharing in New Product Development Teams: Customer and Competitor Knowledge Sharing in NPD Teams: A Cognitive Perspective

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 positive enhances 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 effect on performance, cautioning against constant efforts to promote market knowledge sharing in a team.

■ TB10

5C, 5th Floor

Decision Making II

Contributed Session

Chair: Paul R Messinger, University of Alberta, Faculty of Business, 3-20e Faculty of Business Bldg, Edmonton, AB, T6G 2R6, Canada, paul.messinger@ualberta.ca

1 - The Relationship Between Customer Value and the Timing of Adoption in a New Experience Goods Category

Yan Xu, PhD Candidate, Tilburg University, Rijtse Akkers, # 32, Tilburg, 5037JS, Netherlands, y.xu_1@uvt.nl, Bart J Bronnenberg, Tobias J Klein

We study consumer behavior in a new repeat-purchase experience goods category with large category expansion in the extensive margin. Our balanced panel data are uniquely suited for this purpose because they allow us to observe when consumers adopt the category and what their subsequent purchase behaviors are. We interpret the observed consumer adoption and purchase decisions through the lens of a model in which consumers make purchase decisions under uncertainty. Their inclination to adopt and subsequently buy the product depends on their prior beliefs regarding the consumption utility they will experience when purchasing the product, which they update after purchasing, their heterogeneous risk attitude, and their utility for marketing variables like price and product line length. Estimating this structural learning model allows us to isolate learning effects from time-invariant brand specific preference and heterogeneity in price sensitivity and quantify the role of differences in risk attitudes, permanent tastes, and price sensitivity for adoption timing. In our model, consumers respond differently to firms’ policy changes that shift their uncertainty level, and to pricing policy change. Moreover, since under uncertainty consumers’ choices in the future depend on their decision history, the learning speed depends on firms’ choices about, e.g., price. We use our estimates to express the value of a typical customer in subsequent adoption segments. Our counterfactual simulations further provide suggestions on optimal policy decisions (e.g., on reducing consumer uncertainty, price strategy, product line length choice).

2 - “What Should I Read Next?” A Multi-Category Utility Model of Consumer Response to Content Recommendations

Yicheng Song, Boston University, 595 Commonwealth Ave, Boston, MA, 02215, United States, ycsong@bu.edu, Nachiketa Sahoo, Elie Ofek

We propose a multi-category utility model of content consumption at online media sites. This model provides a framework to learn an individual consumer’s preferences towards different topics of content– which in turn governs the likely response to recommended content. Unlike existing models of personalized recommender systems, our approach provides a way to estimate how quickly users will satiate while consuming repeatedly in each category and how they tend to substitute one category of content with another. The model also allows understanding how consumers trade off relying on their own costly search effort for new content vs. relying on the proposals put forward by a recommendation engine. Taken together, these three elements enable us to learn how consumers construct bundles of content to consume in their visits to a site and the extent to which they are likely to click on recommended content presented to them. We estimate this model using a clickstream dataset from a large national media outlet, which included firm-generated recommendations, and show the superiority of our approach in describing individual consumer behavior. We calibrate the model and apply it to predict the content that a user will select at different stages of an online session. We demonstrate the superiority of our approach over those that do not incorporate the possibility that consumers form bundles from different categories in order to maximize their utility in a given session.

3 - The Effect of Free Samples under Imbalanced Duopolist Competition

Shuojia Guo, Assistant professor, CUNY-CSI, 2800 Victory Boulevard, Staten Island, NY, 10314, United States, nancy.guo@csi.cuny.edu, Chan Choi

Free samples provide customers with first hand usage experience that enables them to resolve uncertainty and improve their perceived fit for rival products to discover the true fit of their preferences. We model the effects of free samples under duopolist competition and analyze the optimal sampling strategy for both producers. We also discuss the scenarios when free samples will increase or reduce the competition intensity.

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 strategies against one another in choice experiments. We propose 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 with Extended Paper

Chair: Peren Ozturan, VU University Amsterdam, FEWEB, De Boelelaan 1105, Amsterdam, 1081 HV, Netherlands, p.ozturan@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 big data revolution have changed the marketing climate irreversibly. Geographical boundaries between markets are blurring, and 'selling' has been replaced by 'engaging'. Consumers are more connected, more informed, more empowered, and more spoilt 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 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 Ozturan, Assistant Professor, VU University Amsterdam, FEWEB, De Boelelaan 1105, Amsterdam, 1081 HV, Netherlands, p.ozturan@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.

■ TB12

5E, 5th Floor

Working Paper IV

Contributed Session with Extended Paper

Chair: Desmond Ho-Fu Lo, Santa Clara University, 500 El Camino Real, Santa Clara, CA, 95050, United States, hlo@scu.edu

1 - A Study of Bidding Behavior In A Simultaneous Online Auctions of Identical Goods By Hidden Charges

Boram Lim, PhD Student, University of Texas at Dallas, SOM, UT Dallas, Richardson, TX, 75080, United States, bxl131330@utdallas.edu, Ernan E Haruvy, Peter T. Popkowski Leszczyc

In a controlled field experiment, we examine pairs of auctions for identical items with the same auction format but with different hidden charges, where a hidden charge is an added cost, such as shipping and handling for example, that involves some additional effort to uncover. The basic claim in the literature is that due to search costs, some bidders will not fully incorporate the hidden charge, and this can be exploited by firms. If this were the case, we would expect to see astronomical hidden charges in auctions, which is not the case, so this suggests some offsetting negative effect of hidden charges. Identifying and mapping these offsetting effects is the purpose of the present work. We are able to observe any offsetting avoidance of high hidden charge auctions by tracking users' behavior with click-stream data. We find that the existence of hidden charges impacts the auctions' evolution and users' activities, and there is price dispersion within pairs. More specifically, users who visit the higher charged auction are less likely to place a bid, and tend to place lower bids. The difference in hidden charges has mixed effect on auction users' decisions. The hidden charge difference negatively affects the user's decision on whether to place a bid and the willingness to visit an auction item but it affects positively the bid amount. In addition, we find that non-searches or users with lesser mobility across auctions are less likely to place a bid, and tend to place lower bids. Click-stream data enable us to build a simple integrated model for investigating auction users' decisions to visit an auction, whether to bid and how much to bid. We find the existence of price dispersion due to high inertia bidders who do not search to find lower price auctions, but larger price differences within pairs have negative effects on the users' visiting auctions and deciding to place bids. In other words, we find a tradeoff between profit from high inertia bidders and lower bidder participation due to excessive hidden charges.

2 - Strategizing Calculus" In Industrial Procurement Contracts

Desmond Ho-Fu Lo, Santa Clara University, 500 El Camino Real, Santa Clara, CA, 95050, United States, hlo@scu.edu, Giorgio Zanarone, Mrinal Ghosh

Extant research in collaborative ties has pre-dominantly focused on studying how governance forms balance the potential gains against transaction hazards within that relationship. Building on the incomplete contracting approach, we develop a game-theoretical model that shows how buyers trade-off gains within a supplier relationship against protecting their own resources that exist outside the relationship. We show that compared to open-price contracts, closed-price contracts that dis-incentivize suppliers from over-investing in activities that facilitate appropriation, provide better protection to such pre-existing resources. Consistent with our model, but not with alternative theories, our data on procurement contracts show that OEMs tend to use closed-price contracts when their pre-existing resources are high but the use of closed-price contracts reduces both the supplier's dedicated investments and the OEM's gains. Our work provides evidence on how parties, cognizant of the dark side of relationships, strategically trade-off protecting pre-existing resources against generating value within inter-organizational relationships.

■ TB13

5F, 5th Floor

Advertising Effectiveness

Contributed Session

Chair: Song Yao, Northwestern University, Evanston, IL, 6009160208, United States, s-yao@kellogg.northwestern.edu

1 - Effects of Online/Offline Media Contact and Price Promotion on Trial and Repeat Purchase of New Consumer Packaged Goods

Takashi Teramoto, Associate Professor, Yokohama National University, 79-1 Tokiwadai, Hodogaya-ku, Yokohama-shi, Kanagawa, 2408501, Japan, teramoto-takashi-yg@ynu.ac.jp, Akira Shimizu, Jeff Inman

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 binominal logistic regression modeling for trial purchase and a negative binominal regression modeling for repeat purchase to test their hypotheses using a single source data set of 6,000 panelists supplied by INTAGE, Inc that 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 initial trial) affects repeat purchase, but does not affect 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 has synergistic effects on trial purchase 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.

2 - The Impact of Advertising along the Conversion Funnel

Song Yao, Northwestern University, s-yao@kellogg.northwestern.edu, Stephan Seiler

We assemble a unique data-set which combines information on advertising with path-tracking data on consumers' movement within a supermarket as well as purchase information. Using this novel information on consumer behavior prior to a purchase, we trace out how advertising impacts consumer behavior along their path-to-purchase. Surprisingly, we find that advertising has no significant effect on the number of consumers visiting a particular product category. The null effect is precisely estimated and even at the upper end of the confidence interval, a one standard deviation shift in advertising increases category traffic by only 1.3%. The point in time (during the shopping trip) at which consumers visit a category is similarly unresponsive to advertising, suggesting that consumers' paths are relatively rigid and not affected by advertising. On the other hand, we do find that advertising significantly impacts consumers at the lower end of the conversion funnel by increasing sales conditional on visiting the category. A one standard deviation change in advertising (evaluated at the point estimate) increases category-level sales significantly by 12%. We further decompose the impact in sales and find that the increase is driven by consumers buying multiple products within the category. The number of consumers purchasing in the category is not affected. Consistent with the absence of an effect on category traffic and the nature of the sales increase, we find no evidence of spillover effects of advertising between categories which are stocked in proximity of each other in the store.

3 - Advertiser Learning in Internet Ad Networks

Jason M.T. Roos, Erasmus University, Rotterdam, Netherlands, roos@rsm.nl, Carl F Mela, Santiago Balseiro

Internet advertising networks match advertisers with publishers whose audiences are potential customers, substantially lowering advertisers' search and transaction costs. But in spite of these efficiencies, the advertiser problem in this market remains daunting due to the vast array of alternative sites on which to advertise. Advertisers entering the network initially face considerable uncertainty about the efficacy of advertising on each site, uncertainty which can only be reduced through (potentially wasteful) advertising. Because the network operator observes all advertising taking place throughout the network, it can potentially reduce some of this advertiser uncertainty. Hence, we consider mechanisms whereby the ad network shares information among advertisers in order to improve the efficiency of the network and increase the profits of the ad network. Using data provided by an ad network, we estimate a structural model of advertiser demand and measure the effects of these mechanisms on advertisers' choices, equilibrium prices, and network profit.

■ TB14

5H, 5th Floor

UGC – Business Impact

Contributed Session

Chair: Natasha Zhang Foutz, University of Virginia, 340 Rouss & Robertson Hall, University of Virginia, Charlottesville, VA, 22904, United States, nfoutz@virginia.edu

1 - Understanding Drivers of Corporate Blogging Effectiveness

Juliana Huppertz, PhD Student and Research Assistant, University of Hamburg, Welckerstraße 8, Hamburg, 20354, Germany, juliana.huppertz@wiso.uni-hamburg.de, Mark Heitmann, Florian Stahl

Weblogs are an emergent, personalized form of social media, and marketers are increasingly becoming aware of the potential of corporate weblogs as strategic communication tool. However, research on factors that drive communication success for corporate weblogs are scarce. This study seems to close that gap by evaluating how reciprocal online conversations on corporate blogs between corporations and its (potential) customers affect the readership and reach of corporate weblogs. Further, we aim to disentangle the dynamic effects of targeted messages (1) and informal, interpersonal comments of corporations (2) and also among customers (3) on communication success. Our data covers 14 organizational weblogs operated by global Fortune 500 listed companies and contains unique information on 2.218 blog posts and 9.012 comments. We study the effectiveness of corporate blogging by evaluating the impact of different conversational (i.e. comment stock, sentiment, commentator concentration) and post characteristics (i.e. post length, multimedia content, storytelling, blog maturity) on the number of page views. As this count variable is strongly overdispersed, we apply negative binominal regression for our analysis. Our results provide substantive insights into the effectiveness of corporate blog communication. First, we find that informal small talks (i.e. short conversations that consist of only two conversational comments) have the strongest effect on corporate blog effectiveness. Second, our results support the notion that an active company involvement (especially via informal comments) and hence a close interaction with the customer base drive communication success. In a similar vein, within-post variation in response time positively impacts the effectiveness of corporate blogs. Overall, our findings suggest that firms should not only seek to create true online conversations when adopting the practice of corporate blogging, but also that they actively take part in these conversations themselves and treat their audience as equal communication participants.

2 - Does Increasing Volume of Online Reviews Really Help Sales

Chao Fan, Southwest University of Political Science and Law, Chongqing, China, fanchaokobe@qq.com, Zhen Li, Lin Huang

There is much evidence that the volume of online reviews positively affect merchants' subsequent sales. However, little is deeply discussed about the mechanism of these effects. This paper posits that sales effect of the volume of online reviews is overestimated in prior research. Our approach assumes that previous sales influence both volume of online reviews and subsequent sales, which results in endogeneity of the volume of reviews. Building on this assumption, we propose an econometric model to study the relationship among previous sales, volume of reviews, and subsequent sales. The data in this study are retrieved from two types of online markets, platform and independent-operation, by using a python-based crawler. The results confirm the endogeneity and overestimate of the volume of reviews, and suggest its effect on sales is somewhat smaller on platform markets than it on independent-operation markets. Our study mainly contributes to the existing literature by improving the accuracy of sales effect of review volume from endogenous approach in methodology, and discussing the difference in this effect across markets type. We think our findings can help marketers and merchants to further understand the characteristics of sales in online markets, and improve the effectiveness of markets or shops evaluation management.

3 - Association between E-Sentiment and Market Performance

Hyun S. Shin, Associate Professor, Hanyang University Business School, Seoul, Korea, Republic of, hyunsangshin@gmail.com, Dominique M. Hanssens, Kyoo Il Kim, Jean A. Choe

Despite the spectacular growth in online information dissemination, little is known about how consumers' sentiments that are shared online, often referred to as 'e-sentiment,' influence products' market performance. Moreover, we do not understand the comparative impact of e-sentiment (as generated by consumers) and traditional marketing actions such as advertising (as controlled by marketers). To address these questions, we track online buzz in the DSLR (Digital Single Lens Reflex) camera market and analyze its impact on brand sales.

A priori, we expect that negative e-sentiment will have a stronger impact on products' market performance than positive e-sentiment. Furthermore, we expect that these e-sentiment effects will be moderated by customers' expectations levels: negative (positive) online buzz may have a stronger adverse (beneficial) impact for higher-priced (lower-priced) products. In addition, we expect that the impact of advertising will also be moderated by customers' expectations levels, similar to that of positive online buzz which conveys favorable information about a product. The econometric results largely support our hypotheses. Managerial implications are discussed.

4 - Impact of Self-disclosure on Effectiveness of Online Reviews

Natasha Zhang Foutz, Associate Professor of Commerce, University of Virginia, 340 Rouss & Robertson Hall, University of Virginia, Charlottesville, VA, 22904, United States, nfoutz@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.

■ TB15

5I, 5th Floor

Online Advertising II

Contributed Session

Chair: Ron Shachar, Arison School of Business at IDC, PO Box 167, Herzliya, 46150, Israel, ronshachar@idc.ac.il

1 - Channel Coordination in Search Advertising

T. Tony Ke, Assistant Professor, MIT Sloan School of Management, 100 Main St, E62-535, Cambridge, MA, 02142, United States, kete@mit.edu, Xinyu Cao

Retailing is among the top spenders in search advertising, and channel coordination in search advertising is becoming an important managerial decision. Manufacturers and retailers cooperate in search ad spendings, while at the same time, compete in search ad auctions. Two features make channel coordination in search advertising a new setting. First, ad spending impacts demand in a unique way in terms of position auctions. Second, a manufacturer's ad competes directly with its retailers', in contrast to the usual complementary effect in traditional advertising. We build a game-theoretic model to answer the following research questions: Why would a manufacturer sponsor several retailers to bid for his product at the same time? Isn't that indeed competing with himself and burning his own money? Given higher margin from direct sales than via retailers, why sometimes manufacturers do not advertise by themselves? What is a manufacturer's optimal search advertising strategy? Our model captures a manufacturer and his retailers' intra-brand competition and cooperation in search advertising, as well as the inter-brand competitions. We first consider the case that the manufacturer does not bid, but can incentivize his retailers to bid higher by providing positive participation rates in their bidding. In the case of one retailer, we find the coordination mechanism is inefficient in the sense that the retailer's bid is too low to maximize total channel profit. In the case with two retailers, the manufacturer can obtain the maximum total channel profit only when his profit margin is higher than that of one retailer, and the other retailer's profit margin is not too high. We also study the case when the manufacturer can bid directly. In this case, the manufacturer can achieve maximal channel profit even if he coordinates with only one retailer, as long as his profit margin is relatively high. It is more profitable for the manufacturer to win a better position than his retailers if his e-commerce site has a higher return-per-click, i.e., profit margin multiplied by conversion rate.

2 - Digital Consumer Attention: Unveiling Digital Competition using Online Search

Elham Maleki, Resesarch Assistant, Goethe University Frankfurt, Theodor-W.-Adorno-Platz 4, Frankfurt am Main, 60323, Germany, maleki@wiwi.uni-frankfurt.de, Daniel M. Ringel, Bernd Skiera, Christian Doppler

To convince consumers to become customers in the digital world, firms must first compete to capture their attention and draw them to their websites. Understanding the competitive environment for digital consumer attention is crucial for firms' strategic actions about positioning, communication, cooperation and acquisition. Therefore, firms need to determine how successful they are, and who they compete with for consumer attention. Deriving such an understanding, however, is challenging because markets are typically very large, have unclear boundaries, and contain firms with various business models. Moreover, firms need to look at markets from consumers' perspective to avoid myopic decisions. But, surveys of limited number of consumers would be expensive, time consuming, and suffer from limited cognitive abilities of consumers to recall all competitors in the market. We overcome this limitation by using organic search engine data as a representative proxy for consumers' view since search engine intends to provide users with results most relevant to their search. Using organic search engine data, we propose a new approach to (i) define the digital market and its size, (ii) find the distribution of digital consumer attention across firms, and (iii) uncover the competitive market structure. A major advantage of the proposed approach is its ability to draw on data available for a broad range of markets, allowing for a comprehensive, timely, and frequent analysis of nearly any market from consumers' perspective without cognitive limitations. In an empirical application to the online retail banking market with over 600 firms, we use data on more than four million consumer searches to provide decision makers with valuable insights to capture more digital consumer attention.

3 - Hypermedia Search and Consumption

Ron Shachar, Professor, Arison School of Business at IDC, P. O. Box 167, Herzliya, 46150, Israel, ronshachar@idc.ac.il, Jason M.T. Roos, Carl F Mela

Does an Internet news site that excerpts and links to its competition steal their traffic? Or does excerpting increase the linked sites' audience? We develop a structural model to address this question. We show theoretically that the excerpted sites may either benefit (because consumers learn the linked content is suited to their preferences) or be harmed (because excerpting makes the linking site so attractive it steals traffic from the sites it links to). Using data from celebrity news sites, we measure the impact of excerpting on consumers' browsing choices, and find the former effect is dominant–that links are beneficial to both the linking and linked sites, as well as consumers.

■ TB16

5J, 5th Floor

Emerging Online Technologies

Contributed Session

Chair: D Sudharshan, University of Kentucky, 119B Mandrell Hall, Busniess and Economics, Lexington, KY, 40506, United States, sudharshan@uky.edu

1 - Competitiveness of Social Interactions as a Marketing Variable in Social Gaming

Huazhong Zhao, University of Florida, Stuzin Hall 249A, Gainesville, FL, 32611-7155, 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, Busniess and Economics, Lexington, KY, 40506, United States, sudharshan@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 IOEs; (3) Structuration theory 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 Bonfrer, 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 (Simester and Anderson 2004, Datta, Foubert 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 (Schmittlein 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 - 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-82334319, 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.

3 - 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.

■ TC02

3A, 3rd Floor

Channel III

Contributed Session

Chair: Brenda Sternquist, Michigan State University, 10260 Red Bud Drive, Haslett, MI, 48840, United States, sternqui@msu.edu

1 - That's the Way Brand Love Grows: Role of Customer Engagement Across Markets

Albert Valenti, PhD Student, Boston University, 595 Commonwealth Ave., Boston, MA, 02215, United States, albertv@bu.edu, Shuba Srinivasan, Koen Pauwels, Gokhan Yildirim

For the past several years, assessing the impact of customer engagement with the brand has been a key topic of interest for marketing practitioners and academics alike. New customer data sources enable companies to predict the impact of customer engagement on brand performance and to quantify the effects of their marketing actions. While many recent academic papers have focused on customer relationship management, little work so far has taken an integrative perspective vis-à-vis the effectiveness of the marketing mix and customer engagement with the brand. In this research, we aim to provide concrete directions on how the effectiveness of online and offline marketing actions can be improved by examining customer engagement with the brand. This research enables us to (1) quantify customer engagement through metrics of customer relationship management such as recency, frequency, monetary value, and clumpiness (RFMC), (2) offer insights into the effects of online and offline marketing activities on consumers at various stages of customer engagement across different countries, and (3) quantify the extent to which sales can be explained by time variation, engagement, and nationality. To address these objectives, we will employ a combination of hierarchical linear models and cross-effects models, and customer segmentation according to RFMC and customer demographics. The data, provided through Wharton Customer Analytics Initiative, includes four years of retail transactions and customer information across 6 European countries. For 85,000 randomly selected customers and prospects we were grateful to obtain marketing actions addressed at individual level.

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 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 fast 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 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

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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 Vilcassim 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 retail 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. This model includes retailer characteristics, relationship variables, supplier characteristics and power asymmetry. Everdingen, Yvonne, Laurens Sloot, Erjen van Nierop and Peter Verhoef. (2011) Towards a further understanding of the antecedents of retailer new product adoption, Journal of Retailing. 87 (4), 579-597. Kadiyali, Vrinda, Pradeep Chintagunta, and Naufel Vilcassim (2000), "Manufacturer-retailer channel interactions and implications for channel power: An empirical investigation of pricing in a local market," Marketing Science, 19 (2), 127-48. USDA (2014) http://www.ers.usda.gov/topics/food-markets-prices/processing-marketing/new-products.aspx retrieved February 11, 2016

■ TC03

3H, 3rd Floor

Retailing III

Contributed Session

Chair: Woochoel Shin, University of Florida, Department of Marketing, 212 BRY, P.O. Box 117155, 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 Lamey, Frank Verboven

Whereas national brands (NBs) are available in all retailers' assortment, 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 battle ground for retailers. This study examines the role of PL tiers (i.e. 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 - Complementary Relationship Between Private Brands and National Brands

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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 quantile 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 also benefit 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 Captaincy

Woochoel Shin, Assistant Professor, University of Florida, Department of Marketing, 267 Stuzin, Po Box 117155, Gainesville, FL, 32611, United States, wshin@ufl.edu, Wilfred Amaldoss

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 participants: consumers, 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.

■ TC04

3D, 3rd Floor

Marketing Strategy III

Contributed Session

Chair: Feray Adiguzel, Erasmus University, Burgemeester Oudlaan 50, Rotterdam, 3000DR, Netherlands, adiguzel@ese.eur.nl

1 - Have Females More Effective Capabilities in Service Marketing?

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Utilizing the methods of investigation and data analysis,this paper focuses on gender superiority of marketing capabilities of the marketing personnel in the service industry. After reviewing the literatures, interviewing the paradigm and investigating, the hypotheses factors and the model of gender superiority of marketing capabilities are gotten. Furthermore, the data collection and factor analysis are developed with the evaluation for marketing personnel from administrative staffs in hotels and travel agencies as well as the theoretical hypotheses of marketing capabilities test by T-test, Binomial test, and ANOVA test. Findings from this study include the superior factors of Female Marketing Capabilities (FMC), Male Marketing Capabilities (MMC), and no gender difference marketing capabilities. Conclusion and contribution imply that the female employees in the service industry have gender superiority and more effective capabilities.

2 - Who to Call? Predictive Modeling of Potential Customers Based on Customer Behavior Data

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To operate a telemarketing campaign in a classified advertisements website Baixing.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 Adigüzel, Assistant Professor of Marketing, LUISS Guido Carli University, Viale Romania, 32, Roma, 00197, Italy, fadiguzel@luiss.it

Split questionnaire is 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 disacquiescence 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.

■ 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

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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 be also 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. Key Words: Choice Overload, satisficing, maximising

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 overtime. 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.

■ TC06

3G, 3rd Floor

Choice Models III

Contributed Session

Chair: Harmen Oppewal, Monash University, Department of Marketing, Po Box 197 Caulfield Campus, Caulfield East, VIC 3145, Australia, harmen.oppewal@monash.edu

1 - Impact of Media Investments on New Car Sales in a Competitive Context: A Market-shares Approach

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Media investments in the automobile market represent a very large amount of money allocated to different channels: TV, radio, press, outdoor, digital and cinema. A car manufacturer may want to analyze the impact of media investments on its sales in order to optimize the amount spent and the allocation across channels. This cannot be done without tacking into account competition which is prominent in this market and plays a fundamental role in advertising efficiency. Thus, it is the relative information which is of interest, and modeling the sales in market-shares and/or the media investments in shares-of-voice is more relevant. This contribution aims to present and compare statistical modeling methods adapted for shares or proportions, which are characterized by the following constraints: positivity and sum equal to 1. Two major approaches address this question. The first one is the market-share models from the econometric literature and quantitative marketing. The second one is the compositional data analysis from the statistical literature and initially applied to geology. The common point of these two methods is to use log-ratio transformations in order to model shares taking into account their constraints. The differences are mostly coming from the assumptions made on the data distribution or on the error terms of the models.

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 artefacts.

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

Harmen Oppewal, Professor, Monash Business School, 26 Sir John Monash Drive, Po Box 197 Caulfield Campus, Caulfield East, VIC 3145, Australia, harmen.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 to 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.

■ TC07

3B, 3rd Floor

Gary Lilien Practice Prize Competition Presentations

Invited Session

Chair: Gary L. Lilien, Pennsylvania State University, 468 Business Bldg, Univeristy Park, PA, 16802, United States, GLilien@psu.edu

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

■ TC08

5A, 5th Floor

Pricing III

Contributed Session

Chair: Amiya K Basu, Syracuse University, Whitman School of Mgmt, 721 University Avenue, Syracuse, NY, 13244-2450, United States, abasu@syr.edu

1 - Consumers' Perception of Price Inflation

Eric M. Lennartz, Doctoral Student, University of Cologne, Albertus-Magnus-Platz, Cologne, 50923, Germany, eric.lennartz@wiso.uni-koeln.de, Marc Fischer

While statistical offices involve huge efforts to measure price inflation, consumers' perception of inflation strongly deviates from these figures. This perceived inflation has a strong impact on research and real-world decisions. It may shape price fairness evaluations, price sensitivity, and cause shifts in consumption. Marketing research lacks a valid measurement and conceptualization of perceived inflation. In this project, we develop and validate a psychological rating scale to measure perceived inflation. We apply our scale to 13 product categories and 53 corresponding subcategories. Since inflation ratings and official inflation rates are not measured at the same unit level, we suggest a function that maps rating scale values onto percentage values. In addition, we measure the drivers of inflation perceptions. For example, customers may believe that certain products cover a larger share of their wallet than they actually do. Customers may also perceive price changes of specific products differently. We find that perceived inflation largely deviates from official figures. On average, consumers overestimate inflation by 21.42 percentage points for Transportation Services but underestimate inflation by 5.47 percentage points for Newspapers, Books, and Stationery. Perceived consumption shares and product price trends differ from actual shares and trends, which helps explaining the deviation in perceived and actual inflation rates. These deviations strongly vary with consumer and product characteristics. For example, for products with high price promotion frequency, we find that consumers' perception of price trend is closer to the actual price trend and consumers tend to perceive a higher consumption share.

2 - Online Cash Back Strategic Discounting to Limit Search

Ye Qiu, University of Texas-Dallas, 800 West Campbell Road, SM32, Richardson, TX, 75080, United States, yxq110430@utdallas.edu, Ram C Rao

It is increasingly common for a website, often referred to as a cash back site, to inform and enable consumers to avail of discounts at competing retail stores. Thus, consumers who visit a cash back site are able to take advantage of discounts at retail stores that are not available unless they enter the retailer through the cash back site. In other words, cash back sites provide discounts to consumers and act as referral intermediaries for retailers. What is the strategic role of such an intermediary? To answer this, we model competition between two retailers both of whom use the case back site. Retailers compete for consumers some of whom are loyal, others switchers and some are searchers. We then analyze the equilibrium pricing strategies with and without a cash back site. When there is no cash back site equilibrium can be one of two kinds. In the first, searchers act as loyal consumers given firms' equilibrium pricing strategies. We establish this by extending Stahl (1989). In the second equilibrium searchers act as loyal consumers when faced with low prices and switchers when faced with high prices. We establish this result by extending Narasimhan (1988). Depending on the relative proportion of types of consumers, their willingness to pay and the search cost of searching consumers firms may find one or the other equilibrium profitable. When there is a cash back site the equilibrium is such that searching consumers behave like loyal consumers and the retailers' profits are higher than without a cash back site. This result occurs whenever 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.

3 - Multiunit Ascending Auctions vs. Posted Price: The Case with Common Values

Guofang Huang, Carnegie Mellon University, 5000 Forbes Ave, Carnegie Mellon University-Tepper School of B, Pittsburgh, PA, 15213, United States, gfhuang@andrew.cmu.edu

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.

4 - Retail Competition on Salop Circle under Linear Demand

Amiya K Basu, Professor of Marketing, Syracuse University, Whitman School of Mgmt, 721 University Avenue, Syracuse, NY, 13244-2450, United States, abasu@syr.edu, Charles A Ingene, Atasi Basu

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 entrance 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.

■ TC09

5B, 5th Floor

New Product III

Contributed Session

Chair: Hirokazu Takada, City University of New York, 73 Abbey Close, Scarsdale, NY, 10583, United States, hirokazu.takada@baruch.cuny.edu

1 - The Informational Role of Software Variety in Hardware Diffusion Process

Li Sun, Assistant Professor, Zayed University, Dubai, United Arab Emirates, Li.Sun@zu.ac.ae

Although the video game market has long been used as a canonical example of system markets driven by the indirect network effects, a few recent studies have questioned the significance of such effects. In attempt to solve this conundrum and identify nuances of the indirect network effects, we examine the overall indirect network effects as well as multiple facets of software variety effects on the hardware diffusion. Specifically, we incorporate software characteristics such as the diversity of software across various genres, number of superstar titles and online games in a Generalized Bass Model framework, and offer explanations of their respective effects from the information theory perspective. In the context of the U.S. home video game market, we find strong evidence that hardware sales are most responsive to the available superstar titles rather than the overall software supply. The diversity of software as well as the introduction of online games are more likely to help reaching out to a more heterogeneous population in terms of their game preferences. Therefore, the console makers have created an ecosystem that can cater to different consumers with a wide variety of complementary software. With weak and sometimes even insignificant indirect network effects, it is critical for marketing researchers and practitioners to understand the roles complementary software really play to ensure effectiveness of the software variety strategy.

2 - How a Mismatched Ad Drives Early Adoption of Co-Created Innovations

Helen SI Wang, The University of Hong Kong, Hong Kong, Hong Kong, helensw@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 dampens customer-inventors' enthusiasm to participate—the very core that fuel the success and sustainability of the co-creation model. In innovation research, beyond our understanding of macro-level determinants for aggregated takeoff or a "user-designed" labeling strategy that promotes 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 the advocacy of the innovation benefits (non-narratives) and stories of customer invention (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 legitimation of the product market from the institutional view. To this end, first, we propose a theoretical framework to analyze the transition of the market from the "formulation stage" to the "stabilized stage" by applying existing sociocognitive and neoinstitutional theories. Second, to apply the hypothetical model of market transition, we propose a method to measure the legitimacy, which changes along with market expansion, from published newspaper articles and Internet search indexes. In general, as it is difficult to observe the transition of the market from behavioral outcomes such as sales amounts and diffusion 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 legitimation on the diffusion rate and profitability.As a result, we find that market size and profitably increase at the "formulation 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

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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.

■ TC10

5C, 5th Floor

Decision Making III

Contributed Session

Chair: Amit M. Joshi, University of Central Florida, Dept of Marketing College of Bus. Admin, P.O. Box 161400, Orlando, FL, 32816-1400, United States, amit.joshi@ucf.edu

1 - Understanding Managers' Tradeoffs between Exploration and Exploitation

Alina Ferecatu, Assistant Professor of Marketing, Rotterdam School of Management, Erasmus University, Burgemeester Oudlaan 50, T10-18, Rotterdam, 3062 PA, Netherlands, ferecatu@rsm.nl, Arnaud De Bruyn

This paper investigates managers' tradeoffs between exploration and exploitation, and how their strategies relate to their personality traits. We conduct a lab experiment involving subjects playing a 70-round, three-armed bandit game. Subjects attempt to maximize overall payoffs by optimally balancing exploration and exploitation. Our results show that 75% of decision makers either under-explore, focusing too quickly on a possibly suboptimal alternative, or over-explore, wasting precious time and resources. We model their actual exploration and exploitation behavior, relate their behavioral tendencies, such as decision biases and tendencies to over- or under-explore, to psychographics, and compare them to the optimal strategy. Results show that maximizing-oriented managers, as they search for the best alternative strategy, tend to adopt an exploitative strategy only after extensive exploration. Satisficing-oriented managers, in their search for the good-enough option given their acceptability level, run the risk of focusing too quickly on a possibly suboptimal alternative. Managers exhibit decision biases such as loss aversion (tendency of low payoffs to exert an inordinate importance in their belief formation), recency bias (tendency to give undue importance to the most recent payoffs), and exploitation bias (tendency to stop updating their beliefs once they enter exploitation stage), which can be partly linked to and predicted by psychographics. Our findings pave the way to introducing a set of guidelines intended to assist managers to optimally balance exploration and exploitation processes. As a first step, we build an exploration-exploitation index and a website where managers can test their behavioral tendencies.

2 - Genetics and Marketing: Myths, Unknowns, Established Facts, and Future Possibilities

Graciela Carrasco, ESSEC Business School, Cergy, France, graciela.carrasco@essec.edu, Arnaud De Bruyn

In spite of great changes in how managers "do" marketing, anticipating what consumers will buy continues to be at the center of marketing science. In this paper we argue that while it now seems highly unlikely for any single genetic factor to predict economic behaviors of interest to marketing scientists, it will most likely be feasible, in the foreseeable future, to use genetic data as part of a broader strategy for the prediction of consumer purchase behavior. The strategy would involve applying a weak signal approach to genetic and observational data in tandem, a significant departure from current marketing practices. The possibility raises a whole host of legal, policy, and ethical issues.

Here we offer a critical review of the literature in behavioral genetics with relevance to marketing. We provide some background on genetics and genomics for those who are new to this area. We highlight some of the myths surrounding genetics and marketing, and clarify what is actually known about the genetics of consumer behavior, since there seems to be considerable confusion amongst scholars. We describe how genetic and observational data could be used in the prediction of consumer purchase behavior, following a weak signals approach. Finally, given the state of the science, we consider legal and policy implications. It is our view that policy makers, consumer advocates and concerned researchers should be aware of the possibilities, and push for preemptive legislation to protect future consumers.

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 Aier

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 above. We test 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.

■ TC11

5D, 5th Floor

Working Paper V

Contributed Session with Extended Paper

Chair: Hongyan Shi, Nanyang Technological University, 50 Nanyang Ave., Blk S3-B1a-32, Nanyang Business School, Singapore, 639798, Singapore, hyshi@ntu.edu.sg

1 - Customer Migration From Online Retail Platforms

Qin Zhang, Assistant Professor, Pacific Lutheran University, 10th Ave S., Tacoma, WA, 98447, United States, zhangqc@plu.edu, Tat Y Chan, Fan Zhang

Online retail platforms have become a popular channel choice for many sellers. In this study, we examine a channel structure where a company sells the same products through a platform and its own website. We focus on the long-term benefit of using the platform channel in terms of helping migrate customers from the platform to the company's website. For this purpose, we use individual panel data to estimate a simultaneous model of customers' channel choice and expenditure decisions, in which customers' consideration sets are determined by their awareness of the company's website. We find that the company has been greatly benefited from the partnership with the platform, not only because it can acquire new customers from the platform, but also because it can convert those customers to buy from its website in the future. We use counterfactuals to show how the company can manipulate product assortments to improve its long-term profits and create a "win-win" situation for both parties. We also demonstrate how the value of the partnership with the platform varies across different types of sellers.

2 - Inter-competitor Patent Licensing and Product Innovation

Hongyan Shi, Assistant Professor, Nanyang Technological University, 50 Nanyang Ave., Blk S3-B1a-32, Nanyang Business School, Singapore, 639798, Singapore, hyshi@ntu.edu.sg, Baojun Jiang

This paper studies how patent licensing between an incumbent and an entrant affects market competition and the entrant's product quality decision. We examine a market where the incumbent owns some software patent or other intellectual property (IP) for the making of the final product, and the entrant has developed new technologies that allow it to introduce new features to offer an improved, higher-quality product, but it needs to either license the baseline software from the incumbent or incur an R&D cost to develop its own software or IP. We find that a royalty licensing contract between the incumbent and the entrant has a competition-alleviation effect and that its effect on the entrant's optimal quality may depend on whether the entrant's innovation is drastic or incremental. The royalty contract tends to foster the entrant's innovation when the innovation is drastic, and hinder the entrant's innovation when the innovation is incremental. A wide range of royalty contracts are mutually acceptable, even if the entrant may pay a total royalty fee higher than its alternative R&D cost. This suggests that the intuitively sound decision-making criterion of rejecting a contract or proposal when the firm's alternative cost is lower may not be optimal

■ TC12

5J, 5th Floor

Working Paper XXIV

Contributed Session

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

2 - Stock Market Reactions to New Product Preannouncement Timing and Frequency Strategies

Qingsheng Wu, Shanghai Jiao Tong University, Shanghai, China;. Contact: qswu@sjtu.edu.cn, Linda Shi

Questions of when a firm should first preannounce new products and how frequently it should update its product messages are critical to market performance. Drawing on signaling theory, this article investigates the relationships of first preannouncement timing, the frequency of updated preannouncements, and total abnormal returns to a new product. An empirical test of 4,072 preannouncements, pertaining to 659 new products from 217 Chinese firms, reveals that both timing and update frequency have inverted U-shaped effects on total abnormal returns. New product innovativeness and top management team equity further strengthen the effect of timing, whereas interfirm collaboration weakens its influence on total abnormal returns. The effect of updating frequency on total abnormal returns is positively moderated by top management team equity. This study is the first large-scale, cross-industry, empirical investigation of both timing and frequency strategies for new product preannouncements, and it provides several novel theoretical and managerial implications.

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5E, 5th Floor

Working Paper VI

Contributed Session with Extended Paper

Chair: Chu Wujin, Seoul National University, 1 Gwanak-ro, Gwank-gu, Seoul, 08826, Korea, Republic of, wchu@snu.ac.kr

1 - Evaluation of Brands after Consecutive Brand Successes and Failures: An Attribution-Factored Bayesian Learning Model

Chu Wujin, Professor, Seoul National University, 1 Gwanak-ro, Gwank-gu, Seoul, 08826, Korea, Republic of, wchu@snu.ac.kr

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 unstable 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.

■ TC13

5B, 5th Floor

Marketing & Innovation

Content- Innovation: General

General Session

Chair: Nuno Camacho, Erasmus University-Rotterdam, Burgmeester Oudlaan, 50, H15-03, Rotterdam, 3062 PA, Netherlands, camacho@ese.eur.nl

1 - Defeating the Going-Public Effect: When Firms Learn to Defy Stock Market Pressures

Christine Moorman, Duke University, moorman@duke.edu, Simone Wies

Previous research shows that after going public, disclosure requirements and short-term incentives lead firms, on average, to reduce their breakthrough innovation activities. However, not all firms succumb to this going-public effect. What distinguishes these firms? By analyzing the innovation patterns of 207 firms in the CPG sector that go public between 1980 and 2011, we observe a group of firms that defy stock market pressures and exceed predicted levels of breakthrough innovation. We predict and find that firms in this group are more likely to have a history of breakthrough innovation at the time of the IPO and that this experience improves future breakthrough innovation more when firms have exposure to a diverse array of markets, geographies, industry partners, and a new CEO. Our findings challenge the view that the stock market, per se, causes firms to behave in a short-term manner and instead offers a positive view of how firms can learn to defeat the going-public effect.

2 - Big Data, Text Mining, and Consumer-based Service Innovation Management

Joseph Johnson, Associate Professor, University of Miami, Coral Gables, FL, United States, jjohnson@miami.edu, Deb Mitra, Brent Kitchens

We define innovation as an intervention leading to improvement in an offering's performance while producing, experiencing, and evaluating the offering. Thus, innovation needs to be conceptualized and operationalized from the consumers' perspective. The development of many marketing theories has relied on constructs such as consumers' perceived service quality, consumers' satisfaction, firms' market orientation, etc. These constructs when tracked can provide early indicators of successful innovation. Yet, most research identify innovations ex-post based on sales. This post-hoc identification makes the concept of innovation tautological and prone to hindsight and survivor biases. Simply put, innovations that do not succeed are not considered as innovation, by definition. We believe this weakness in identifying innovation can be mitigated if we are able to exploit rich information sources in today's online environment. For example, consumers share their experiences in social media, firms communicate to investors and analysts through reports and press releases, and both firms and consumers interact using online tools. All these sources contain information on leading indicators of successful innovations. Manually extracting this information (e.g., using human coders) from such diverse text is impossible. Fortunately, developments in information retrieval, machine learning, and data mining have provided alternative means of extracting information from unstructured textual data. Using textual data spanning online consumer interactions, firm-generated content and digital media, we extract information on service innovations' quality dimensions. Applying a combination of lexical and machine learning techniques we show how innovations can be identified and monitored ex-ante based on the dynamics of quality dimensions.

3 - Does Offering No Incentives Work? Incentives, Participation, and Design Qualityin Crowdsourcing Contests

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

Consumers are increasingly engaged in idea generation 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 out 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 context 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

Stefan Stremersch, Erasmus School of Economics, Rotterdam, Netherlands, stremersch@ese.eur.nl, Elio 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 employee 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.

■ TC14

5H, 5th Floor

UGC-Consumer Response

Contributed Session

Chair: Ya You, 1017 River Haven Circle Apt. O, Charleston, SC, 29412, United States, hopesoya@yahoo.com

1 - The Effects of Summary Statistics Provision on Consumer Processing of Multiple Product Reviews

Shun Yin Lam, Associate Professor, Nanyang Technological University, S3-B1C-95 Nanyang Business School, Singapore, 639798, Singapore, asylam@ntu.edu.sg, Chong Guan

Online product review forums often provide consumers with averages of product ratings given by reviewers. In contrast, frequency distribution of product ratings is not commonly shown. The authors argue that provision of average rating, i.e., showing the average statistic, affects consumer review processing through the confirmation or disconfirmation of the consumer's expectancies about the product in question. The consumer is motivated to collect information from a review forum when she has positive expectancies about the product. If the average rating of the product is positive (negative), it is consistent (inconsistent) with her positive expectancies. Consequently, she lowers (raises) her vigilance in scrutinizing information, and hence reads fewer (more) reviews. Therefore, average rating provision affects the number of reviews read by the consumer. However, provision of rating distribution attenuates this effect because it alerts her to the presence of ratings different from the average. An eye-tracking experiment demonstrates these effects. It also shows that as a result of these effects, average rating provision makes consumer attitude towards the focal product more extreme whereas rating distribution provision reduces this polarization. Overall, the findings show that provision of summary statistics affects consumer review processing and thereby consumer attitude. The findings also draw marketers' attention to circumstances that call for more effort on responding to reviews, and suggest that the number of positive/negative reviews read by consumers is a good predictor of consumer attitude.

2 - Impact of Type of Social Media and Type of Reviews on Consumer Perception of Online Reviews

Shun Yin Lam, Associate Professor, Nanyang Technological University, S3-B1C-95 Nanyang Business School, Singapore, 639798, Singapore, asylam@ntu.edu.sg, Chong Guan

Electronic word-of-mouth (e-WOM) undertaken by potential, actual, and former customers about a product via the Internet, may occur on different websites (e.g., branding/shopping sites, consumer review sites, corporate websites, social networking sites), in the form of online reviews. Such websites may or may not have commercial intent for the reviewed brand. Often, the reviews are presented in different formats (e.g., rich/lean media). In this study we propose a conceptual model and theorize about the possible impact of the type of social media (i.e., with commerce intent, with no commerce intent) and type of review (i.e., text, text with image, video) on the credibility, persuasiveness, helpfulness, involvement, information usefulness, trust, perceived risk and perceived ease of use of online reviews. Accessibility-diagnosticity of the reviews/type of media is a mediator. Product type (i.e., experience, credence) is a moderator. We propose that consumers are likely to prefer: a) websites with no commercial intent; b) reviews on rich media (compared to less rich media); c) video-based reviews on websites with no commerce intent, and text-based reviews on websites with commerce intent (i.e., interaction between type of social media and type of review). In terms of contribution, first, our model, based on Agency theory, Media Richness theory, Accessibility and Diagnosticity theory and WOM literature, provides a much-needed framework for examining consumer perceptions of online reviews across various types of social media. Second, we contribute to the need in the marketing literature to theorize about technology-based consumer decision-making. Third, our propositions will help marketers in devising promotion and CRM strategies across a variety of social media.

3 - Effects of Customers' Temporal Orientation and Experience Valence on the Emotionality of Online Reviews

Ya You, College of Charleston, 1134 Barbados Way, Charleston, SC, 29412, United States, youy@cofc.edu, Ze Wang, Michael Brady, Amit M Joshi, Huifang Mao

Due to the staggering impact of customer reviews on consumer decision-making, firms are now seeking to actively monitor and manage these reviews. This research attempts to shed light on this idea by integrating the temporal focus research from psychology with online word-of-mouth literature to theorize and test conceptual relationships among customers' temporal focus (i.e., the degree to which individuals devote their attention to the past, present, and future; Shipp, Edwards, and Lambert 2009), valence of service experience, and emotional content of customer reviews. Using a mixed methods technique (an econometric analysis of over 15,000 Yelp online reviews and two lab experiments), we test whether the emotional content of customer reviews is dependent on the interaction between temporal focus (past, present or future) and service experience (positive, neutral or negative). We find past-oriented or present-oriented customers write reviews with higher emotional content after a negative (vs. positive) consumption experience, whereas future-oriented customers write reviews with higher emotional content after a positive (vs. negative) consumption experience. This research makes several important contributions. First, this study is the first study to examine how temporal orientation influences individuals' psychological pressure level, which interacts with the experience valence, to predict the emotionality of online customer reviews. Second, it provides a strategic approach for firms to enhance the utility of favorable reviews and minimize the negative influence of unfavorable reviews. Finally, this research also deepens our understanding of how customer experience is expressed with emotionality in an online environment and its influence on consumer decision-making.

■ TC15

5I, 5th Floor

Paid Search Advertising

Contributed Session

Chair: Hyun Shin, Hanyang University, Room 612, School of Business, Wang-sim-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 incorporated 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

Hyun 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' 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.

■ TC16

5J, 5th Floor

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, Sonnemannstr. 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 9 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 allow for more 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 field by shedding light on 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

Edlira Shehu, University of Southern Denmark, Odense, DK-5230, Denmark, edsh@sam.sdu.dk, Dominik Papies, 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 to online retailers.We address this void 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 relationship between free shipping and returns, and measure this effect in the short and in the long run.We examine data from a leading online retailer that engages in free shipping promotional campaigns. Basing 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-scaled field study of the same company. Our results provide implications for companies engaging into 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, Nettelbosje 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 - Competing for Limited Attention on Social Media

Xinyu Cao, PhD candidate, MIT, 100 Main St E62-582, Cambridge, MA, 02142, United States, xinyucao@mit.edu, T. Tony Ke, John R Hauser, Juanjuan 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 and 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.

2 - 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.

■ TD02

3A, 3rd Floor

Channel IV

Contributed Session

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

1 - Building Trust in Marketing Channels

Yu Wang, Associate Professor of Marketing, California State University, Long Beach, Long Beach, CA, United States, yu.wang@csulb.edu, Özalp Özer, 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.

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, Lin Tian

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.

■ TD03

3H, 3rd Floor

Retailing IV

Contributed Session

Chair: Sri Devi Duvvuri, University of Washington, Bothell, 219 Beardslee, University of Washington, Bothell, WA, 98011, United States, sdduvvuri@uwb.edu

1 - Category Comparability: The Missing Link between Retailer's Assortment and Pricing Strategy

Jochen Reiner, Goethe University Frankfurt, Theodor-W.-Adorno-Platz 4, Frankfurt, 60323, Germany, jreiner@wiwi.uni-frankfurt.de, Jaime Romero, Martin Natter, Daniel Klapper

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 rivalling 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 distinctively 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 1000m 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.

■ TD04

3D, 3rd Floor

Marketing Strategy IV

Contributed Session

Chair: Shaojun Qin, University of Minnesota, 4-351 Carl School of Management, 321 - 19th Avenue South, Minneapolis, MN, 55454, United States, qinxx113@umn.edu

1 - Why Do Firms Change Competitive Reactions Over Time

Jimi Park, Korea University, Business School LG-POSCO 404, Anam-Dong, Seoul, 136-701, Korea, Republic of, jimipk@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 unfold 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 on 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 retaliations to accommodations, 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 value creation in key account 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 who themselves rely more on key suppliers. Moreover, greater value is created when suppliers match with customers in open networks (structural holes). With estimated results I run counterfactual analyses in which we assess the effect of demand shocks on the match assignment. 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.

■ TD05

3E, 3rd Floor

Consumer Behavior IV

Contributed Session

Chair: Peter T Popkowski Leszczyc, University of Alberta, 4-30 F Faculty of Business Blg, Edmonton, AB, T6G 2R6, Canada, ppopkows@ualberta.ca

1 - The Effect of Gift Giving on Product Purchase

Moon Young Kang, Assistant Professor of Marketing, Korea Advanced Institute of Science and Technology (KAIST), Seoul, Korea, Republic of, mkang@business.kaist.ac.kr, Reo Song

Gif giving is an intriguing and universal behavior. The ritual of gift giving occurs in all societies and many corporations even try to use gift giving as one of their promotion tools. However, the effect of gift giving marketing and donation on gift purchase is not well understood by either academics or practitioners in marketing. While previous studies in marketing have gift giving as their focus, most of their work performed by using qualitative methods (i.e., consumer culture theory) and none of them have considered gift giving from a quantitative and social network perspective by using big data. The focus of this research is on developing a better understanding of gift giving and purchasing in social network. Our research approach involves Heckman selection model. By using the estimated results, we provide accurate marketing ROI (return on investment) for managers to choose more effective promotional tools by considering 1) marketing for the consumer oneself vs. gift giving to friends, 2) gift giving generated by the firm vs. by consumers, and 3) the effect of gift giving vs. gift receiving on gift purchase in social network.

2 - Do I Donate More or Not? Influence of Calamities on Donation Behavior

Suman Ann Thomas, Assistant Professor, Indian School of Business, Office: 2126, AC2 Level 01, Gachibowli,, Hyderabad, 500 032, India, sumanann@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 & Simonshon 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 country of interest where 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 Blg, Edmonton, AB, T6G 2R6, Canada, ppopkows@ualberta.ca, Ernan E Haruvy

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, whereas 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.

■ TD06

3G, 3rd Floor

Choice Models IV

Contributed Session

Chair: Minki Kim, KAIST Business School, SUPEX Hall 304, 85 Hoegi-ro, Dongdaemun-gu, Seoul, 130-722, Korea, Republic of, minki.kim@kaist.ac.kr

1 - Using Simple Models to Gain Insights from Stated Choice Data

Paul Wang, University of Technology Sydney, Marketing Discipline Group, Po Box 123, Sydney, NSW 2007, Australia, paul.wang@uts.edu.au, Kyuseop Kwak

Stated choice models have become popular in marketing (Louviere et al. 2000; Street and Burgess 2007). To date, a number of sophisticated modelling approaches have been developed to account for consumer preference heterogeneity. Among them are mixed logit (Train 2009), hierarchical Bayes (Rossi et al. 2005), and latent class models (Kamakura and Russell 1989). However, such approaches have some shortcomings including special training such as programming skills & advanced statistical knowledge, strong assumptions, and lack of connection with observed consumer characteristics. In addition, research has shown that complex models often do not outperform simple models in forecast accuracy (Armstrong 2001). Therefore, the purpose of this study is to use simple models to get a feel for the data, draw managerial insights, and build a foundation for more sophisticated models. This is possible because stated choice data are often collected using a balanced and orthogonal main effects design (Street and Burgess 2007). It turns out that in such designs each respondent’s choice frequency counts contain all the statistical information needed for model estimation. This allows us not only to visualize actual choice behavior, but also to conduct a number of readily available exploratory analyses such as general linear model to estimate attribute main effects & interactions, cluster analysis to identify preference segments, and crosstabs to link with observed consumer characteristics. Using data from real world DCEs, we demonstrate the usefulness of such simple models in gaining insights not only for practicing managers, but for researchers interested in state-of-art modeling as well.

2 - Modeling Large-Scale Cross Effect in Co-Purchase Incidence: Comparing Artificial Neural Network Techniques and Multivariate Probit Modeling

Zhiguo Yang, Missouri State University, Glass Hall Room 359, 901 South National Ave, Springfield, MO, 65897, United States, zhiguoyang@missouristate.edu, D. Sudharshan

This paper, based on the author’s dissertation, extends research on models of cross category effects by (1) examining the performance of MVP model across category scale; (2) customizing artificial neural network (ANN) techniques for large-scale cross effect analysis; (3) examining the performance of ANN across scale; and (4) developing a conceptual model of spending habits as a source of cross effect heterogeneity. The results provide researchers and managers new knowledge about using the two techniques in large category scale settings The computational capabilities required by MVP models grow exponentially with scale and thus are more significantly limited by computational capabilities than are ANN models. In our experiments, for scales 4, 8, 16 and 32, using Nielsen data, MVP models could not be estimated using baskets with 16 and more categories. We attempted to and could calibrate ANN models, on the other hand, for both scales 16 and 32. Surprisingly, the predictive results of ANN models exhibit an inverted U relationship with scale. As an ancillary result we provide a method for determining the existence and extent of non-linear own and cross category effects on likelihood of purchase of a category using ANN models. Besides our empirical studies, we draw on the mental budgeting model and impulsive spending literature, to provide a conceptualization of consumer spending habits as a source of heterogeneity in cross effect context. Finally, after a discussion of conclusions and limitations, the dissertation concludes with a discussion of open questions for future research.

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-incidence, 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.

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, Dongdaemun-gu, Seoul, 130-722, Korea, Republic of, minki.kim@kaist.ac.kr, Junghyun Anna Park

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., Belk 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).

■ TD07

3B, 3rd Floor

Gary Lilien Practice Prize Competition Rehearsals

Invited Session

Chair: Gary L. Lilien, Pennsylvania State University, 468 Business Bldg, Univeristy Park, PA, 16802, United States, GLilien@psu.edu

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

■ TD08

5A, 5th Floor

Pricing IV

Contributed Session

Chair: Ashutosh Prasad, University of Texas- Dallas, 800 West Campbell Road, SM 32, Richardson, TX, 75080, United States, aprasad@utdallas.edu

1 - A Price Discrimination Model of Why Auto Manufacturers Subsidize Leases

Srabana Dasgupta, Assistant Professor, Simon Fraser University, 8888 University Drive, Vancouver, BC, V5A 1S6, Canada, srabanad@sfu.ca, Sivaramakrishnan Siddarth

We propose price discrimination as a new rationale for the existence of leasing in the automobile market place. Because lessees must pay a per mile penalty if they drive more than the mileage allowance listed in their contracts, leasing becomes the more expensive and, therefore, inferior option in the firm's product line. We argue that imposing a mileage penalty on lessees allows the manufacturer to effectively segment the market based on the annual number of miles that consumers drive and to charge a relatively higher price for the superior product, i.e., the purchased vehicle. We develop a structural model of contract choice and pricing to derive the demand for leasing and financing contracts for an automobile. We then derive the corresponding optimal prices for the leased and financed variants for a profit maximizing firm. We test the model using transaction data from the SUV segment of the US automobile market and show that the strategic price discrimination model explains the price differential between purchased and leased products much better than other baseline models.

2 - Measuring Heterogeneous Selectivity in Menu-Based Subscription Pricing

Longxiu Tian, Doctoral Student, Ross School of Business, 701 Tappan Ave., Ann Arbor, MI, 48109, United States, longxiu@umich.edu

In this study, we empirically investigate subscription pricing on first-time subscribers using field data collected from a randomized pricing experiment conducted through an online dating site. The format of subscription pricing on this site enables us to investigate of the impact of the pricings of price menus on subscription choice. In our field data, the price menu consists of 1-, 3-, and 6-month subscription options, along with corresponding prices. We can uniquely characterize a price menu by its (1) baseline reference price, or midpoint, and (2) the within-menu differences of the price scale, or steepness. We implement an orthogonalized, factorial design of price menu treatment conditions across these two characteristics in the field study. We propose a discrete choice modeling framework with heterogeneous selectivity correction to study the effect of price menus on consumer choice in the online subscription context. Our results show that, without correcting for heterogeneous selectivity across customers, managers equipped with naïve choice models will overestimate (underestimate) the price effect of short-term (long-term) contracts, leading to suboptimal pricing, and ultimately, lower profits.

3 - 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, IIM K Campus, IIM Road, Kunnamangalam, Kozhikode, 673570, India, atanu.adhikari@iimk.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 intention. 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 influence, 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.

4 - Selling Opaque Goods with Bundles

Ashutosh 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 profitability. We find that customer heterogeneity distribution, consumer risk profiles and marginal costs play important roles in establishing the profitability of the extended product line.

■ TD09

5B, 5th Floor

New Product IV

Contributed Session

Chair: Maciej Szymanowski, Rotterdam School of Management, Erasmus University, P.O.Box 1738, Rotterdam, 3000 DR, Netherlands, mszymanowski@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, mchaudhuri1@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 Putsis, 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. It is an improvement on the more commonly used diffusion models in the literature since the former facilitates forecasting NP diffusion path with limited set of observations, updates initial parameter estimates as additional information becomes available, and does not make unrealistic assumptions (Xie, Song, Sirbu and Wang, 1997). Second, we examine diffusion trajectories while considering the impact of various marketing tools (i.e., Detailing, Direct-to-Consumer Advertising, Samples, Journal publications) employed by the brand manufacturers along with firm's exposure to exogenous shocks due to patent expirations. Findings suggest EKF is a more accurate predictor of the diffusion process while accounting for exogenous shocks that impact the NP diffusion process.

2 - Nonlinear Conjoint Optimization

Xinfang Wang, Associate Professor, Georgia Southern University, P.O. Box 8036, 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 respondents 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 compares 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 and its linear 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 32, 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.

4 - How Social Contagion in New Product Diffusion Depends on Innovativeness of Consumers Involved?

Maciej Szymanowski, Associate Professor, Rotterdam School of Management, Erasmus University, P.O.Box 1738, Rotterdam, 3000 DR, Netherlands, mszymanowski@rsm.nl, Weiyi Deng, Xi Chen

Social contagion is a key factor in new product diffusion. Diffusion speed depends on whether early adopters serve as opinion leaders and trigger adoption by less innovative consumer segments. Extant research is however inconclusive on whether early adopters indeed tend to be opinion leaders. Some studies report correlation in self reported measures of innovativeness and social influence or attribute failures of new products to negative opinions of early adopters. However other studies propose that social influence weakens with increasing dissimilarity of consumers in terms of their innovativeness implying that early adopters influence other early adopters more than they influence other consumer segments. In this study we use large datas et on consumer new music band adoption to study how social contagion likelihood depends on the difference in consumers' innovativeness. Our data is sourced from an online music-oriented social network and includes data on social connections and new band adoption. We develop individual-level measures of innovativeness and build a logit model to infer social contagion from users' adoption behaviors and social network connections. We find significant social contagion between users in the sample. Contagion probability is moderated negatively by the difference in innovativeness levels of the individuals involved. We also find that, controlling for the difference in users' innovativeness, social contagion is more likely when the influence source is more innovative than influence target compared to when it is the target who is more innovative than the source. Implications for personalized marketing in new product diffusion are discussed.

■ TD10

5C, 5th Floor

Decision Making IV

Contributed Session

Chair: Rajdeep Grewal, University of North Carolina, 2000 Bailty Hill Drive, Chaepel Hill, NC, 27514, United States, guneet_kaur@kenan-flagler.unc.edu

1 - Necessity, is it The Mother of All Innovation? The Case of Hotel Managers' Decision to Manage Reputation or Renovate Their Properties

Amit 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 mimicry 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 systems researchers are interested in 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 consumers' 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. Our 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, Guneet 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 if 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 U.S. 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 salience of performance reporting while ensuring appropriate tackling of potential endogeneity concerns. 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.

■ TD11

5D, 5th Floor

Working Paper VII

Contributed Session

Chair: Chen Zhu, China Agricultural University, China Agricultural University, Beijing, 1, China, zhuchen@cau.edu.cn

1 - Exploring Facets of Experiential Value in Fashion Retailing

Geetika Varshneya, Research Scholar, Indian Institute of Management, Rohtak, Haryana, 124001, India, geetika.varshneya@gmail.com, Gopal Das

In recent times, firms are redefining their value delivery propositions to surpass their competitors. One such prominent endeavor is to provide 'value in experience' or 'experiential value' in terms of providing engaging, pleasurable, memorable and meaningful experiences to customers. Experiential value may be apprehended as a perceived, relativistic preference for product or service attributes arising via interaction within a purchase setting that expedites or hinders achievement of customers' purpose. The present study aims to explore the facets of experiential value. To capture a comprehensive view of experiential value, a scale will be developed by established scale development procedures comprising of item generation (qualitative study), item purification and validation. The qualitative study resulted in 38 items from an initial set of 72 items. The present paper is a part of working paper; therefore, the remaining two stages (i.e. purification and validation) would be undertaken in the coming months and the subsequent findings will be reported at the time of presentation. For item purification and scale validation, data will be collected from fashion retail shoppers of NCR region in India. The proposed scale may offer a validated and parsimonious instrument for accessing experiential value. The resultant instrument could serve as a framework for future empirical work. The valuable insights from study may aid fashion retailers to identify new value creation opportunities. No study so far has captured experiential value facets in fashion retailing, albeit its importance. Thus, this could be seen as a unique and useful contribution in the literature.

2 - Joint Promotion and Consumer Within-Category Purchase Behavior

Chen Zhu, Assistant Professor, China Agricultural University, Beijing, China, zhuchen@cau.edu.cn

Consumers are observed to regularly make multiple purchases of different products from the same category during a shopping trip. However, due to the lack of individual-level purchase data and computational difficulties, existing marketing and economic literature usually assume that only one product being purchased in a choice occasion, rarely touch upon the simultaneous purchasing behavior and ignore the underlying correlations among chosen items, which may not be appropriate in studying a differentiated product market such as cereals or carbonated soft drinks. In this paper, I employ a Multivariate Bayesian approach to examine such within-category purchasing behavior, and investigate factors that determine the fundamental dependencies among products. I use a scanner database of 32 national breakfast cereal brands over a 3-year period that contains 713,056 observations from the US, which is unique in the literature in terms of sample size and choice set dimension. 81% of households are found to buy two or more cereal products in a single store trip, and they tend to choose alternatives from the same manufacturer, either because of the firm-level loyalty or joint marketing strategies. Surprisingly, consumers do not tend to purchase cereals belong to different segments. Instead, they prefer to buy a combination of different children's cereals the most, followed by a combination of different adult/family cereals and a bundle of mix, implying strong segment preferences of cereal products. Besides manufacture effects and segment effects, joint promotions are found to be positively associated with consumers contemporaneous purchasing behavior, either in the form of manufacturers' coupons or retailers' temporary store sales. This suggests an alternative way to promote multiple items simultaneously and maximize manufacturers' or retailers' overall profits in a differentiated product market, which has been ignored in previous studies of promotion effects.

■ TD12

5E, 5th Floor

Working Paper VIII

Contributed Session

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

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, cyc@scu.edu.tw, Rong-An Shang, Chung-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. In addition, a stronger perception of uncertainty was found to suppress the positive relationship between gifting pleasure and the intention; however, the same effect was not found on the impact of gifting 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@e.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.

■ TD13

5F, 5th Floor

Networks

Invited

Invited Session

Chair: Sridhar Narayanan, Stanford University, Stanford University, Stanford, CA, 94305, United States, sridhar.narayanan@stanford.edu

1 - Effect of Recognition on Content Creation and Engagement: Experimental Results from a Social Network

Sridhar Narayanan, Stanford University, sridhar.narayanan@stanford.edu

Motivating content creation is an important challenge for managers of social platforms. However, identifying causal factors that affect content creation and creative effort is difficult in networked contexts due to the fact that featured content is typically not randomly selected, and due to the endogeneity of the network links. Additionally, the effort that the individuals put into creating creative output is unobserved, making it hard to detect the effect of featuring due to the low frequency with which creative output is posted on typical networks. The authors present results of a randomized controlled experiment that aims to measure the effect of being featured and recognized on a social network on subsequent network activity and content creation. The unique context of this experiment, including the linkage of social network accounts and those for the creative software tools, enables observation of both creative output and effort. The experiment shows that being featured on the network causes increased engagement, tie formation, posting of creative output, and usage of the underlying creative tools. These effects on engagement and creative output are shorter lived than the increased recognition from the network due to featuring, suggesting that while activity and cre- ative output on the network are elastic to featuring and peer recognition in the short term, they are relatively inelastic in the long term. These results add to a growing literature on social network behavior and could help social network managers design strategies to increase content on their platform. There are further implications for the rich relationship between companies designing products that enable content creation and the social networks that allow recognition of said content.

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 animes. 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 isolated cities in the U.S., 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, on average, removing one branch would lead to a reduction of 0.17 percentage points in its market share, which amounts to roughly $1.5 million in deposits.

■ TD14

5H, 5th Floor

UGC and Social Media

Contributed Session

Chair: Jinhong Xie, University of Florida, Warrington College of Bus. 209 Bryan Hall, Campus Box 117155, Gainesville, FL, 32611-7155, United States, jinhong.xie@cab.ufl.edu

1 - Disentangling the Determinants of Consumer Consideration Set Formation and Choice

Gang Wang, Assistant Professor, University of Delaware, 252 Purnell Hall, Newark, DE, 19716, United States, gangw@udel.edu, Bin Li

With the increasing popularity of social media such as, microblogs and online reviews, over 70% of consumers rely on social networks to guide purchase decisions (ODM, 2014). Prior research has struggled to determine whether social influence affects consideration, choice, or both. In this study, we focus on how consumers' consideration and choice decisions are influenced by two different types of information: normative information and persuasive information. We also examine how social network structure moderates the impact of the two types of information on consumer decisions. Utilizing a large panel data set collected from Douban, one of the largest social network sites in China, we find that two types of information have different impacts on consumers' consideration set formation versus final choice decisions. Our results also provide interesting managerial insights

2 - Social Communications and Live Content Broadcasts

Qiang (Steven) Lu, University of Sydney, Discipline of Marketing, School of Business - Econ Building H69, 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 communications) on 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 behaviour.

3 - The Interfering Role of Online Responding on the WOM Dynamics

Chunyu Li, Post Doctor, Lingnan University, 8 Castle Peak Road, SEK101, Hong Kong, Hong Kong, chunyuli@ln.hk, Dongri Liu, Ling Peng, Geng Cui

The implicitly underlying assumption that posted product ratings reflect the customers' authentic evaluations of consumption experience has been challenged recently. Ratings change systematically over both order and time, which is independent of the consumer's objective assessment of the product. Current research has identified that these ratings are susceptible to different sources of influence, such as the self-selection bias, the constitution of customer base, or consumers' motivation to conform or to differentiate. Due to the accessibility, reach and transparency of online WOM, increasing firms adopt online responding to take advantage of the externality of WOM and explicitly interfere with the generation of WOM. To understand how online responding interfere with the original dynamics of WOM, we collect the field data in hotel industry from two popular websites: Tripadvisor.com (with responding function) and Expedia.com (without responding function). Generally, whereas Expedia data replicates a negative trend of the average valence over time and sequence as identified by previous research, Tripadvisor shows a slow increasing trend in the average valence. We model survival analysis with time-covariates using Bayesian convergence to separate the interfering dynamics of online responding from those resulting from social dynamics identified by previous literature. We model how responding weaken or exaggerate the effect of social dynamics and show that responding to positive vs negative ratings exerts asymmetric impact on WOM dynamics.

4 - 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, Sungsik Park, Woochoel 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 underscores 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 downward bias in the rating. The findings have substantial implications for online sellers and ecommerce platform providers.

■ TD15

5I, 5th Floor

Search Advertising: Bidding

Contributed Session

Chair: Ming Cheng, Suffolk University, 73 Tremont St, Rm 7069, Woburn, MA, 01801, United States, mcheng2@suffolk.edu

1 - The Impact of Hard-and Soft-floors in Real-Time Advertising Display Auctions on Publisher's Profit

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In real-time advertising (RTA), publishers sell each ad impression separately and in real-time in sealed-bid second-price auctions. An innovative feature of these auctions are two kinds of floor prices: the hard-floor that acts as a minimum price below which an ad impression is not sold, and the soft-floor that turns the second-price auction into a first-price auction if the advertiser bids below the soft-floor. This paper is the first to analyze how intensively publishers use hard- and soft-floors as well as how they affect advertisers' bidding behavior and consequently publisher's profit. We use a conceptual analysis to show that the optimal hard-floor can increase publisher's profit, but a hard-floor that is set slightly too high can lower publisher's profit. In contrast, the soft-floor cannot harm publisher's profit, but it only increases publisher's profit when advertisers do not adjust their bids with regard to floor prices. In an extensive empirical analysis of 8.4 million auctions and a large field experiment that ran for two weeks and covered more than 630,000 auctions we show that advertisers hardly adapt their bids to floor prices, so that publishers can use floor prices to increase their profit substantially.

2 - Impression Effect Vs. Click-Through Effect – Mechanism Design of Online Advertising

Xiang Zou, Southeast University, Southeast University Road No.2, Nanjing, 211189, China, zxiangr@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 not-emphasized 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 strived 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 to 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, Boston, MA, 02108, 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 pontential targeted customers, companies devote substantial resources to their quest for a successful search engine campaigns - more specifically, keyword auction campaigns. From advertiser's standpoint, how to effectively allocate money (or budget) to individual keyword has become a criticle 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 bets 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.

■ TD16

5J, 5th Floor

Mobile Marketing

Contributed Session

Chair: Wei Shi, Santa Clara University, 500 El Camino Real, Lucas Hall 221C, Santa Clara, CA, 95053, United States, wshi@scu.edu

1 - Who Purchases Products More Frequently Via Mobile

Kay Ryung Koo, Korea University, 411 Main Business Building, 145 Anam-ro, Seoul, Korea, Republic of, kay.ryung.koo@gmail.com, Janghyuk Lee

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 (Buellingen 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 computer is 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 essential 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 Universit, Beijing, 100084, China, wubg.12@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 customer 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, Kirthi 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 (Crittercism 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.

Friday, 8:30am - 10:00am

■ FA01

3C, 3rd Floor

Brands 1

Contributed Session

Chair: John G Dawes, Ehrenberg-Bass Institute-UniSA, GPO Box 2471, Adelaide, 5001, Australia, John.Dawes@marketingscience.info

1 - The Spillover Effect of Catastrophic Product Failure: A Study of Prescription Drug Withdrawals

Qiyu (Jason) Zhang, Loyola University Maryland, 4501 N. Charles St., Baltimore, MD, 21210, United States, jzhang1@loyola.edu, Srinivas Reddy, Pradeep Chintagunta

Prior research has found that impact of product failure may spill over to other products that share connections with the failed product such as shared brand names in umbrella branding. Different from prior work, this study examines the spillover effect of product failure in the house-of-brands structure where brands in the failing company's portfolio do not usually share explicit connections to each other and to their parent company. This separation may hinder the transfer of negative information from one brand to another. An intriguing question arises: does the house-of-brands structure prevent the spillover effect of product failure? Using data from the pharmaceutical industry, we empirically examine the spillover effect of safety-related prescription drug withdrawals. This research setting is particularly interesting in that within the pharmaceutical industry, a) the house-of-brands structure is the norm of branding and b) product withdrawals (over 20 withdrawals since the 1980) are often catastrophic to both the firms (e.g., financial and public relations crisis) and their customers (e.g., consumer harm). From various sources, we compiled a historical dataset covering several prescription drug withdrawals. This dataset includes monthly sales of the surviving brands of the withdrawing company, the monthly marketing activities of these brands, and those of their competitors between 1996 and 2003. Preliminary analysis reveals that prescription drug withdrawals may negatively affect withdrawing companies' marketing effectiveness (i.e., how effectively marketing efforts would lead to sales) and in some cases the sales of other surviving brands. This finding is important as a) it adds to marketing literature by showing that the spillover effect can take place even when brands in the parent firm's portfolio are separate entities; b) it aids the executives in the pharmaceutical industry to better understand and quantify the impact of catastrophic product failures.

2 - When and Why the Brand Lover Won't Love the Brand

Jesheng Huang, Assistant Professor, Tamkang University, 151 Yingzhuan Road, Danshui Dist, New Taipei City, 25137, Taiwan, iamjesheng@gmail.com

This study aims to re-explore the customer-brand love relationship by switch path analysis research. Through comparing the dimension and process of brand love concepts, the purpose of this study is to examine what kinds of mindset, emotion and behavior of consumers with love brand will mostly facilitate themselves to engage in brand related relationships, and to explore when and why such kind of brand lovers will do the brand switching behavior. The author argues that (1) customer-brand love relationship is dynamic and changeable; (2) brand lovers won't always complain unless the unpleasant state or unexpected behaviors of their loving brands reach the level of brand detachment or exceed the threshold of tolerance; (3) there is usually no significant phenomenon or symptoms firm can find the brand lovers intending to switch in advance. For research design, the authors use in-depth interviews to collect experienced brand switching data through the process of brand detachment behaviors, employ content analysis to identify critical incidents, and combine the method of sequential critical incident analysis to interpret why the brand lovers decided switch to other brand and the technique of switching path analysis to construct their paths of brand switching processes. Based on the deduction drawn from sequential critical incident analysis and hermeneutic mode of interpretation, the finding enhances our understanding of even the brand lover might do brand switching behavior, and it provides a useful construct foundation for future studies.

3 - Brand Voiceprint

Yi Wang, Associate Professor, Central University of Finance and Economics, 39 South College Road, Haidian District, Beijing, 100081, China, wangyi@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, spokespeople, 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 segment of consumers? We conducted 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 most of the 20 categories. As well as finding 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 and retailers. The NM effect will be subject to further research to test the extent that it is an empirical generalization.

■ FA02

3A, 3rd Floor

Competitive Strategy I

Contributed Session

Chair: Yongfu He, Monash University, 49 Woodside Drive, Rowville, VIC, 3178, Australia, yongfu.he@buseco.monash.edu.au

1 - On the Use of Overt Anti-Counterfeiting Technologies

Yuetao Gao, National University of Singapore, Singapore, Singapore, yuetao.gao@nus.edu.sg

Many pharmaceutical companies use overt anti-counterfeiting technologies (OACTs), such as holograms, to fight counterfeiters. An OACT is typically implemented on the drug packaging, which makes it difficult for counterfeiters to produce convincing copies and easier for patients to tell the difference between authentic and counterfeit medicines. I show that there may be an inverted U-shaped relationship between the complexity of the OACT and the magnitude of counterfeit medicine purchases. The nature of this relationship is a consequence of an OACT engendering two opposing effects. On the one hand, adopting an OACT imposes a significant entry cost on counterfeiters, causing fewer counterfeiters to enter a dubious source; as a result, the drugs at this source have a greater chance of being genuine (a counterfeiters' entry-dampening effect). On the other hand, more patients head to this dubious source owing to the increased chance of obtaining a genuine drug (a patients' demand-enhancing effect). When the selected OACT is sufficiently complex to replicate, the former effect overrides the latter and thus the problem of counterfeit purchasing is relieved. However, when the OACT is not adequately sophisticated, the latter effect more than offsets the former. This leads to an anti-counterfeiting trap: the use of a rudimentary OACT may beget more counterfeit purchases. This result is consistent with the fact that despite enormous spending on the upgrading of OACTs in recent years, annual global sales of counterfeit drugs have actually risen. Additionally, I find that using an OACT results in higher prices for both counterfeit and authentic drugs. Furthermore, I demonstrate that, at the optimum, authentic firm may not use any OACTs if it does not change its original price, and may find it more profitable to employ a mediocre OACT if otherwise.

2 - Seller Competition and Fake Word-of-Mouth

Chun Qiu, Assistant Professor of Marketing, Wilfrid Laurier University, 75 Univ Ave. W, Waterloo, ON, N2C3C5, Canada, cqiu@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 incentive 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 a 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, Korea Uvi, Anam Dong, Seoul, 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 telecommunication 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 (e.g., Amazon Marketplace or Taobao Mall) often carry 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.

■ FA03

3H, 3rd Floor

Retailing V

Contributed Session

Chair: Jikyung Kim, IE University, Campus de Santa Cruz la Real, Cardenal Zúñiga, 12, Segovia, 40003, Spain, jeannekim52@gmail.com

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, Harmen Oppewal

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 levels signal 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 Fildes, Didier Soopramanien

Grocery retailers need accurate sales forecasts to improve their inventory management. In practice, they face intense competitions 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 intercept 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, Grÿneburgplatz 1, Frankfurt am Main, 60323, Germany, elkihal@wiwi.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.

■ FA04

3D, 3rd Floor

Marketing Strategy V

Contributed Session

Chair: Daniel Halbheer, HEC Paris, Department of Marketing, 1 Rue de la Libération, Jouy-en-Josas, 78351, France, halbheer@hec.fr

1 - An Approach to Identify The Relationship Among Technology, Specifications, and Attributes Via Three-Level Hierarchical Modeling

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

Consumers' decision making on brand-choice is supposed to be done based upon the evaluation of attributes, that is, well-known multi-attribute attitude model. The evaluation of attributes is processed based upon the ingredients or specifications, generally discussed as the quality. And the quality of ingredients and specifications are varied across manufacturers depending upon their technology level. Not only consumers but also marketing managers make their various decisions, such as brand-choice/ product development and comprehension of ads/ marketing communication strategy, based upon this relationship among technology, specifications, and attributes regarding. However, consumers do not always have enough experience or knowledge as to the technology, specifications, and attributes, so that they are prone to make subjective inference with regard to their decision making on brand-choice. In this research, we attempt to identify the relationship among technology, specifications, and attributes that is likely to be subjectively inferred by consumers, based upon the three-level hierarchical modeling. We applied the three-level model to the cosmetic products in Japanese market. We found that the traditionally known relationship among technology, specifications, and attributes is not identified but a subjectively inferred relationship among them, especially dominated by technology is identified. We also exhibit the application of the model to the analysis of brand-value structure where the relationship among attributes, functional consequence, and psychosocial consequence are examined.

2 - How CSR Conscious Consumers Affect Global Sourcing Decisions

Wenqing Zhang, University of Minnesota Duluth, 1318 Kirby Drive, Labovitz School of Business and Economics, Duluth, MN, 55812, United States, wqzhang@d.umn.edu, Chiang Chung-Yean

The social image of a company plays a more and more important role in developing or maintaining the competitive edge. In response to this call for social responsibility, companies should reconsider their sourcing decisions. This paper studies the pricing and sourcing choices in a two-echelon supply chain selling a procure-to-stock product to a price-sensitive and social welfare conscious market.

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, hcmaeng@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 arises 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 sellers' profit and the social welfare increase.

4 - The Protection Economy: Occasional Service Failure as a Business Model

Daniel Halbheer, HEC Paris, Jouy-en-Josas, France, halbheer@hec.fr, Eitan Gerstner, Oded Koenigsberg

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 optional 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.

■ FA05

3E, 3rd Floor

Consumer Behavior V

Contributed Session

Chair: Yiping Song, 670 Guoshun Road, Siyuan Building, Shanghai, 200433, China, ypsong@fudan.edu.cn

1 - The Role of Emotion in Service Evaluation and Recovery

Yi (Cathy) Chen, Assistant Professor, Bucknell University, Bucknell University, Lewisburg, PA, 17837, United States, cyc004@bucknell.edu, Peter De Meyer

Previous research has presented rich empirical evidence for the role of emotion in consumer decision making. We are particularly focused on how the strength of emotion experienced in a service context influence consumer's evaluation to the service provider, the perceived fairness during the service encounter and reactions towards various service recovery practices. Three studies are included in this research. The first survey demonstrated empirical support that the emotion extremity (as measured based on respondents' verbal protocol) moderated the impact of perceived distributive, procedural and interactional justice on the evaluations to the service provider and consumers' repatronage intention. In the second study, we conducted a lab experiment and directly examined the impact of service failures with high versus low emotion strength on consumers' reactions towards three types of service recovery (personal touch, functional benefits, versus standard response letter). The results showed that in the high emotion strength conditions, consumers showed a significantly higher preference for service recovery highlighting personal touch, consistent with the emphasis on interactional justice (vs. procedural or distributive justice) in these conditions. In the third study, we again used a lab experiment to control the amount of functional benefits involved in the service and compared the effect of a service practice highlighting staffs' emotional concern versus one highlighting the procedural effectiveness. The results in Study 2 were replicated and we found that the service highlighting staff's emotional concern was more preferred for the participants who were more emotionally involved. Implications on the service marketing literature were discussed.

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, Bjoern.huettel@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 two-sided: 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 dyadic 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, 2-15-45 Mita, Tokyo, 19122, Japan, ashimizu@fbc.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 mediums and decision-making 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-usage 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 cross different levels of store crowding density, as well as consumer gender and age segments.

■ FA06

3G, 3rd Floor

Structural Economic Models

Contributed Session

Chair: Masakazu Ishihara, New York University, Tisch Hall 818, 40 West 4th Street, New York, NY, 10012, United States, mishihar@stern.nyu.edu

1 - Empirical Analysis of Two-Sided Match in Chinese Mutual Fund Industry

Xi Chen, Assistant Professor of Marketing, Erasmus Unveristy, Burgemeester Oudlaan 50, Rotterdam, 3062PA, Netherlands, chen@rsm.nl, Sha Yang

Identification and estimation of agents' preferences in two-sided matching have always been challenging as same preference structure leads to different stable matching outcomes, and vice versa. Previous studies have identified the co-production function but not individual agents' preferences (Choo and Siow 2006; Fox 2010). In this paper, we estimate a many-to-one two-sided matching model where preferences of agents on both sides are separately identified. Such identification hinges on two assumptions: first, agents on one side have responsive preferences; and second, they also have identical preference. By applying the model to the many-to-one two-sided matching between mutual fund firms and banks in China and leveraging a particular structure of the data, we were able to separately identify heterogeneous preferences of both fund firms and banks. The separate identification enabled us to answer empirical questions such as which firm (or bank) characteristics are more valued by bank (or firm). In addition, through policy simulations, we were able to study the leverage effects of policy changes of one side (e.g. foreign holdings ratio of fund firms) on agents of the other side. Moreover, the model and Bayesian estimation method used in the paper can be applied to other two-sided matching settings, where utility transfers are not allowed or exogenous.

2 - Give Money, Grow Better: Dynamic Charitable Giving of Walmart

Jinghui Qian, Rotman School of Management, 105 St. George Street, # 573, Toronto, ON, M5S 3E6, Canada, jinghui.qian12@rotman.utoronto.ca

Each year, companies spend billions of dollars on charitable giving. Why are companies burning so much money on seemingly unprofitable events? Using a novel dataset containing detailed information of the charitable giving behavior of Walmart Foundation, we find strong support for the theory that firm's pro-social behaviors are largely driven by profit maximizing motivations. Specially, we find that (a) Walmart Foundation strategically uses charitable giving to facilitate Walmart's entry, and (b) charitable giving reduces the oppositions against Walmart. We further develop and estimate a model of Walmart Foundation's dynamic fund allocation, accounting for both altruistic and self-interest motivations. We demonstrate that if charitable giving were purely driven by altruistic motives, Walmart would have significantly cut its budget on charity giving.

3 - Random Coefficient Demand Estimation by Optimal Instrument-Based Continuously Updated GMM

Zsolt Sandor, Sapientia Hungarian University of Transylvania, Piata Libertatii 1, Miercurea Ciuc, Romania, zsosan@gmail.com

We propose a continuously updated GMM estimator based on optimal instruments for estimating random coefficient demand, where the matrix of optimal instruments varies with the parameters. Under the condition that the optimal instrument matrix has full rank, this estimator avoids problems of inconsistency of GMM estimators based on instruments constructed from observed characteristics. In Monte Carlo simulations we find that when only product characteristics are available for instruments, the presence of some collinearity in the optimal instrument matrix affects the performance of the estimator in terms of bias and variance, but it still outperforms GMM based on characteristics instruments. In the case when also cost shifter instruments are available, our estimator performs very well.

4 - When and How do Firms Benefit from Limited-Time Products?

Masakazu Ishihara, New York University, Tisch Hall 818, 40 West 4th Street, New York, NY, 10012, United States, mishihar@stern.nyu.edu, Makoto Mizuno

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 single-source data set from the Japanese beer market between 2013 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.

■ FA07

3B, 3rd Floor

Gary Lilien Practice Prize Competition Presentations

Invited Session

Chair: Gary L. Lilien, Pennsylvania State University, 468 Business Bldg, Univeristy Park, PA, 16802, United States, GLilien@psu.edu

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

1 - Building Optimized and Hyperlocal Product Assortments: A Nonparametric Choice Approach

Vivek Farias, MIT, Cambridge, MA, vivekf@mit.edu, Srikanth Jagabathula, Devavrat Shah

2 - Managing Advertising Campaigns for New Product Launches in the Automobile Industry: An Application at Mercedes-Benz

Marc Fischer, University of Cologne, Cologne, Germany. marc.fischer@wiso.uni-koeln.de

■ FA08

5A, 5th Floor

Pricing V

Contributed Session

Chair: Ayelet Israeli, Harvard Business School, Morgan Hall 177, Soldiers Field Road, Boston, MA, 02163, United States, aisraeli@hbs.edu

1 - Consumer Perceptions of Price Fairness: The Role of Cost Transparency

Huseyin S Karaca, Assistant Professor of Marketing, Bogazici University, Bebek, Istanbul, 34342, Turkey, huseyin.karaca@boun.edu.tr, Ozlem Hesapci, Necmettin Alican Mecit

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 from various fields. As a novel norm and a means to gain competitive advantage, transparency inspires trust in consumers. Although there are several dimensions through which a company can make itself transparent, cost is assumed to be one of the most market-sensitive cues to be transparent about. However, transparent practices, especially concerning cost, are almost non-existent in today's business-to-consumer markets, leading to a shortage of practices, definitions, and perspectives. In this research, we address this void by specifically examining 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.

2 - Consequences of Price Fairness Perceptions: A Meta-Analytic Study

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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 (PFP), which influence purchase behavior. Many studies have investigated the consequences of PFP, revealing high variation in findings. In order to explain this variation, we suggest that the effects of PFP 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. The data set provides a unique opportunity to examine the moderating role of the economic and cultural situation on PFP' 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 that PFP have a very 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 in the dependent variable. Furthermore, the economic situation moderates these effects significantly. For example with increasing GDP growth rate, the influence of PFP 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.

3 - Repairing the Damage: The Effect of Gender and Price Knowledge on Auto-Repair Price Quotes

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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 higher benchmark price. We find 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.

■ FA09

5B, 5th Floor

Product Management

Contributed Session

Chair: Axel G Stock, University of Central Florida, Dept. of Marketing CBA, P.O. Box 161400, Orlando, FL, 32816-1400, United States, Axel.Stock@ucf.edu

1 - Product Line Design under Network Externalities: On the Optimality of Freemium

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Despite its immense popularity, the freemium business model remains a complex strategy to master and often a topic of heated debate. Adopting a screening framework a la Mussa and Rosen (1978) while fully endogenizing prices, qualities and network effects, we ask when and why a firm should endogenously offer a zero price on its low-end product when users' product usage generates network externalities on each other. In the standard M&R model without network effects, freemium never emerges as optimal and the firm always chooses the efficient price point for its low-end product. We show that even with network effects, freemium is typically not optimal. Under symmetric network effects, the firm has greater incentive to expand its network size and may find it profitable to sell to the low-end customers, even at a loss. However, this does not lead to freemium in equilibrium. Instead, the firm should offer sufficient quality for its low-end product to attract the customers, while keeping its price positive. Freemium can only emerge if the firm can differentiate its high and low-end products such that they provide asymmetric network effects. In order for freemium to be viable, the firm should design its product line such that the paid users gain access to greater network effects. In contrast to conventional beliefs, a firm pursuing the freemium strategy might increase the baseline quality on its low-end product above the efficient level, which seemingly reduces differentiation. As extensions, we explore the implications of exogenous and quality-dependent network effects.

2 - Product Line Design with Revenue Sharing Scheme

Lu Hsiao, Associate Professor, National Chung Hsing University, 6f.-4, No 12, Lane 82, Taichung, 403, Taiwan, hsiaolu@dragon.nchu.edu.tw, Ying-Ju Chen, Hui Xiong, Nuo-Yin Nora Wang

Many manufacturers sell their products through the retailers, and share the revenue with these retailers. Before the selling period, the manufacturers always face a production decision, that is, producing a product line or a single product, since they serve consumers of heterogeneous valuations in the market. Facing this phenomenon, we build a stylized model in which a monopolistic manufacturer serves two segments of consumers through a retailer. These two segments are distinguished by their willingness to pay for quality. Then, the manufacturer and the retailer decide whether to adopt the revenue sharing contract and provide the product line, to optimize their payoffs. Our findings indicate that when the manufacturer's revenue sharing ratio of high-quality product is greater than that of low-quality product, the retailer is more willing to provide the product line for the consumers under 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 is closer to the efficient level in the revenue sharing scheme. On the contrary, the quality for the high-segment consumers may be lower or greater than the efficient level. Further, we compare the product line decisions with the traditional product line when a manufacturer sells through a retailer without the revenue sharing contract. We identify the regions in which they should adopt the revenue sharing contract or choose the traditional product line instead.

3 - Signaling Quality through Availability in the Context of a Repeat Purchase

Axel G Stock, Associate Professor, University of Central Florida, Dept 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 intuition is that although 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 loss 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.

4 - The Optimal Product Line Design of Conspicuous Goods

Nuo-Yin Nora Wang, National Chung Hsing University, Taichung, Taiwan, noywang_tw@yahoo.com.tw, Lu Hsiao, Ying-Ju Chen

The common wealth level gradually increases in accordance with economic development, shifting the consumers' focus and concern from intrinsic value to the social status a product can demonstrate. This conspicuous consumption is often applied in businesses to screen consumers, and this is why the product line design has been an important issue of concern for scholars. Yet, how the features of conspicuous consumption affect a firm's product line design has not been analyzed in the previous literature. In this project, a game-theoretic dynamic model is built to study the optimal product line of conspicuous goods, and we have the following major results. First, when consumer sensitivity to status utility is strong, the product price and quality become lower. Second, the consumer sensitivity to status utility has different impact on unit margin and profit of high-end and low-end products. Third, we also find that when consumer sensitivity to status utility is stronger, the difference of price and quality between high-end and low-end products is larger. Forth, in a non-integrated channel, consumer sensitivity to status utility helps to lower the double marginalization of low-end products, but it may not have the same effect on high-end products.

■ FA10

5C, 5th Floor

Probabilistic Selling

Contributed Session

Chair: Rachel Rong Chen, UC Davis, 3208 Gallagher Hall, University of California at Davis, 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 full 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 mutes 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. Such 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

5D, 5th Floor

Working Paper IX

Contributed Session

Chair: Nathan Yang, McGill Desautels, 1001 Sherbrooke Ave, Montreal, QC, H3A 1G5, Canada, nathan.yang3@mcgill.ca

1 - How to Become a Planner for a Customer's Shopping Cart

Hannaneh Rashidi Bajgan, PhD candidate, Luiss Guido Carli University, Via Fumiarga, 34, Colico Piano, Lecco, 23823, Italy, hannaneh.rashidi@gmail.com

In the past few years, retailers have become interested in using 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 ne gative effects have prevented adaption of smart shopping devices on a large scale. It requires considerable investments while there is not enough evidence of customers' 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 could 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@mcgill.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 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

5E, 5th Floor

Working Paper X

Contributed Session

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

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

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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 the 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?

Aleksandr Gritckevich, Columbia University, AGritckevich20@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 disutility for advertising. Content providers (publishers) invest in costly quality 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 Facebook complain of fake likes that they pay for, but do not get any value out of. 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 publisher 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 dispensed 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 Univerisity,
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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 sellers 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.

■ FA14

5H, 5th Floor

UGC Content and Impact

Contributed Session

Chair: Raoul Kubler, Ozyegin University, Nisantepe Mah Orman Sk No. 13, Istanbul, 34794, Turkey, raoul.kubler@ozyegin.edu.tr

1 - Behavioral Big Data – Understanding the Interplay between Ratings and Usage in Collaborative Content Communities

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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 uncaringly provide the data. Yet, occasionally customers will 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 elicit 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 20J, Jersey City, NJ, 07302, United States, kli@njcu.edu, Douglas Schutz

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, emoticons, 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

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Due to the digitalization of the retailscape, 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 customers behave 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 Colicev, 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 it's own advantages and disadvantages. Lexicon based approaches are perceived to be faster and less expansive. 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 expansive. 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.

■ FA15

5I, 5th Floor

Online Ad Effectiveness

Contributed Session

Chair: Lara Lobschat, University of Groningen, Nettelbosje 2, Groningen, 9747AE, Netherlands, l.lobschat@rug.nl

1 - The Predictive Ability of Ad Visibility for Clickthrough Rates

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Recent studies suggest that only half of all display ads appear on the screen of a user, e.g., because the user does not scroll down to the position of an ad. Consequently, advertisers urge publishers to improve the position of their ad slots (i.e., space on a website reserved for ads), such that ads served in those ad slots have a higher chance to be seen. The visibility of an ad slot is measured by the visibility rate, which is the ratio of ads measured as visible to ads served, while an ad is measured as visible if 50% of its size appears on-screen for one continuous second. However, this definition ignores other stimuli competing for users' attention that impact how receptive users are towards display advertising, which might lead to an overestimation of the ad effectiveness of ad slots with a high measured visibility rate. The aim of this study is to analyze the predictive ability of the measured visibility rate for the click-through rate. The analysis is based on a unique data set with over 600 million impressions. The results show that the measured visibility rate is a predictor for the click-through rate. But the predictive ability for the click-through rate of the measured visibility rate varies strongly with ad slot characteristics, as large ad slots have a lower chance to be measured visible, while showing higher click-through rates. Furthermore, despite lower measured visibility rates, below the fold ad slots on a content website (i.e., article) show click-through rates comparable to above the fold ad slots. This result indicates that even though above the fold ad slots might be more often in-view, they appear in a situation where the user is likely distracted by other stimuli.

2 - An Empirical Analysis of Application Usage and Advertising Response

Baohong Sun, Distinguished Chair Professor of Marketing, Cheung Kong Graduate School of Business, 601 Lexington Avenue, Suite 2640, New York, NY, 10069, United States, bhsun@ckgsb.edu.cn, Liye Ma

Although mobile applications account for 86% of consumers' time on mobile devices, and in-app advertising spending is eclipsing that of mobile web, little is known about either phenomenon. 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%.

3 - Top or Bottom Mobile Banner Ad? Examining The Effect of Screen Location on Mobile Banner Ad Performance on Smartphones Versus Phablets

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With the recent proliferation of smartphones, the mobile platform is becoming an increasingly important new media for marketing. However, some recent research shows that companies may not have a thorough understanding of how this new media works. For example, mobile app developers often discuss and debate whether to place a banner ad on the top or the bottom of a screen and their decisions are often made not based on ad performance reasons but based on convenience or aesthetics reasons. The current research examines which screen location (top vs. bottom) is more effective for mobile banner ads on regular smartphones (e.g., iPhone 6) and phablets (smartphones with screen size bigger than five inches, e.g., iPhone 6 Plus). We predict that mobile banners ads displayed on the top versus the bottom of a screen would perform better because individuals' dominant reading direction is from top to bottom. However, as individuals' visual field broadens on bigger screens due to larger eye movements, their attention expands and thus the differences between the effectiveness of top versus bottom banner ads may become smaller. Our results from a lab experiment show that the banner ad placed on the top of a regular smartphone's screen is more effective than the same ad placed on the bottom of the screen in terms of consumers' attitude toward the advertised product and the likelihood to include the product into their consideration set. On the contrary, for phablets, such differences become insignificant. Interestingly, although both the top and bottom banner ads on phablets enhance consumer attitude, the top banner ad on smartphones are most effective in consumers' consideration set formation. This may be due to the fact that individuals are more focused not only visually but also cognitively on smaller screens than on larger screens. These results are not affected by how much time an individual spent on the mobile website. The findings of this research contribute to the theory in digital advertising and the practice of mobile advertising and design.

4 - Keeping Online Ad Compelling – The Effects of Ad Creation and Ad-Carrying Website on Display Ad Effectiveness

Lara Lobschat, Assistant Professor, University of Groningen, Nettelbosje 2, Groningen, 9747AE, Netherlands, l.lobschat@rug.nl, Norris Ignatiius Bruce, Ram C Rao, Niels Holtrop

Although marketers nowadays have the possibility to target their online display ads more precisely to their potential customers in the online sphere-by using e.g., retargeting or programmatic buying-they are also observing an increasing level of reluctance to respond to online ads. Consequently, to reach consumers in today's media-filled world, marketers need to rethink their current approach. Jeffrey F. Rayport (2013) notes that "persuading through interruption and repetition is increasingly ineffective." Hence, the purpose of this research is to provide further insights into the drivers of advertising wear-out for online display ads. More specifically, we study the differential effects of ad repetition, ad message focus (i.e., hard-sell vs. brand building), and ad execution elements on online display ad effectiveness over time as well as along the customer purchase journey. Moreover, we analyze the impact of the ad-carrying website (i.e., social vs. non-social) on consumers' likelihood to click on display ad as well as engage in conversion-related behaviors. Additionally, we provide insights into the effect of ad exposure duration on consumers' likelihood to respond to a display ad. Using a large individual-level data set provided by the Wharton Customer Analytics Initiative, we model a consumer's likelihood to click on a display ad and/or exhibit conversion-related behaviors through a Hierarchical Bayes approach based on previous work by Braun and Moe (2013). Our initial findings provide evidence for differential effects of ad execution elements (e.g., animation, faces, call to action) for hard-sell vs. brand building display ads presented on social vs. non-social websites. Likewise, we discover differential effects of the number of ad exposures as well as the total exposure time on consumers' ad response behavior for these four conditions.

■ FA16

5J, 5th Floor

Social Influence I

Contributed Session

Chair: Jeongwen Chiang, China Europe International Business School, 699 Hongfeng Road, Shanghai, 201206, China, jwchiang@ceibs.edu

1 - Visual and Network Drivers of User Engagement with Visual User-Generated Content

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

Brands have begun to utilize visual social media like Instagram to advertise their products. When a user of Instagram posts a new photo, her followers receive that photo in their feed. Instagram also includes an ad from a brand that wishes to reach specific types of followers in the feed. Thus, for instance, a follower who is interested in personal care products may receive ads from brands that offer them. Instagram selects the recipients of such ads based on traditional criteria like demographics and lifestyles. The targeting, thus, does not account for differences in recipients' engagement with the ads. Ad recipients' engagement, however, is of growing importance to online advertisers since it affects their response. One approach to improve the engagement of ad recipients is to include ads next to photos that are more engaging to the viewer. There is little research, however, into the characteristics of photos or their posters that can increase engagement. This is the issue that we investigate by operationalizing a photo's ability to engage as the number of likes and comments it receives. The specific attributes that we investigate are color compositions of the photos, the characteristics of people if any in them, and characteristics of the posters' social networks. We rely on a dataset of the likes and comments received by over a million photographs on the social media platform Instagram. We model the likes and comments received by each photo using a bivariate negative Binomial model with the marginals joined by a copula.

2 - Social Distance Reduces the Biases of Probability Evaluations

Qingzhou Sun, East China Normal University, Junxiu Building,3663 North Zhongshan Road, Shanghai, 200062, China, Jenniferlou@163.com, Liandi Lou, Yongfang Liu

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 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 either for themselves or for others. In Study 2, participants were asked to make decisions for others, while the social distance between the decision maker and the beneficiary was manipulated to vary from 1 (dearest friend) to 100 (mere acquaintance). In Study 3, emotional and cognitive indicators were measured while participants were asked to make decisions either 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 acquisition of probability-information (Study 3). We also found that social distance did not directly affect cognitive factors after controlling the effect of emotional factors, and the mediating effect of emotional factors was stronger than that of cognitive factors (Study 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 justify 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 cponsumption to social and economic factors. Insights from the study will offer children clothing companies useful suggestions on their distribution, pricing and product strategies.

■ FA17

3I, 3rd Floor

Behavioral Modeling in Marketing (BMiM)

Content- Behavioral Industrial Organization

General Session

Chair: Tony Haitao Cui, University of Minnesota, 321 19th Ave. S, Suite 3-150, Minneapolis, MN, 55455, United States, tcui@umn.edu

1 - Reference-Dependent Utility, Product Variety and Price Competition

Chuan He, University of Colorado-Boulder, Ucb 419, Leeds School of Business, Boulder, CO, 80309-0419, United States, chuan.he@colorado.edu, Wilfred Amaldoss

Products such as iPhone, Coca-Cola and Tide serve as the standard against which consumers evaluate other members of the category. Empirical evidence suggests consumers care about not only the consumption utility derived from a product but also the gain-loss utility in comparison to the reference product of the category. This paper examines how reference-dependent utility affects price competition in a horizontally different market where consumers' taste are diverse. The analysis shows that when consumer valuations are low, the reference product is priced lower than a nonreference product. On the contrary, when consumer valuations are high, the reference product is priced higher than a nonreference product. Moreover, loss-aversion on the price dimension always intensifies competition among low valuation goods, whereas loss-aversion on the taste dimension softens competition among high valuation goods only if consumer sensitivity to the difference in match quality is above a threshold. We further find that an increase in the diversity of consumers' taste reduces equilibrium profits if consumer valuation is low, but has the opposite effect if consumer valuation is high.

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 consumers 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-valuation consumer segment always obtains an unlimited plan while the low-valuation 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 throttling speed) is exogenously determined, and when it is endogenously 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 throttling on profits is ambiguous. When the quality degradation is endogenously determined, the optimal speed after throttling is independent of consumers' demand heterogeneity: It increases in the size of the low-valuation segment and decreases 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 effect 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 buyers 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 consequence, 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.

Friday, 10:30am - 12:00pm

■ FB01

3C, 3rd Floor

Brands II

Contributed Session

Chair: Bart J Bronnenberg, Tilburg University, School of Economics, Dept of Marketing, Tilburg, 5037 AB, Netherlands, bart.bronnenberg@uvt.nl

1 - The Dominance of Moral Character on Tarnished Endorser Perception

Joseph W. Chang, University of Massachusetts-Dartmouth, 285 Old Westport Road, Dartmouth, MA, 02747, United States, drjoechang@gmail.com

This research investigates the dominance of endorser characteristics on endorser perception and the influence of tarnished endorsers on brand evaluations. Perceiver characteristics are discussed from the three perspectives of dispositional tendency, innate moral intuitions and self-location. Three experimental studies were conducted to examine the research hypotheses. The research findings indicate that moral character is more influential than warmth on endorser evaluations. Tarnished endorsers with immoral character exert more negative influence than with coldness character on brand evaluations. Innate moral intuitions and self-location moderate brand evaluations. Moreover, cross-cultural comparisons reveal that endorser and perceiver characteristics yield asymmetric patterns of influence on Americans' and Indians' brand evaluations.

2 - The Impact of Gasoline Prices on Brand Level Convenience Store Shopping Behavior

Alexander Chaudhry, Texas Tech University, 703 Flint Avenue, Lubbock, TX, 79409, United States, alexander.chaudhry@ttu.edu, Seethu Seetharaman, Dale F Duhan

Consumers' purchase decisions are influenced by budgetary constraints. From June 2014 to December 2014, regular unleaded gasoline prices dramatically dropped by 55% over this six-month window, from $3.65/gallon to $2/gallon. Using this natural experimental setting, we empirically examine the effect of a rapid gas price decrease on convenience store shopping behavior using brand level scanner data from January 2014 to June 2015 in 10 categories. The goal of this research is to examine the impact of a financial windfall on consumer brand choice. Specifically, we investigate the purchasing shifts from quantity to quality, bottom-tier to top-tier brands, and hedonic to utilitarian goods.

3 - To Delist or Not to Delist National Brands from Grocery Shelves: Insights from Online Experiments

Rajagopalan Sethuraman, Harold Simmons Distinguished Professor of Marketin, Southern Methodist University, Marketing Dept Cox School of Business, PO Box 750333, Dallas, TX, 75275-0333, United States, rsethura@smu.edu, Juan Gázquez-Abad, Francisco J Martínez-López

Strategically, a grocery supermarket retailer is a real estate manager. Their real estate is the grocery shelves on which they place the brands and obtain revenues and profits from sale of those brands to end consumers. These brands can be store, national, and regional brands, or a combination. Recently, there has been a growing trend among retailers to delist (i.e., stop carrying) some or all national brands and give more shelf space to their own store brands or private labels. This research attempts to shed light on retailers' decision to delist national brands through a large scale online experiment of 1400 consumer panelists in USA and 1400 panelists in Europe across four grocery products. These panelists were randomly assigned to broadly three assortment conditions: (i) Store brand only (ii) Store brand + 3 national brands (iii) Store brand + 9 national brands. Our goal is to assess the relationship between retailer's assortment (as reflected in the three experimental conditions) and consumers' response to the observed assortment in terms of their perceived store variety, store image, store switching intention, intention to buy private label. We also investigate whether consumer demographics/attitudes and product characteristics moderate the relationships. We use a combination of data analysis techniques - confirmatory factory analysis, descriptive (model-free) statistics, regression model, Analysis of Variance and Structural Equation Modeling. We jointly assess the effect of assortment conditions on dependent variables - perceived variety, store switching propensity, and brand choice. Results from this analysis yield insights and initial guidance into whether retailers should delist national brands and, if so, to what extent.

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 in the chain 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 can classify each participant's information about the private label as positive, negative or neutral. Most of the positive long run effect on private label shares 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.

■ FB02

3A, 3rd Floor

Competitive Strategy II

Contributed Session

Chair: Sajeesh Sajeesh, City University of New York, 55 Lexington Avenue, New York City, NY, 10010, United States, s.sajeesh@baruch.cuny.edu

1 - Differentiation through Risky Marketing Investments

Yuanfang Lin, Professor of Marketing, Conestoga College, Kitchener, ON, Canada, ylin1@conestogac.on.ca, Amit Pazgal

It has been an increasingly noticeable phenomenon for firms to incorporate consumer-generated contents (e.g. product review from existing customers) into their marketing activities. A direct consequence is that these consumer-generated contents might not serve their intended positive endorsement for the companies. In this paper, we examine the competitive rationale for firms to invest in different types of marketing activities that could lead to either positive or negative outcomes. In particular, we study marketing activities by two symmetric firms that are aimed at influencing potential consumer product valuation on both vertical (quality) and horizontal (fitness) aspects. In each dimension, the invested marketing activity could lead to the intended enhancement in consumer valuation with only a certain probability. However, it might instead lead to an unintended negative impact on consumer valuation. Our model analysis indicates that utilizing the uncertainty about consumers' ex post product valuation symmetric firms can achieve equilibrium differentiation. A specific application to online consumer product reviews is discussed in detail using laboratory experiment and analytical modeling to demonstrate the main predictions of our study. This paper thus provide important managerial implications for firms contemplating investment in seemingly risky marketing activities where the outcomes are not completely controllable.

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, Burgplatz 2, Vallendar, 56179, Germany, anna.dubiel@whu.edu, Sourindra 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, mtb34@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.

4 - Strategic Revenue Sharing with Daily Deal Sites: A Competitive Analysis

Sajeesh Sajeesh, City University of New York, 55 Lexington Avenue, New York City, NY, 10010, United States, s.sajeesh@baruch.cuny.edu, Pradeep Bhardwaj

Daily deals have become ubiquitous in the past few years. Groupon is perhaps the best known provider of these promotions to customers. Daily deals differ from traditional coupons on three important dimensions: (1) They are not offered to consumers directly by firms but are offered through an intermediary, (2) the promotional depth offered by these localized promotions tends to be higher, and (3) consumers prepay for the discount vouchers, and then the daily deals site reimburses the retailer a pre-specified negotiated percentage of each paid voucher. In this study, we build a theoretical model to explore the profitability of undertaking a daily deals campaign by firms. Our analysis identifies the role of types of consumers in the market, relative bargaining power of the local businesses, revenue sharing agreements, and market characteristics, such as degree of product substitutability and extent of competition, on the profitability attained through daily deal promotions. Surprisingly, when demand spillovers exist, an asymmetric outcome, with one firm offering an online discount voucher and the competing firm not offering an online discount voucher, is an equilibrium under some conditions. In contrast, when the competing firm doesn't benefit from demand spillovers, it could lead to a prisoners' dilemma.

■ FB03

3H, 3rd Floor

Retailing VI

Contributed Session

Chair: Doug J. Chung, Harvard Business School, Morgan Hall
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, 77054, 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 2014, QVC, one of the largest TV shopping networks, generated nearly $9bln 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 Poisson 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 sale 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 superstores.

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, mkjenny@cityu.edu.hk, Xu Zheng, Jeff 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 franchisors' financial performance. While regional clustering lowers franchisors' 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 is high, as contract completeness ensures uniform operation, which makes it easier for franchisors 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 franchisors to monitor franchisees even they are geographically clustered. Our analysis of 106 franchisors over a nine-year period (2003-2011) supports our hypotheses. We conclude with recommendations to franchisors 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, Reo Song

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 choice for mall developers. Specifically, we identify stores that act as revenue generators versus opportunists reaping high demand generated by other stores. Furthermore, we detangle 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.

■ FB04

3D, 3rd Floor

Marketing Finance I

Contributed Session

Chair: Zecong Ma, Binghamton University, School of Management, 271 Academic A, Binghamton, NY, 13902, United States, zma3@binghamton.edu

1 - Stock Market Reactions to a Price-Increase Preannouncement

Leon Gim Lim, Doctoral Student in Marketing, Singapore Management University, 70 Stamford Road #B1-38a, Singapore, 178901, Singapore, leongim.lim.2013@pbs.smu.edu.sg, Kapil R Tuli, Marnik G. Dekimpe

Consulting reports, business press, and financial analysts have consistently referred to price increases as one of the most effective marketing actions to enhance cash-flows. Occasionally, firms make formal public preannouncements of their planned price increases. On the one hand, such price-increase preannouncements (PIPs) may reflect a firm's ability (power) to raise prices, a quality that is often sought by investors. On the other hand, it can antagonize customers, and negatively impact cash-flows. In order to investigate investors' overall reactions to a PIP, we examine the abnormal returns following 268 PIPs made by 80 firms. We find that while the average abnormal returns to a PIP is positive (approximately 0.46%), almost 41% of the PIPs result in negative abnormal returns. Accordingly, we build a framework that links investors' reactions to a PIP with both the PIP content (magnitude, time to implementation, cost and demand attribution) and the firm's PIP conduct (frequency and competitive precedence). In addition, we propose that these effects are contingent on industry concentration. Consistent with the proposed hypotheses, we find that PIPs with a demand attribution result in greater abnormal returns, while PIPs with a greater time to implementation, a cost attribution, higher frequency and competitive precedence result in lower abnormal returns. Importantly, our results underscore the moderating role of industry concentration as the effects of magnitude, demand attribution and competitive precedence are stronger in more concentrated industries, while the effect of cost attribution is weaker in such industries.

2 - Value Drivers of Customer-related Assets in Mergers and Acquisitions

Cem Bahadir, Ozyegin University, Nisantepe Mah. Orman Sok. No:34-36, Alemdag-Cekmekoy, Istanbul, 34794, Turkey, cem.bahadir@ozyegin.edu.tr, Sundar G Bharadwaj

While the drivers and valuation of customers within firms has seen significant research, little research has examined the value of customer-related assets when there has been a transfer of ownership between firms as occurs during a merger and acquistion process. Using a empirical analysis of over 200 M&A transactions, the authors investigate the relationship between customer-base characteristics, namely, customer-base concentration and financial quality, and the value of customer-related assets. The results suggest that the effect of customer concentration on both sides of the dyad to be value-driving and consistent with scale and integration effeciencies rather than a dependence- and opportunism-based explanation. This positive impact is not unconditional, with the product similarity between the firms moderating the impact of customer-base concentration on the value of customer-related assets in an asymmetric fashion. In line with an adverse selection penalty, we find that the risk of the target firm's customer-base lowers the value expectations from the acquired customer-base. Interestingly, in parallel, the risk of the extant customer-base of the acquirer also mitigates the value expectations the customer-base consistent with credit management and customer selection explanations.

3 - The Impact of Financial Leverage on Marketing: An Empirical Investigation of Manufacturers' Pricing and Promotion Strategy in Supermarkets

Zecong Ma, PhD Candidate, Binghamton University, School of Management, 271 Academic A Binghamton University, Binghamton, NY, 13902, United States, zma3@binghamton.edu, Manoj Agarwal, Qi Wang, Chang Hee Park, Yilong Zheng

While several prior studies have investigated the impact of marketing strategies on a firm's financial performance, the impact of a firm's financial performance on its marketing decisions is underexplored. In this research, we examine the influence of a firm's leverage on its pricing and promotion strategies in supermarkets. We develop a structural model to investigate manufacturers' optimal pricing and promotion decisions by incorporating the impact of their leverage and the interactive behavior between the manufacturing firms and the retail chain. We use the Dominick's Finer Food data from the University of Chicago, including UPC-level product sales, prices, and promotions. We then augment the data by matching all 18,000 UPC's in the data to the 109 public firms that sell products in Dominick'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.

■ FB05

3E, 3rd Floor

Psychological and Behavioral Consequences of Scarcity versus Abundance

Content- Consumer Behavior: General

General Session

Chair: Meng Zhu, Johns Hopkins University, 100 international dr, baltimore, MD, 21202, United States, mengzhu@jhu.edu

1 - Scarcity and Context Effects: The Role of Internal Preferences and Need for Justification

Nivriti Chowdhry, Rice University, nivi@rice.edu, Meng Zhu, Ajay Kalra

This research examines how scarcity influences decisions under context, and how these decisions differ when consumers are indifferent between options and when consumers have clear internal preferences. The authors propose that scarcity (versus abundance) of supply level increases context effects when there are no clear internal preferences and decreases context effects when there are clear internal preferences. They argue that this phenomenon occurs because scarcity increases decision consequence and need for justification. When consumers are indifferent or have no clear internal preferences (e.g., a 50/50 split between options A and B), which is traditional to the setup of context effect studies, scarcity increases the likelihood of relying on the relational property of the context effect to justify one's decision. In contrast, when there are clear internal preferences (e.g., a 70/30 split between options A and B), scarcity increases the likelihood of relying on the clear internal preferences and decreases the likelihood of relying on the relational property of the context effect to justify one's decision. Thus, when there are no clear internal preferences, scarcity increases context effects, but when there are clear internal preferences, scarcity decreases context effects. The findings provide support for the theorizing, such that the studies show that scarcity increases decision consequence and need for justification. Furthermore, the studies show that scarcity increases attraction and compromise effects when there are no clear internal preferences, but decreases attraction and compromise effects when there are clear internal preferences.

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

Ding (Allen) Tian, Wuhan University, Wuhan, 430072, China, dtian2@ualberta.ca, Gerald Haubl

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 Shape Preference

Lei Su, Hong Kong Baptist University, 34 Renfrew Road, WLB 504, Hong Kong, Hong Kong, lsu@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 activates 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 nuancing 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 social-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 may 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.

■ FB06

3G, 3rd Floor

Structural Models

Method- Structural Economic Models: General

General Session

Chair: Ron N. Borkovsky, University of Toronto, University of Toronto, Toronto, ON, m5s3e6, Canada, ron.borkovsky@rotman.utoronto.ca

1 - Learning in The United States Presidential Primaries

Andrew Ching, University of Toronto, Toronto, ON, Canada, andrew.ching@rotman.utoronto.ca, Ron N Borkovsky, Jason M.T. Roos

We explore how voters in the U.S. Presidential primary elections learn about the quality of presidential candidates and, accordingly, how they choose candidates in public opinion polls and ultimately in the primary election itself. Our research is motivated by the observation that in the 2012 Republican primary, several candidates seemed to take turns surging to the leadership position in the polls, only to ultimately fall out of favor. This is a phenomenon that has been observed in earlier elections as well. We first explore how well a standard Bayesian learning model can rationalize this phenomenon. We then devise a richer learning model in order to better rationalize this phenomenon. We estimate our model using data from the 2012 Iowa Republican presidential primary.

2 - Multi-category Competition and Market Power: A Model of Supermarket Pricing

Stephan Seiler, Stanford University, Stanford, CA, United States, sseiler@stanford.edu, Oyvind Thomassen, Howard Smith, Pasquale Schiraldi

In many important competitive settings, consumers buy multiple product categories in the same period, and some prefer to use a single firm or location, generating complementary cross-category price effects. To study pricing in supermarkets - a form of retail organization in which cross-category effects are internalized - we develop a multi-category multi-store demand model (used in theoretical models of retail pricing) and estimate it using UK consumer data. We quantify cross-category effects and find they have a substantial pro-competitive impact on prices. We find, as a consequence, that a supermarket's single-firm (or "core") shoppers constrain market power more than its multi-firm shoppers.

3 - Is Early New Product Release Preannouncement a Signal for High Product Quality?

Baek Jung Kim, New York University, 40 West 4th Street, Tisch Hall, New York, NY, 10012, United States, bkim2@stern.nyu.edu, Masakazu Ishihara

New product release preannouncement is a versatile and ambiguous communication process that firms use to send a message to target groups such as consumers, competitors, and/or stockholders. Despite its importance in designing optimal product release strategy, little has been empirically investigated about the strategic role of its timing. In this paper, we focus on consumers as the target group of preannouncement and study the impact of preannouncement timing on consumer demand for new products. In particular, we examine the role of preannouncement timing as a signal of new product quality. Our unique data set from the Japanese video game market includes details about product release strategy (timing of preannouncement, preannounced release dates, delays, actual release date, etc.) as well as pre-release weekly consumer excitement levels, media coverage, advertising, and post-release sales and prices for 546 games between 1998 and 2008. Our findings suggest that (1) earlier preannouncement leads to higher first-week sales and the effect is larger for high quality games; (2) the effect of preannouncement timing on first-week sales is mediated by pre-release consumer excitement; and (3) the discrepancy between pre-release consumer excitement and critic rating published a week prior to the game's release date has an influence on first-week sales - when critic rating turns out to be low, high pre-release consumer excitement decreases first-week sales. Finally, we investigate possible mechanisms (signaling and other mechanisms) behind these findings.

■ 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, GLilien@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 Heijnsbroek, Peter C. Verhoef

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

■ FB08

5A, 5th Floor

Meet the Editors I

Invited

Invited Session

Chair: Min Ding, Pennsylvania State University, University Park, PA, minding@psu.edu

1 – Meet the Editors 1

The following editors will be attending to dicuss the Journals:

International Journal of Research in Marketing- Peter C. Verhoef, University of Groningen (RUG), Groningen, Netherlands. p.c.verhoef@rug.n

Journal of Marketing Research - Rajdeep Grewal, University of North Carolina, Chapel Hill, NC, Contact: guneet_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

■ FB09

5B, 5th Floor

Innovation

Contributed Session

Chair: Yansong Hu, The University of Warwick, MSM Group - The University of Warwick, Coventry, CV4 7AL, United Kingdom, Yansong.Hu@wbs.ac.uk

1 - The Impact of Product Innovation on Performance, the Moderating Effects of Managerial Ties

Wenjing Li, Fudan University, Shanghai, China, 15110690026@fudan.edu.cn

This study investigates the impact of exploitative and exploratory innovation on performance. It examines the moderating roles of managerial ties in different situations. Using survey data from 201 manufacturers, my empirical results indicate that exploitative and exploratory innovations are two important ways to enhance corporate performance. It also reveals that the moderating effect of business ties on the relationship between exploitative innovation and performance is positive, especially when the market turbulence is high; while the moderating effect of government ties on the relationship between exploratory innovation and performance is positive, especially when the competitive intensity is high.

2 - Cross-Classification and Market Conceptualization

Luming Wang, Assistant Professor of Marketing, University of Manitoba, 676 Drake Center, Winnipeg, MB, R3Y0C5, Canada, luming.wang@umanitoba.ca

It is commonly observed in marketing that a product belongs to multiple categories that represent alternative market conceptual organizations, which are called cross-classification. Conceptualizing the same market in different ways is an essential tool for consumers to condense the available information into a form that is easier to process at an acceptable decision complexity level. It becomes more and more important nowadays due to the frequent new product introduction and regular promotion activities in the marketplace. Despite the obviousness and wide commercial use of the multiple market conceptualizations (such as the "product menus" at bestbuy.ca and amazon.ca), we found no literature in marketing examining this phenomenon. In order to fill this gap, based on cross-classification theory, we develop a new choice model to represent several cross-classified market conceptualizations simultaneously. We also address how marketing mix variables influence consumers' usage of multiple market conceptualizations and how a firm can take advantage of the existence of more than one market conceptualization and position a new product strategically.

3 - Technological Collaboration with Customers: Driver or Consequence of Product Innovation?

Ernst Osinga, 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.

■ FB10

5C, 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" Better? Violence and Profanity in Movie Sequels

Sanjay R Sisodiya, Associate Professor of Marketing, University of Idaho, College of Business and Economics, 875 Campus Drive MS 3161, Moscow, ID, 83844-3161, United States, sisodiya@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., Eliashberg, Elberse, and Leenders, 2006). Even with this heightened level of interest, some movies still fail at the box office (Eliashberg 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 (Sood 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. (Basuroy and Chatterjee, 2008; Dhar, Sun, and Weinberg, 2012; Sood and Dreze, 2006). An area of movie sequel research that that is not well studied is that which considers the role of violence and profanity. Though profanity and violence have been studied before 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 the hypotheses. 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, xinlonguoft@yahoo.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 budget and actor 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 the 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

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

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 releases to 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.

4 - Can Social-Issue Documentaries Change People's Behavior? Effects of the Movie Food Inc. on Organic Food Purchases

Junzhao Ma, lecturer, Monash University, Department of Marketing, P.O.Box 197, Caulfield East, VIC 3145, Australia, junzhao.ma@monash.edu, Satheesh Seenivasan, Bingyu Yan

Documentary films have long been used to raise awareness of social issues and advocate for social changes. Its efficacy in changing the audiences' attitude toward these issues are 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.

■ FB11

5D, 5th Floor

Working Paper XI

Contributed Session

Chair: Aruna D. Tatavarthy, Indian Institute of Management Bangalore, Bannerghatta Road, Bangalore, 560076, India, divya.miscacc@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 benefits. Incentive alignment of contract 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, Bannerghatta Road, Bangalore, 560076, India, divya.miscacc@gmail.com, Srinivas Prakhya

Individuals purchase extended warranties (EWs) for their durables priced at unreasonably high premium due to the characteristics of their risk preferences over the repair costs. The tendency to perceive repair costs as a loss and non-linearly weigh 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 was 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 durable. 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 individual's 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 pricing and designing menu of EWs.

■ FB12

5E, 5th Floor

Working Paper XII

Contributed Session

Chair: Lin Tian, Fudan University, 670 Guoshun Road, Lane 7, Shanghai, 200433, China, tevintian@gmail.com

1 - Two-sided Customer Management of Platform with Competitive Designed

Jiao Wang, Zhongnan University of Economics and Law, 1 South Nanhu Road, Wuhan City, Hubei Province, Wuhan, China, 1543758454@qq.com, Xiaoling Li

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 ads bidding platform of B2B website with a total of 220 days. Finally, using a VAR model to analysis the dynamic evolution effects, the authors put forward some implements for effective control over buyers and sellers.

2 - Effects of Demand Uncertainty and Production Lead Time on Product Quality and Firm Profitability

Lin Tian, Fudan University, 670 Guoshun Road, Shanghai, 200433, China, ltian11@fudan.edu.cn, Baojun Jiang

In many distribution channels, the brand-owning retailer designs product quality and decides the retail price, but often outsources the production of its product to suppliers on wholesale price contracts. For products with a short selling season, long production lead time in the supply chain requires the supplier to carry out the production before the selling season, and the uncertain market demand creates risks of stock-out or excess inventory. This paper studies the impact of the supplier's lead time and its Just-in-Time (JIT) production capacity on product quality and pricing decisions under pull contracts in the supply chain. Our analysis shows that a reduction in the supplier's lead time or an increase in its JIT production capacity can lead to higher or lower equilibrium product quality, benefiting the retailer but potentially reducing the supplier's profit. This implies that the supplier may have no incentive to improve its lead time or JIT capacity even if it is costless to do so, unless it can keep such improvement a secret from the retailer. Interestingly, better market conditions (i.e., a higher probability of the market having a large fraction of high-valuation consumers) may actually reduce the profits for both the retailer and the supplier, and lead to lower product quality.

■ FB13

5F, 5th Floor

Mobile Marketing Session I: Structural Models and Mobile Marketing

Content- Mobile Marketing: General

General Session

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

Co-Chair: Nathan Fong, Temple University, Temple University, Fox School of Business, Philadelphia, PA, 19122, United States, nmfong@temple.edu

1 - Competitive Price Targeting With Smartphone Coupons

Jean-Pierre H Dube, University of Chicago, jdube@chicagobooth.edu, Nathan Fong, Xueming Luo, Zheng Fang

We conduct a large-scale field experiment to study competitive price discrimination in a duopoly market with two rival movie theaters. The firms use mobile targeting to offer different prices based on location and past consumer activity. A novel feature of our experiment is that we test a range of relative ticket prices from both firms to trace out their respective best-response functions and to assess equilibrium outcomes. We find an empirically large return on investment when a single firm unilaterally targets its prices based on the geographic location or historical visit behavior of a mobile customer. However, these returns can be mitigated by competitive interactions whereby both firms simultaneously engage in targeting. In practice, firms typically test only their own prices and do not consider the competitive response of a rival. In our study of movie theaters, competition enhances the returns to behavioral targeting but reduces the returns to geo-targeting. Thus, managers need to consider how competition moderates the profitability of price targeting. Moreover, field experiments that hold the competitor's actions fixed may generate misleading conclusions if the permanent implementation of a tested action would likely elicit a competitive response.

2 - Mobile Advertising and Real-time Group Dynamics: Evidence From a Field Experiment

Beibei Li, Carnegie Mellon University, beibeili@andrew.cmu.edu, Anindya Ghose, Siyuan 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 into improving the effectiveness of mobile advertising.

3 - Conditioned Learning and Consumption Habit

Xiaoyi Wang, Zhejiang University, Hangzhou, China, kevinwxy@zju.edu.cn, Song Yao, Xueming Luo, Navdeep S Sahni

Mobile users may develop different consumption pattern and behavior. The goal of this study is to test the effects of different interruption interventions on consumer learning and consumption habit. Theories from development psychology suggest that different learning mechanisms exist and are related to different conditioning interventions. Across different experimental treatments with mobile app users, we test whether and how a user's reading habits change because of different interruptions.

4 - 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 adopting 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 fare trips rather than reduction in waiting time.

■ FB14

5H, 5th Floor

Social Media – Crowdfunding

Contributed Session

Chair: Girish Mallapragada, Indiana University, 1309 E Tenth Street, Kelley School Of Busines, Rm. BUSI 328M, Bloomington, IN, 47405, United States, gmallapr@indiana.edu

1 - Social Influence on Backer Behavior for Crowdfunding Projects

Yiwei Li, The Business School of the Chinese University of Hong Kong, Room 1101, 11/F,Cheng Yu Tung Building, 12 Chak Cheung Street, Shatin, N.T. , HK, Hong Kong, 852, Hong Kong, victorli@baf.cuhk.edu.hk, Yuho Chung, Jianmin Jia

Crowdfunding has recently emerged as a novel way for people to collect monetary donation from netizen. Since 2009, the volume of crowdfunding has increased exponentially, reaching 16.2 billion in 2014. A growing number of literature starts to investigate social influence in crowdfunding that occurs when former backers, who make contribution to fund a project at an earlier stage of fund-raising period, make influences of the contribution decision of latter backers. Prior research focuses on how anonymous others (i.e., "non-peer") influence the decision making process and does not study the potential peer influence on backers' contribution behaviors. The failure of identifying peer influence may lead to a biased estimation and interpretation for social interaction.

This paper aims to firstly confirm the existence of peer influence on backers' contribution for crowdfunding projects. Unlike previous studies which assume a constant impact of social influence during the entire fund-raising period, this study unfolds the dynamic impacts of social influence for crowdfunding projects. In addition, this study uncovers different patterns of social influences in various types of crowdfunding projects (e.g., donation-based versus reward-based). We find that opinion leaders play an important role for the fundraising process in the donation-based projects. But for reward-based projects, backers tend to put more weights on non-peer social influence, and less on peer influence. Anonymous others contributions are complement, rather than substitute, of subsequent project contributions. Our research provides a solid linkage between crowdfunding and social network research and offers new insights for entrepreneurs who wish to raise more money in crowdfunding markets.

2 - Central Backers in Social Networks and their Impact on Outcomes of Crowdfunding Projects

Yee Heng Tan, Phd. Student, Singapore Management University, 50 Stamford Road, Singapore, 178899, Singapore, yeeheng.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), founder 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, Yiwei 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 (1) 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 distances also vary across projects categories. 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 Busines, Rm. BUSI 328M, Bloomington, IN, 47405, United States, gmallapr@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 last 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.

■ FB15

5I, 5th Floor

Business Impact of Online Advertising

Contributed Session

Chair: Alexander Bleier, Boston College, 140 Commonwealth Avenue, Fulton Hall 448, Chestnut Hill, MA, 02467, United States, bleiera@bc.edu

1 - Investigating the Effectiveness of Triggered Email Marketing

Marcel Goic, University of Chile, Beauchef 851, Santiago, 8370439, Chile, mgoic@dii.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 status 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 campaign 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, jane1112@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 channels by examining the characteristics of company websites vis-à-vis information-only versus transaction-enabled ones. We propose that it is not always a best practice to enable online transactions and that information-only websites may derive higher total revenue under certain conditions. In this study, the effect of the information-only website introduction on total revenue is compared with that of the transaction-enabled website introduction based on the difference-in-differences (DID) regression model. 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 given 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 Herty Dr., Marketing Dept., Athens, GA, 30602, United States, suechang@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 about brands online. 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 the 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 different types 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 useful 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.

4 - A Cross-Firm, Channel and Product Analysis of the Effects of Online Content Factors on Business Performance

Alexander Bleier, Assistant Professor, Boston College, 140 Commonwealth Avenue, Fulton Hall 448, Chestnut Hill, MA, 02467, United States, bleiera@bc.edu, Colleen M Harmeling, Robert W. Palmatier

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.

■ FB16

5J, 5th Floor

Social Influence II

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@uwm.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@uwm.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, Jurui 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 "coolness" 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 rewards 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's needs to make 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 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 individual 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 markets and marketing strategies.

4 - Assessing Celebrities' Newsworthiness from Retweet Rates of their Tweets

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

Several brands today rely on celebrities to communicate with consumers via social media platforms like Twitter. For instance, Kim Kardashian tweeted for the Old Navy brand. Brands benefit from such tweets through retweets which broaden the tweet's reach. Given the large number of tweets posted each day and the large number of celebrities on Twitter, however, the retweeting likelihood of a celebrity tweet falls rapidly with time elapsed from its posting. It is therefore critical for brands to understand characteristics of celebrities that increase the rate of retweets. Surprisingly, despite the widespread use of celebrities by brands, there are few insights in this regard. This is the gap that we address in this research. Our investigation is guided by the theory that consumers retweet for self-enhancement and social interaction and the desire to appear to be "in the know" (Brown et al 2007, Martin and Smith 2008, Muniz and Schau 2005) to their online social networks. Tweets by newsworthy (Gulang and Ruge 1965) celebrities that can be read and forwarded rapidly would therefore be retweeted at a faster rate than others. Our empirical analysis is based on 2486 tweets posted by 60 celebrities in five culturally significant categories. We rely on a Modulated Poisson Process model (Soyer and Tarimcilar 2008) which allows the number of retweets in different time intervals to follow a Poisson model with a rate that varies with time, tweet characteristics and celebrity newsworthiness operationalized through fixed-effects. Our results are consistent with the theory.

■ FB17

3I, 3rd Floor

Information OnlineI I: Advertising, Search, and Reviews

Content- Digital Marketing: General

General Session

Chair: Paulo Albuquerque, INSEAD, INSEAD, Fontainebleau, IL, France, paulo.albuquerque@insead.edu

Co-Chair: Garrett Johnson, Simon Business School, University of Rochester, Simon School – CS3-206, Rochester, NY, 14627, United States, Garrett.Johnson@Simon.Rochester.edu

1 - The Negative Effect of Tensile Promotions In Digital Marketing Communications

Anja Lambrecht, London Business School, alambrecht@london.edu, Catherine Tucker

To attract the attention of potential customers, 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 site 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 retailer that experimented with a large number of display 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 prior price knowledge contributes to whether tensile ads are effective.

2 - Consumer Search and Choice under Limited Information

Jun B. Kim, HKUST, Hong Kong, Hong Kong, junkim@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 set 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 heteroscedasticity 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 primitives 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 contacting 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 correspondingly 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, Wreetabrata Kar

This paper studies the selection, ordering and pricing of in-stream advertisements in video sessions shown in online video platforms, and proposes an algorithm that uses a collective measure of price and quality for each advertisement to 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 ads placed early in a video that increases the probability of viewer exit 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 Vickery-Clarke-Grove 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

3C, 3rd Floor

Brand Equity

Contributed Session

Chair: Florian Stahl, University of Mannheim, L5 - 2, Mannheim, 68161, Germany, mail@florian-stahl.com

1 - How Does Emotional WOM Influence Brand Equity: The Unparalleled Mechanisms of Brand Trust and Sentiment

Feng Wang, Michigan State University, N471 North Business Complex, 632 Bogue S, East Lansing, MI, 48824, United States, wangf@broad.msu.edu, Hang Nguyen, Roger Calantone

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. At a deeper level, our model seeks to understand the mechanism that drives these effects through brand trust and sentiment. Using seven-years of linguistically interpreted web scrapings 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 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@wiso.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 a 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 39 different automobile 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 Ailawadi, 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, with the intercept and marketing response components of SBBE on the other hand. It uses ten years of IRI scanner and Brand Asset Valuator (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, Energized 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

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

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 therefore of utmost importance. Recent developments in digital/social/mobile 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 value 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 Valuator (BAV) pillars for 177 brands from 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

3A, 3rd Floor

Competitive Strategy III

Contributed Session

Chair: Sumitro Banerjee, European School of Management and Technology, Schlossplatz 1, Berlin, 10178, Germany, sumitro.banerjee@esmt.org

1 - Minimizing Litigation in Franchising: The Role of Contract Ambiguity

Xu Zheng, Assistant Professor, City University of Hong Kong, Hong Kong, 00000, Hong Kong, xuzheng@cityu.edu.hk, Ling Ge, Uri Benoliel

Franchise relationships are prone to conflicts due to interest misalignment between the franchisor and the franchisee. When either party breaches the franchise contract, the aggrieved party may sue the offending party for 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 of conflict management 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 franchisor and franchisee; (2) reliance on contract 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" "satisfactory" "conventional" "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 franchisor- and franchisee-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

Wei Li, Zhejiang gongshang University, Hangzhou, China, leewaycn@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 PFI(Profiting from Innovation) framework which was proposed by Teece (1986)as the startpoint 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 theory to conduct multiple 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 Yim, Assistant Professor of Marketing, Penn State Erie, The Behrend College, 5101 Jordan Road, 220 Burke, Erie, PA, 16563, United States, sean.yim@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 commit socially unacceptable business 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 CSIR 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 CSR 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 Preannouncement under Two-Sided Asymmetric Information

Sumitro Banerjee, Associate Professor, European School of Management and Technology, Schlossplatz 1, Berlin, 10178, 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 incumbent pre-announces 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. Vaporware or false 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. The model thus provides an explanation for the surprising pervasiveness of non-verifiable preannouncements in rapidly changing software markets.

■ FC03

3H, 3rd Floor

Sales Force I

Contributed Session

Chair: Selin Kudret, Kingston University, Kingston University, London, United Kingdom, S.Kudret@kingston.ac.uk

1 - Who Compensates the Sales Agent

Duo Shi, PhD Student, Olin Business School, Washington University-St Louis, KH 401, Olin Business School, 1 Brookings Drive, St. Louis, MO, 63130, United States, dshi@wustl.edu, Panos Kouvelis

We analytically study a value chain consisting of three segments: a manufacturer, a retailer, and a sales agent. Five distinct value-chain structures are considered: an integrated value chain, an integrated distribution channel (the manufacturer and the retailer) compensating the sales agent, unintegrated channels with the manufacturer compensating the sales agent, with the retailer compensating the sales agent, and with joint compensation. We compare the strategic implications across all these value-chain structures. Our main findings are as follows. First, the value-chain efficiency under an integrated distribution channel may be lower than that under an unintegrated distribution channel; i.e., partial value-chain coordination may be worse than complete decentralization. Hence, channel integration is not always favorable if viewed from an extended scope. Second, from the distribution channel's perspective, retailer compensation is more profitable than manufacturer compensation if the production cost is low, and vice versa if the production cost is high. Third, the manufacturer always prefers to compensate the sales agent by itself, whereas the retailer may not. It is more beneficial for the manufacturer to directly pay for the compensation than to reimburse the retailer's compensation cost by lowering wholesale price. As a result, the manufacturer always takes its first-mover advantage to grab all the compensation responsibility under the joint compensation structure, making it collapse to a manufacturer-compensation structure. If the retailer compensates the sales agent, the manufacturer may charge a high wholesale price and produce a low quantity to avoid reimbursing the retailer's compensation cost, which harms the retailer.

2 - The Dynamic Influence of Relational and Transactional Marketing Efforts on Salesperson Performance

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Many firms rely heavily on the success of their salespersons. Hence, analyzing the drivers of salesperson performance has gained considerable attention in literature. Previous studies mainly focused on static attitudinal data rather than on salespersons' actual behavior. Widely neglected so far, 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 emphasizes the importance of distinguishing relational and transactional marketing efforts 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 812 independent salespersons from 2005 to 2013. Extending previous work, which mostly 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.

3 - Compensation Mechanism for Coordinating Inside and Outside Sales Forces

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To ensure cooperation between inside and outside salespeople of business-to-business (B2B) sales organizations we propose and analytically demonstrate the benefits of a new joint compensation system. This proposed new compensation system is designed to facilitate the exchange of well-qualified leads between inside and outside salespeople. The motivation for designing this new system is the Internet-induced fundamental changes in B2B buyers' purchasing behavior - from a reactive or seller-driven to a proactive or buyer-driven approach. These trends have led to inside sales forces rising in importance and value relative to outside sales forces in B2B sales. However they pose problems to B2B selling firms: 1) dissonance between inside and outside salespeople; 2) loss of potential customers as each sales group pursues those leads of most relevance to them; and 3) increasing costs when each group passes on poorly qualified leads to the other group. To mitigate these problems, our proposed compensation mechanism ties each sales group's incentives to achievement against self-selected targets for leads to be passed on to the other group. In this research we describe and investigate the impacts of properties of this compensation plan and also compare its impact on salespeople's utilities and earnings, and firm's profits with two those of two other incentive mechanisms (i) A system that rewards salespeople for their own performance; and (ii) A system under which salespeople are partly rewarded for corporate performance but receive no extra incentive for exchanging leads. Our simulation results show that the target-value compensation system is optimal for the firm and salespeople. More specifically, the target-value compensation system ensures that (1) salespeople of one group will endeavor to deliver well-qualified leads to the other side and (2) firms do not need to observe sales forces' actions.

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 insight, communicating marketing information and strengthening relationship with customers. Researchers therefore often considered 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.

■ FC04

3D, 3rd Floor

Marketing Finance II

Contributed Session

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

1 - Product Discontinuation and Firm Market Value

Ismail Erzurumlu, PhD Student, Koç University, Istanbul, Turkey, ierzurumlu@ku.edu.tr, Nukhet Harmancioglu, Sundar G Bharadwaj

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@oakland.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 relation between reshoring strategy and short-term stock market reactions, which has not been empirically tested.

3 - How and How Much do Firms' Expressed Strategies Inform Business Performance and Outcomes?

Ashish S Galande, Doctoral Candidate, Indian School of Business, AC9 Level 5 ISB Campus, Gachibowli, Hyderabad, 500032, India, ashish_galande@isb.edu, Prakash Satyavageeswaran, Sudhir Voleti

Conventional marketing wisdom shows that customer orientation provides a firm with a better understanding of its customers, which subsequently leads to enhanced customer satisfaction and firm performance. In this study, we consider an important but an amorphous determinant of firm performance, namely, stated firm strategy. We develop and demonstrate an approach to empirically measure the existence and the contours of the impact of stated firm strategy on firm performance. We focus on two particular aspects of firms' stated strategy, viz. that part of a firm's strategic ambition or aspiration captured in the vision statement, and that part of a firm's strategic intent captured in its mission statement. Noting that the Vision and Mission statements are textual in form, we propose a general framework to incorporate textual attributes of a set of units of analysis into a generalized linear model by (i) translating inter-unit effects due to the textual attributes into a simple function of the relative location of each unit in latent, text space, and (ii) drawing upon well-established procedures in spatial econometrics for estimation, inference and interpretation. Specifically, we invoke a class of spatial autoregressive models (Anselin 2002). We label our approach textspatial modeling. Our data comprise the Fortune 1000 firms. In addition to significant effect of the firm's choice of words in the two statements on its performance, we find a statistically significant cross-firm effect on performance. We proceed to investigate the what, how and how much of cross-firm strategy impact on firm performance and derive managerial implications therein.

4 - The Informative Role of Reward-Based Crowdfunding

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Reward-based crowdfunding can provide entrepreneurs information regarding future demand for their products. Such information is valuable, especially for entrepreneurs who need additional funding from a Venture Capitalist (VC), because a successful crowdfunding campaign can help convince the VC to finance the project. A failed campaign, however, will send a negative signal that is likely to eliminate the entrepreneur's chances of obtaining subsequent VC funding. Because the entrepreneur can always approach professional investors without running a crowdfunding campaign, it is important that she weighs the informational benefits of running a campaign against the adverse consequences of failing in the campaign. This paper investigates the incentives of an entrepreneur to run a reward-based crowdfunding campaign in an environment where VC's supplemental capital is needed to commercialize the entrepreneur's new product. In case the entrepreneur decides to run a campaign, we examine how the entrepreneur chooses the campaign instruments. We also investigate the preference of the VC in favor of running crowdfunding campaigns.

■ FC05

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.

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 tastes 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 demand drivers that influence only what choice alternatives are considered when decisions maximize direct utility subject to a budget constraint. Finding such demand drivers is equivalent to discovering a two-stage decision process. We then operationalize our theoretical argument and find that the number of facings of a brand on the shelf influence 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 advertisement's effect on brand equity building from its effect on brand recognition. Moreover, this variation allows us to estimate the menu effects, which is not well studied in the literature. We apply the method to the data from field experiments implemented in a Japanese vending machine company, in which vending machines recommend different products to different consumers based on their characteristics and time of day. We find significant effects of advertisements (recommendations) on both awareness and preference. Moreover, the length of assortment and the the total number of recommended products influence the effectiveness of product recommendation. These findings have an important managerial implication for designing optimal recommendation mechanism.

■ 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, xingli@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 Monto Carlo study to demonstrate the finite sample properties of the estimator.

2 - 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 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 empirical content. The identification of the discount factor is shown not to follow as a special case of recent generic identification results for hyperbolic discounting.

3 - 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

■ FC07

3B, 3rd Floor

Gary Lilien Practice Prize Competition Presentations

Invited Session

Chair: Gary L. Lilien, Pennsylvania State University, 468 Business Bldg, Univeristy Park, PA, 16802, United States, GLilien@psu.edu

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

1 - The Impact of Marketing Skills on Business Growth, Prosperity, and Survival: Insights from a Randomized Controlled Trial in Collaboration with the World Bank

Stephen Anderson-Macdonald, London Business School, London, United Kingdom; sjam.phd2009@london.edu, Rajesh Chandy, Bilal Zia

■ FC08

5A, 5th Floor

Pricing VI

Contributed Session

Chair: Taewan Kim, Lehigh University, 621 Taylor Street, Bethlehem, PA, 18015, United States, tak213@lehigh.edu

1 - Time Preferences and the Pricing of Complementary Durables and Consumables

Iman Ahmadi, Ph.D. candidate, Goethe University Frankfurt, Theodor-Adorno-Platz 4, Frankfurt am Main, 60323, Germany, i.ahmadi@wiwi.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 abstracts from the effect of consumers' higher discount rate than firms on marketing decision variables such as pricing. We study analytically the effect of high consumer discount rates on prices, profits and consumer surplus of 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 consumable price. Fourth, the optimal consumable price of tied goods is always higher than the optimal consumable price 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, Hemant 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 servicification 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.

3 - Service Mass Customization: How Assembling the Service Tariff Impacts Consumer Perceptions, Behavior, and Firm Profits

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 their effect on customer perceptions and their actual behavioral 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 value 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, as it is among the first to show that the active participation in a contractual service price setting differs from customizing products.

4 - An Analysis of Menus of Multi-Part Tariffs

Taewan Kim, Lehigh University, 621 Taylor Street, Bethlehem, PA, 18015, United States, tak213@lehigh.edu, Ryan Ji-Heung 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 (3PTs) generate greater profit than two-part tariffs (2PTs) and examine the optimal values of 3PTs. 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 3PTs, 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.

■ 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 are an import 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 illegal versions. Prior research simulates exclusive releases of two product versions, but lacks of an empirical support (Mukherjee and Kadiyali, 2011). This study is the first that empirically quantifies the effect of exclusive product releases on sales in 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.

2 - How Free Sampling Affects the Price Elasticity of Digital Experience Goods: An Analysis of Music Downloads

Nils Wloemert, Assistant Professor, Vienna University of Economics and Business, Institute for Interactive Marketing & Social Media, Welthandelsplatz 1, Vienna, 1020, Austria, nils.wloemert@wu.ac.at, Dominik Papies, Michel Clement, Martin Spann

Although the Internet has been a marketplace for digital products for years, our knowledge about the factors that shape price elasticities for 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 consumption options increases 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.

3 - The Choice and Effects of Previews in Video-On-Demand Service

Zhen Chen, Fudan University, Graduate Working Station, 7th Floor of Li Dasan Building, 670 Guoshun Road, Yangpu District, Shanghai, 200433, China, chenzhen12@fudan.edu.cn, Yong Liu, Madhu Viswanathan, Pei Huang, Hongtao Pan

Video-on-demand (VOD) services, such as Netflix, Amazon Prime Instant Video, iTunes, and Google Play, have revolutionized the delivery of entertainment programs and transformed the way that people watch movies and TV shows. A key promotional strategy that the VOD service providers use to help consumers choose certain programs is to provide previews. As a result, consumers not only have the control of choosing the video entertainment products, they also decide whether to watch the previews/trailers of these products. Besides the effectiveness of providing previews, there is little understanding on whether and when the previews are watched in the first place. In this paper we investigate when consumers would choose to watch previews and what are the effects of preview watching on consumer choice of the full entertainment products. We address these questions in the context of on-demand movies that are available in the typical Internet Protocol TV (IPTV) systems, and use a dataset containing consumer choice for previews and movies from a large Chinese VOD service provider. We find that the movie attributes, household characteristics, and time of the week significantly affect consumer choice for previews. At the same time, watching the preview of a movie helps increase the choice probability of the movie and decreases the choice probability of other movies. Furthermore, given consumers watching previews, the ratio of preview watching time to the length of the preview have a significant impact on subsequent movie choice.

4 - Relationships between Box Office Performance of Movies in the United States and in China

Charles B Weinberg, University of British Columbia, Sauder Business School, Henry Angus Bldg, Rm 669, Vancouver, BC, V6T 1Z2, Canada, weinberg@sauder.ubc.ca, Jason Ho, Chunhua Wu

The United States and China are the two largest markets for theatrical release of movies in the world. While there has been considerable attention paid to the drivers of box office performance of movies shown in the United States, there has been limited attention paid to those for movies shown in China. While most of the US box office is accounted for by US movies, Chinese movies account for approximately half of the total attendance in China. Nevertheless, US movies account for nearly half of the movie attendance in China; so we concentrate our study on movies made in the US that are shown in both countries. To do so, we first build a model to explain the selection of US movies that are permitted to be shown in China by the Chinese government. This is important, as only 10% of US movies enter the Chinese theatrical market and they are not always the ones with the highest US box office revenues. Moreover, the opening dates are at times delayed. As a result of this selection process, the background environment underlying box office performance differs for the US and China and so we analyze both movie characteristics and situational factors underlying box office performance with a newly developed and extensive database.

■ FC11

5D, 5th Floor

Working Paper XIII

Contributed Session

Chair: Brett 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 Nijs

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 abil- ity 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, michelle915lmm@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 reviewers.

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 Unicversity, Philadelphia, PA, 19122, United States, xluo@temple.edu

Co-Chair: Yuchi Zhang, Temple University, 1, Philadelphia, PA, 1, United States, yuchizhang@gmail.com

1 - How Do TV Ads Drive Search Spikes: Second-Screen Behavior

Rex Yuxing 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 dayparts, TV networks, program genres, ad slots and creatives. They illustrate how their findings can help make TV advertising more effective.

2 - The Role of Mobile Devices in the Online Customer Journey

Evert de Haan, University of Groningen, a, Groninengen, Germany, dehaan@wiwi.uni-frankfurt.de, Pallassana K Kannan, Peter C Verhoef, Thorsten Wiesel

The widespread use of mobile devices has important consequences for the online customer journey. The preferred device depends on the device's advantages and disadvantages and the shopping goals of the customer. Using clickstream data from a large online retailer, together with propensity score analysis and a simulation study, the authors find that if a customer goes from a more mobile device (e.g., smartphone) to a less mobile device (e.g., personal computer), the conversion rate more than double. This illustrates the importance of not focusing on the conversion rates of individual devices, but on all devices customers use in their journey.

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.

■ FC14

5H, 5th Floor

Social Media and Their Impact

Contributed Session

Chair: Koen Pauwels, Ozyegin University, Kusbakisi Str No 2, Altunizade Uskudar, Istanbul, 00000, Turkey, koen.pauwels@ozyegin.edu.tr

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 Sheng, 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 use 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 fit opinions 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. low fit uncertainty), there is a niche group of customers who use the free return policy to order multiple versions of an item with low fit information volume (i.e. high fit uncertainty) and return those that do not 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

Ruibin Geng, PhD. Candidate, Zhejiang University, 388 Yuhangtang Road, Hangzhou, 85719, China, grace.bin1207@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, Ozyegin University, Kusbakisi Str. No 2, Altunizade Uskudar, Istanbul, Turkey, koen.pauwels@ozyegin.edu.tr

Social media became 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 site, 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 from April 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.

■ FC15

5I, 5th Floor

Multichannel Marketing I

Contributed Session

Chair: Hui Li, Carnegie Mellon University, 5000 Forbes Avenue, Tepper School of Business, Pittsburgh, PA, 15213, United States, huil1@andrew.cmu.edu

1 - Does Consumers' Showrooming Behavior Intensify or Soften Competition?

Yilong Luo, PhD Student, Illinois Institute of Technology, 565 West Adams Street, Chicago, IL, 60661, United States, yluo4@hawk.iit.edu, Jiong Sun

Showrooming behavior, i.e., inspecting a product in a brick-and-mortar store and then buying it in a competing online store, poses a significant threat to brick-and-mortar retailers. We show that offline retailers can alleviate showrooming effects by strategically designing the length of the product line, and that under some conditions, collusion between offline and online retailers can benefit both parties by directing more consumers to do showrooming and resolving their valuation uncertainty.

2 - When Showrooming Increases Retailer Profit

Chenxi Liao, The University of Texas at Dallas, Richardson, TX, 75080, United States, chenxi.liao@utdallas.edu, Dmitri Kuksov

Showrooming, - the phenomenon of consumers visiting a brick-and-mortar store (to learn about products) but then buying online (to obtain lower prices), - is attracting an increasing attention both in business practice and in the academic literature. It is considered a major threat faced by the brick-and-mortar retailers; "how to fight it" seems the only consideration from their point of view. However, the manufacturer need for retail informational services has always been an essential reason for retailers to exist and a means for retailers to achieve profitability. The usual arguments for the threat of showrooming ignore the strategic role of the manufacturer in the distribution channel. This paper analytically shows that when the manufacturer decisions are added to the consideration (i.e., when the manufacturer-retailer contract is endogenous), the ability of consumers to engage in showrooming may lead to increased, rather than decreased, profitability of brick-and-mortar retailers. Thus, the retailer efforts to restrict showrooming may be misguided. This result holds even if the manufacturer is restricted to wholesale-only contracts and is not allowed to price discriminate between channels.

3 - Store Exit, Customer Churn and Complementarity between the Online and the Offline Channels

Gonca Soysal, Assistant Professor, Univ of Texas at Dallas, 800 W Campbell Road, Richardson, TX, 75080, United States, gonca.soyal@utdallas.edu, Alejandro Zentner, Eric Zheng

While e-commerce is rapidly displacing brick and mortar stores in some retail industries, it is likely that online and offline commerce will coexist for the long run in other industries. In this paper we focus on examining one possible mechanism that may explain this dual-channel coexistence: the presence of complementarities between the online and offline channels. Online and offline channel synergies may arise when consumers increase their total purchases because they can return products purchased online at physical stores, or because they can place orders online following product evaluation at showrooms or physical stores. To measure the extent of complementarities between the online and offline channels we use data from a video rental company that closed a large number of its brick and mortar stores during our study period. Our focal company offered DVD-by-mail subscription plans, where consumers were able to rent DVDs online and received them in the mail. Consumers could return DVDs via mail, but a subscription also allowed consumers to exchange the DVDs received in the mail at physical stores. Our results show that closure of a physical store in the zip code the customer resides in increases the customer's probability of terminating her subscription plan significantly (17.4%) and that store closures have a much larger effect on the churn rate of heavy physical store users (43.5%) than of light physical store users (4.3%). We show that our results are robust to alternative model specifications, geographic market definition, and inclusion of competitive effects and discuss the managerial implications of our findings.

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, huil1@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

Juanyi Jiang, PhD Candidate, Lingnan University, 8 Castle Peak Road, Tuen Mun, Hall D 717, Hong kong, NA, Hong Kong, juanyijiang@ln.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 computers, 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 rewards schemes on the recommender's referral likelihood and the receiver's purchase likelihood. This study empirically examine the effectiveness of referral rewards on three parties simultaneously: the firm, the recommender, and the receiver. In addition, this study investigates the question of how best to design referral reward programs to maximize firm profitability, testing three different reward schemes based on who receives the referral reward and the moderating effect of tie strength between the recommender and the receiver. Results show that the reward both scheme is the most effective at increasing the recommender's referral likelihood and the receivers' 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 SaVinhas

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.

■ FC17

3I, 3rd Floor

Pharmaceutcal Marketing

Industry- Health Sciences: Pharmaceuticals

General Session

Chair: Vijay Ganesh Hariharan, Erasmus University Rotterdam, Burgemeester Oudlaan 50, Rotterdam, 3062PA, Netherlands, hariharan@ese.eur.nl

Co-Chair: Stefan Stremersch, Erasmus University Rotterdam, Burgemeester Oudlaan 50, Rotterdam, 3062PA, Netherlands, stremersch@ese.eur.nl

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@mcgill.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 a newly launched specialty drug. 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 Holtrop, 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 shows 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, or accommodate 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 often are 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

Ever 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 distinctive features comparing 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.

Friday, 3:30pm - 5:00pm

■ FD01

3C, 3rd Floor

Brand Extensions

Contributed Session

Chair: Manuel Skrzypczak, University of Stuttgart, Keplerstra 17, Stuttgart, 70174, Germany, manuel.skrzypczak@bwi.uni-stuttgart.de

1 - A Signaling Model of Co-Branding with an Ingredient Supplier

Dalu Fang, The Hong Kong Polytechnic University, MN101, The Hong Kong Polytechnic University, Hong Kong, Hong Kong, Dalu.Fang@connect.polyu.hk, Xubing Zhang

In the real world, product quality may not be readily observable to consumers. For example, without actually using a laptop, consumers are unlikely to be able to assess its durability. In such situations, consumers often use brand name as a cue to infer quality. In the PC industry, co-branding strategy is commonly observed. Producers such as Lenovo, Dell and HP display not only their own brand name ("host brand") on their computers, but also those of some key ingredients provided by independent suppliers ("ingredient brand"). Consumers therefore may use both the host brand and the ingredient brand to infer the quality. The objective of this research is to investigate a manufacturer's incentives to co-brand with an ingredient supplier for signaling purposes. To explore the optimal conditions for co-branding and their implications for quality signaling we develop a series of game theoretical models. In our model, while a manufacturer produces a final product, the quality of the product is determined by an ingredient and unobservable to some consumers. We consider two type of ingredient: high quality and has brand equity; low quality and no brand equity. Three type of consumer: uninformed, semi-informed and informed. We also consider two types of costs that the manufacturer incurs in co-branding: a lump sum contracting fee, and a marginal cost of labeling for co-branding. We derive the manufacturer's optimal strategies for the two cases and elucidate the conditions under which co-branding with the ingredient brand facilitate quality signaling.

2 - Horizontal and Vertical Brand Extensions Impact on the Case of Automobile Industry

Darren Sung Uk Kim, University of New South Wales, Level 3 QUAD Building, School of Marketing, Sydney, 2052, Australia, darren.kim@unsw.edu.au, Tania Bucic, Liem 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 framework for investment decisions 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: Moderating 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 as ingredients–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. 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.

■ 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.

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, Yubo Chen

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-up 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 Cui

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 2009-2010 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 level 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.

■ 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 Rouzies

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 relating salespeople' 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.

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

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 the gains from receiving such authority? We study these key questions using proprietary data on salespeople selling industrial equipment. We find that firms do delegate more pricing as well as task decisions to salespeople in more complex, uncertain, and competitive environments and that both price and task delegation are positively related to that salesperson's productivity (annual sales growth). More importantly, we find that the effect of price delegation on productivity is enhanced when the salesperson is also delegated the authority to manage/choose her tasks, suggesting complementarity between these two roles. Furthermore, we find that it is the more able and the more experienced salespeople who are able to leverage this pricing and task-related authority 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@uh.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 differential 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 from 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 inter-relationship of key account 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 managerial implications.

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

Srinath Gopalakrishna, Professor of Marketing, University of Missouri, Trulaske Sr. 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.

■ FD04

3D, 3rd Floor

Modeling Marketing Outcomes in Emerging Markets

Content- Emerging Markets

General Session

Chair: Raji Srinivasan, University of Texas at Austin, 2803 Barton Point Drive, Austin, TX, 78733, United States, Raji.Srinivasan@mccombs.utexas.edu

Co-Chair: Rajesh Chandy, London Business School, Regents Park, London, NW1 4SA, United Kingdom, rchandy@london.edu

1 - Is Pressure from Shareholders Really Bad for Innovation? An Examination Into the Impact of Corporate Ownership and Management on Innovation

Gerard Tellis, University of Southern California, 2803 Barton Point Drive, Los Angeles, CA, 90089, United States, tellis@usc.edu, Sourindra Banerjee, Jaideep Prabhu

We examine the impact of ownership and management on innovation by studying the relationship between different forms of ownership (widely-held, state and family) and professional CEOs on two major innovation outcomes: how many innovations firms generate and how much value they capture from these innovations. To do so, we develop a theory of how the pressure from shareholders to exploit resources drives firms with different types of ownership and professional CEOs to generate different levels of innovation and different value from innovations. We test our hypotheses using panel data from 2001 to 2011 on major Indian firms in the banking, oil and gas, power, metal, automotive and capital goods sectors. Our results show that, on average, firms with greater state and family ownership generate fewer innovations and capture less value from innovations than firms with greater widely-held ownership do. We also find that firms that are led by a professional CEO generate more innovations and capture more value from innovations than firms that are led by non-professional CEOs do.

2 - The Marketing Lives of Micro-Entrepreneurs: Why Do Some Differentiate Themselves from Their Competitors More Than Others?

Rajesh Chandy, London Business School, London, United Kingdom, rchandy@london.edu, Magda Hassan, Jaideep Prabhu, Om Narasimhan

The world's most common type of entrepreneur is the micro-entrepreneur: someone who owns and runs a business with less than five employees. While it is well known that differentiation drives performance, it is puzzling why only a few micro-entrepreneurs make an effort to differentiate themselves from their competitors, and hence do better. We highlight a hitherto unexplored explanation for this puzzle: the mode of access to the micro-entrepreneur's main productive asset. Specifically, we highlight two potential modes of access: leasing versus possession. In the case of leasing, we argue that the uncertainty of losing the productive asset due to unmet lease payments is actionable in nature and so causes micro-entrepreneurs to differentiate to generate the needed revenues and profits. In the case of possession, we argue that the uncertainty of losing the productive assets through expropriation is non-actionable in nature and so does not drive the micro-entrepreneur to differentiate. We test our theory using data from 407 micro-entrepreneurs in an urban slum in Cairo, Egypt. To address the issue of endogeneity in the mode of access (i.e., lease versus possession), we make use of an exogenous shock in property rights laws that affects the decision to lease versus possess the productive asset. We discuss the implications for research, practice, and policy alike.

3 - Product Innovation for Low-income Consumers in Emerging Markets: The Moderating Role of Product, Market, and Country Characteristics

S. Arunachalam, Indian School of Business, India, na@na.org, Sundar G Bharadwaj, Cem Bahadir

Emerging markets provide high growth opportunities that are challenging to seize for firms. One of the key marketing strategies to capitalize on the growth opportunity in emerging markets is the possibility of serving low-income consumers (e.g., Prahalad and Hammond 2002). In this study, we examine the moderating role of product, category, and country characteristics on the relationship between the introduction of new products that are developed for low-income consumers and the growth of category sales. We draw on in-depth interviews of managers of firms operating in low-income markets and test our hypotheses on a panel data set of product launches, category and country characteristics from over thirty emerging markets. This research contributes to the product innovation literature in emerging markets by providing insights into the boundary conditions on product innovation's impact on growth in emerging markets.

■ FD05

3E, 3rd Floor

Consumer Behavior: Learning

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, Jialie 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 new). 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 insight 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 an online game 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 available 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 switch to 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.

■ FD06

3G, 3rd Floor

Game Theory

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 essay examines the optimal product positioning strategy of Small and Medium Sized Enterprises (SME). Much of the theoretical discussion on firm strategies, such as technical investments and advertising, focuses on symmetric firms. Less attention is given to weak firms when they face strong companies such as IBM, Sony, GE, Apply 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 still small, and 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 on the edges of the market when the advantage gap is larger. Moreover, the SMEs make less on radical investment than on incremental on product's features. These findings show the fundamentally different product positioning strategies under asymmetric competition than under symmetric one.

2 - Frenemy: Relationship as Implicit Contract

Weining Bao, Assistant Professor, School of Economics and Management, Luojia Hill, Wuhan, 430072, China, wbao3@jhu.edu, Jian Ni, Shubhranshu Singh

Competing firms sometime share certain resources, such as inventories, salesforces and distribution networks, even though they compete intensively in the market. Examples are food-trucks might be willing to share raw materials when requested by the competing counters, mom pop stores are willing to lend inventories to the neighborhood competitors, manufacturers share sales agents, etc. On one hand, such sharing might soften the competition through the relationship building, while on the other hand could help the competitor avoid adverse situations such as stock-out and make them stronger in the long run. We study the competing firms' incentives to share the resources in a market in which such sharing is not formally contractible. Based on the relational contract framework, we construct a model where firms compete in the product market while share inventories when market demand is volatile. We find such relational collaboration could benefit the firms in a growing market, especially in the long run. However, in a mature market, such sharing could be detrimental, therefore is less like to happen.

3 - Modeling Consumer Retail Shopping Behavior in Emerging Markets

Abhinav Uppal, University of Pennsylvania, 3730 Walnut Street, 727.6 JMHH, Philadelphia, PA, 19104, United States, auppal@wharton.upenn.edu, Kinshuk Jerath, 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.

4 - Fast or Free – On Partitioned Pricing Competition Between Online Retailers

Prabirendra Chatterjee, Sabanci University, Orta Mahalle, Universite Caddesi No 27, Istanbul, 34956, Turkey, prabirendra@sabanciuniv.edu, Pradeep Bhardwaj, Raghunath S Rao

In this paper we employ a game theoretic model to analyze partitioned pricing competition between two online retail firms. As online retailers are investing heavily on faster shipping technologies, we explore some critical questions related to retailer's profitability and customer's needs. In specific, we address the following questions - a) are product price and shipping fee strategic substitutes? b) which customer segment (rational but not price sensitive, price sensitive and boundedly rational) has higher incentives for subscribing to premium memberships (like Amazon prime) offered by these retailers? and c) under what conditions two symmetric retail firms develop asymmetric product delivery strategies at the equilibrium? Our results show that the subscription based product delivery can only be a part of asymmetric equilibrium strategy. We also find that as consumers expect to purchase more, the likelihood of asymmetric equilibrium also increases. Interestingly we see that compared to the shipping cost or number of purchases, boundedly rational consumer's anticipation of ex-post disutility (from less number of purchases) may have greater impact on subscription fee.

■ FD07

3B, 3rd Floor

ISMS Doctoral Dissertation Winners

Prize Session

Chair: Olivier Toubia, Columbia Business School, 522 Uris, 3022 Broadway, New York, NY, 10027, United States, otoubia@yahoo.com

1 - Television Advertising and Online Word-of-Mouth: An Empirical Investigation of Social TV Activity

Beth Fossen, Emory University, 1300 Clifton Road, Atlanta, GA, 30322, United States, bfossen@emory.edu, David Schweidel

In this research, we investigate how television advertising drives online word-of-mouth (WOM). We first explore if television advertising (1) affects online WOM about the brand advertised and (2) associates with changes in online WOM about the program in which the advertisement airs. We further examine if the media context in which the advertisement appears - the television program - impacts the relationship between television advertising and online WOM. By investigating the integration of consumer social media participation with television programming, known as social TV, we aim to improve the field's understanding of the consumer experience with television, advertising, and social media. Using data containing television advertising instances and the volume of minute-by-minute social media mentions, our analyses reveal that television advertising impacts online WOM for both the brand advertised and the program in which the advertisement airs. We additionally find that the programs that receive the most online WOM aren't necessarily the best programs for advertisers in terms of online engagement. These results suggest the need for social TV activity to be viewed in terms of viewer engagement with both programs 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 online WOM into the media planning and buying process.

2 - Consumer Online Search with Partially Revealed Information

Naiqing Gu, University of Chicago, ee, Chicago, IL, 60601, United States, ngu1@chicagobooth.edu

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 put in the first layer, the search result page becomes hard to comprehend. The optimal information layout design hinges on the value consumers get for each attribute, as well as the cost of comprehending a collection of search result entries and the cost of clicking. We first create a measure for cognitive cost, and empirically show that consumers respond to time and cognitive cost, and, using loading time as new instruments, show that purchase probability increases in the amount of information acquired. We then build a structural model that captures the evolution of consumer information structure and search costs along the search process, and allows the endogenous choice of the search query and click decisions separately. We then characterize the Pareto frontier of consumer welfare and revenue as information layout varies, and derive marketing implications for the platform under study.

3 - Free, Paid, or Freemium: Dynamic Versioning Decisions for Mobile Apps

Seoungwoo Lee, University of Maryland, seoungwoolee@rhsmith.umd.edu

We conduct an empirical investigation of mobile app publishers' decisions on offering free, paid, or freemium (both) versions of their apps. The main objectives of this research are: 1) to gain a deeper understanding of the various trade-offs involved in publishers' app versioning decisions, and 2) to provide policy recommendations on improving commission structures of app distribution platforms. We build a structural dynamic discrete choice model which takes into account various trade-offs involved in app publishers' versioning decisions (e.g., revenues vs. costs, direct vs. indirect revenues, costs of serving new vs. existing users, etc.) and incorporates inter-temporal and cross-version dynamics of mobile app demand. We have compiled a unique dataset consisting of 584 apps with 766 unique app-version combinations from various sources, and employ the Bayesian IJC algorithm and parallel computing to estimate the models. We find that the proposed model which takes into account app publishers' forward-looking decisions substantially outperforms the myopic model and other benchmark models. Our model reveals that free apps generate higher revenues via advertising than in-app purchases, that in-app purchase revenues of paid apps are higher than those of free apps, and that costs associated with new app customers are substantially higher than those of serving existing ones. Via counterfactual simulations, we find that reducing the commission rate from the current level or charging a lower commission rate on direct revenues and a higher commission rate on indirect revenues could increase the app ecosystem payoffs and create profit-sharing opportunities. Moreover, adopting a rent-plus-commission pricing scheme could lead to higher platform revenues and higher publisher profits simultaneously by reducing the number of low-profit apps. These findings lead to valuable managerial recommendations on how to improve the current commission structure and to achieve mutual benefits for both the platform and app publishers.

4 - Optimal Large-Scale Internet Media Selection

Courtney Paulson, USC, Courtney.Paulson.2016@marshall.usc.edu

Although Internet advertising is vital in today's business world, research on optimal Internet media selection has been sparse. Firms face considerable challenges in their budget allocation decisions, including the large number of websites they may potentially choose, the vast variation in traffic and costs across websites, and the inevitable correlations in viewership among these sites. Due to these unique features, Internet advertising problems are actually a subset of a more diverse, general class of problems: penalized and constrained optimization. Generally, attempting to select the optimal subset of websites among all possible combinations is a NP-hard problem; as such, existing non-penalized approaches can only handle Internet media selection in settings on the order of ten websites. Further, these approaches are not generalizable. Although generalizable penalized methodology exists to handle large-scale problems, this methodology cannot incorporate natural advertising constraints, such as budget allocation to particular websites or demographic weighting. We propose an optimization method that is computationally feasible to allocate advertising budgets among thousands of websites while also incorporating these common constraints. The method performs similarly to extant approaches in settings scalable to prior methods, but the method is also flexible enough to accommodate practical Internet advertising considerations such as targeted consumer demographics, mandatory media coverage to matched content websites, and target frequency of ad exposure.

5 - Advertising and Demand for Addictive Goods: The Effects of E-Cigarette Advertising

Anna Tuchman, Stanford University, 358 Diamond Street, San Francisco, CA, 94114, United States, tuchman@stanford.edu

Although TV advertising for traditional cigarettes has been banned since 1971, advertising for electronic cigarettes remains unregulated. The effects of e-cigarette ads have been heavily debated by policymakers and the media, though empirical analysis of the market has been limited. To analyze the question, I leverage access to county-level sales and advertising data on cigarettes and related tobacco products, along with detailed data on the consumption behavior of a panel of households. I exploit a discontinuity in advertising along television market borders to present descriptive evidence that suggests that e-cigarette advertising reduces aggregate demand for traditional cigarettes. Analyzing household purchase data, I find that individuals reduce their consumption of traditional cigarettes after buying e-cigarettes, further suggesting that the products are substitutes. I then specify a structural model of demand for cigarettes that incorporates addiction and allows for heterogeneity across households. The model enables me to leverage the information content of both datasets to identify variation in tastes across markets and the state dependence induced on choice by addiction. I show how the model can be estimated linking both datasets in a unified estimation procedure. Using the demand model estimates, I evaluate the impact of a proposed ban on e-cigarette television advertising. I find that in the absence of e-cigarette advertising, demand for traditional cigarettes would increase, suggesting that a ban on e-cigarette advertising may have unintended consequences.

■ FD08

5A, 5th Floor

Pricing VII

Contributed Session

Chair: Chi-cheng Wu, National Sun Yat-sen University, 70 Lien-Hai Road, Kaohsiung, 80424, Taiwan, chicheng@mail.nsysu.edu.tw

1 - Why Consumers Pay More for Free

Jihwan Moon, University of Florida, 1454 Union Rd, 249E Stuzin Hall, Gainesville, FL, 32611, United States, jihwan.moon@warrington.ufl.edu, Steven Mark Shugan

Myriad professional books claim that the word "free" is special and, perhaps, magical. The word's influence on consumers is so powerful that the Federal Trade Commission (FTC) regulates its use. Recent research confirms consumers do actually value zero prices, viewing this phenomenon as a deviation from consumer rationality, at least, because the presentation of prices matters (e.g., \$10+\$0 > \$8+\$2). However, seemingly irrational behaviors can be reactions to market-level signals. We show signaling theory can possibly explain the "zero-price effect" for free extras. Having free extras increases the all-inclusive price, which discourages some consumers from buying the core product. Thus, sellers can only provide free extras when those extras have a broad appeal to their consumer base. This market information allows uninformed consumers to infer that free extras provide a "good deal" (i.e., having a non-negative surplus). Conversely, sellers charge fees for extras that are only highly valued by some consumers (i.e., a niche). When informed consumers police the market, free extras can be valuable signals for uninformed consumers. Beyond showing a signaling equilibrium exists, we conduct an experiment demonstrating the signaling effect of zero pricing without the word "free".

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. Gruca

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 literatures in industrial organization economics (Landes and Posner, 1981) Building on Kanetkar (2012), we estimate company level price sensitivities for a sample of public firms using quarterly data from COMPUSTAT. 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 (EQUITREND). 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, Sotaro 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. Kalish 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 Jagpal 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.

4 - Managing Regret in Intertemporal Sales

Chi-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 regretted if not". How are these two messages different from each other? and how should marketers choose between them? This paper addresses regret management strategy 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.

■ FD09

5B, 5th Floor

Information, Institutions and Collaboration: Analyzing Strategic Decisions in Health Care Markets

Industry- Healthcare-Services

General Session

Chair: Ahmed Khwaja, Yale University, 165 Whitney Avenue, New Haven, CT, 06520, United States, ahmed.khwaja@yale.edu

1 - The Effect of Information Transparency on Physician Behavior

Tong Guo, University of Michigan, Ann Arbor, MI, 48104, United States, tongguo@umich.edu, Srinivasaraghavan Sriram, Puneet Manchanda

In 2014, Drug and medical device companies paid U.S. doctors and teaching hospitals for promotional speaking, consulting, travel expenses and meals. Recent government legislations require drug and medical device companies to disclose these payments. Access to this payment information has spurred intense scrutiny in the media. One view is that physicians might have a tendency to prescribe drugs and test procedures that might be favorable to firms that make these payments (e.g. Harris et al. 2007, Caputo 2009, Ornstein 2015). On the other hand, doctors argue that many of these payments are made to them in recognition of their involvement in the innovation process, such as industry-driven research, that brings new treatment options to the market. Therefore, any policy change that adversely alters the ability of physicians to receive payments without scrutiny is likely to hinder their participation in bringing new treatment options to market (e.g., prescribing drugs that are in the clinical trial phase). This, in turn, can be detrimental to advancement in treatment options that are available to patients in the future (e.g. Santhakumar et al. 2015). We use a 14-year individual prescription claims data from one of the top private insurers in the US to understand how information transparency affects physician behavior in terms of (a) prescribing branded vs. generic drugs, (b) prescribing drugs for off-label use, and (c) prescribing drugs in phase III trial to understand the relative merits of these two arguments.

2 - The Short and Long-Run Effects of Collaboration on New Product Development: Evidence from FDA Trials and Approvals

Ahmed Khwaja, Yale University, ahmed.khwaja@yale.edu, Rebeca Méndez Durón

Firms often collaborate in R&D, product design and launch. However, there remains paucity of evidence about the benefits of such collaboration. Two important reasons for lack of such evidence are: (1) Selection, i.e., unsuccessful alliances aren't often disclosed to avoid bad publicity and even successful alliances may be kept confidential to protect trade secrets. (2) Often it is not possible to measure and quantify the outcome of the joint venture, and hence, its success or failure. This paper examines (1) Whether collaboration between firms is beneficial in R&D, and market entry. (2) Whether collaboration is more effective at early or later stages of product development. (3) Are there features of firms that are likely to make some alliances more successful. Our study is based on an unique data set of about 4700 Phase II and Phase III clinical trials from 1998-2011 constructed by combining information from various sources. Critically, the data set comprises the universe of all FDA trials in phase II and beyond so there are no selection issues. Also, success or failure in a FDA trial is unambiguously defined. We find that in the short term collaboration is costly, i.e., it delays product development. However, in the long run, accumulated experience with collaboration raises chances of success. Finally, likelihood of collaboration is based on complementarities in skill sets. Our results highlight a strategic partner selection process that heavily relies on the opportunities for accessing complementary knowledge and learning.

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

Jian Ni, Johns Hopkins University, jni@jhu.edu,
Chirantan 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 tightens 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. We then describe the varying 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

5C, 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 - Creating Value Out of Hybridity

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Florian Kohlbacher, Huan Chen

By pursuing financial sustainability and social mission, social enterprises are a typical type of hybrid organizations. However, very little attention has been paid to understanding the link between hybridity and value creation for social enterprises. In order to explore the theoretical question of whether, how and why hybridity may lead to value creation, we conducted 30 interviews with consumers and did multiple case studies with social enterprises in China. We found that social entrepreneurship is an emergent concept in China not only for consumers but also for social entrepreneurs themselves. Therefore, hybridity is a double-edged sword for social enterprises to create consumer, employee and social value. Hybridity presents opportunities for passionate social entrepreneurs to solve unmet social needs while making money. However, our study also suggests it may create confusion and difficulties of positioning, planning, organizing, and marketization of social businesses. We conclude by suggesting ways for social entrepreneurs to overcome hybridizing challenges, with particular implications for social entrepreneurship in China.

2 - 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

Wei Zhang, School of Management, Fudan University,
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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.

3 - How Are Social Enterprises Connecting Stakeholders to Transmit Social Value?

Shiying Liu, Tong Ji University, shadow641@163.com

The social enterprise aims to deliver the social value in business way, which is leading to more concerns on the 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.

4 - The Re-evaluation of Fair Wealth, from Industries to Individuals

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Although wealth by itself is neutral, its creation and usage is very much entangled with various social values. With the introduction of Fair Wealth, we now have an all-new perspective on evaluating wealth based on fairness. We have been working on an evaluation system that is based on various properties, from industries to individuals. With analysis and calculation, we can put these properties into a two dimensional matrix that is based on both Fair Development principals as well as industry categories. The results are expected to lead to a general Fair Index for each industry. Eventually, all these indices can be used, along with other important factors, to calibrate Chinese Rich's Wealth so that their future decision in investment or practice of reshaping a certain industry will be influenced towards a fairer direction.

■ FD11

5D, 5th Floor

Working Paper XV

Contributed Session

Chair: Haojun Yu, MD, United States, yu.haojun@mail.sufe.edu.cn

1 - Bargaining Reputation and Pricing in Online Markets

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Puneet Manchanda, Junhong Chu

Bargaining, which initially started in offline markets, has emerged in online markets and gained popularity among e-commerce giants in recent years. Researchers have found it hard to observe data on bargaining processes and outcomes due to the nature of the interaction (typically verbal and carried out in a very short time period). Thus, there is little empirical research on the characteristics of the setting and their influence on bargaining outcomes. In this research, we leverage the availability of rich, individual level data on bargaining outcomes on a digital marketplace, where list prices, promotional prices, and bargaining are all present and a reputation system is well established. The paper addresses two questions: First, how does the seller reputation level affect the price formation process? Second, what are the key determinants of online bargaining outcomes? We find that sellers with higher reputation levels set higher effective list prices. And as sellers accumulate higher reputation levels / more selling experience, they strategically use promotions (more likely to offer promotions, but shallower promotions) to attract more customers. In terms of the bargaining outcomes, we find that both sellers and buyers benefit from their own higher reputation levels. We also find that Pay-for-Performance advertising usage, repeated purchase rate, transaction quantity, and gender greatly influence the bargaining amounts.

2 - Rating Score Premium and Seller's Score Management through Dynamic Pricing

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Rating scores help sellers to achieve better market performance, but seller's rating scores management is less studied. This paper takes advantage of a unique identification opportunity provided by the rating score system on Taobao, China's largest trading platform, to study seller's management of rating scores. Since accumulation of rating scores on Taobao requires both good reviews per purchase and trade volumes, sellers can accelerate the rating scores accumulation through boosting trade volume by cutting prices. First, I construct a dynamic pricing model to describe seller's incentive to manage rating scores. The incentive to manage the rating scores depends on two key elements: (1) buyers' willingness to pay for high rating scores and (2) how trade volumes affect the speed of accumulation. Then, using a transaction data set over time from Taobao, I structurally model and estimate these two key elements. The seller's heterogeneity and time trend of prices is also addressed. The model is estimated with a nested fixed point algorithm similar to Rust (1987). The estimation results show seller's ability to manage rating scores: 10% increase in sales increase the probability of achieving higher rating scores by 2-4 percentage points. However, the effect of rating scores on sales is small and not significant, especially when ratings are at low levels. As a result, from counter factual analysis, if there were no rating scores management, the prices will be .1 - 1% higher.

■ FD12

5E, 5th Floor

Working Paper XVI

Contributed Session

Chair: Jing Gong, Temple University, 1810 North 13th Street, 201C Speakman Hall, Philadelphia, PA, 19122, United States, gong@temple.edu

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 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 to target low-proficiency users who are otherwise difficult to reach with traditional media. We recommend the use of superstar apps as non-intrusive and cost-efficient vehicles for enhancing mobile app proficiency.

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

Jing Gong, Assistant Professor, Temple University, 1810 North 13th Street, 201C Speakman 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.

■ FD13

5F, 5th Floor

Mobile Marketing Session III: Personalization and Field Experiments

Content- Mobile Marketing: General

General Session

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

1 - Targeted Promotions and Spillover Effects

Nathan Fong, Temple University, nmfong@temple.edu, Xueming Luo, Fue Zeng

High fit promotions based on individual purchase histories are known to increase promotional response while reducing search effort. However, by reducing search activity, they may also create negative spillovers for cross-category purchasing. We investigated the spillover effects of targeted promotions in two sets of field experiments. The first was a series of email campaigns run by an online ticket exchange. The second was a series of mobile promotions run by an e-book reading app. In each case, we compare the purchasing patterns for customers who have a high fit with a promotion (meaning it matches their purchase history) to purchasing for low fit customers. We found that high fit targeted promotions (1) decreased search across categories and (2) decreased purchasing from non-targeted 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 - Effects of Personalized Recommendations and Popularity Information on Smartphone Sales

Marc Linzmajer, University of St.Gallen, St, Gallen, CH-9000, Switzerland, Marc.Linzmajer@unisg.ch, Liane Nagengast, Sandro Schopfer, Thorben Keller, Elgar Fleisch, Thomas Rudolph

As consumers face many purchase options and a high degree of uncertainty, retailers have developed different methods to support them in their purchase decisions. Smartphones offer new possibilities to approach consumers in the course of their decision making process. In one field and two lab studies, we test the interplay of personalized product recommendations and additional popularity information about the recommended product. Although both instruments support consumers in their purchase process and positively affect their attitudes and behaviors, we show a negative interaction such that the indication of popularity weakens the positive effects of personalized product recommendations through smartphones.

3 - Model Crowd and Business District using Mobile Signaling Data

Lei Xu, McGill University, lei.xu2@gmail.com, Mantian Hu

As consumers face many purchase options and a high degree of uncertainty, retailers have developed different methods to support them in their purchase decisions. Smartphones offer new possibilities to approach consumers in the course of their decision making process. In one field and two lab studies, we test the interplay of personalized product recommendations and additional popularity information about the recommended product. Although both instruments support consumers in their purchase process and positively affect their attitudes and behaviors, we show a negative interaction such that the indication of popularity weakens the positive effects of personalized product recommendations through smartphones.

4 - What Drives Likes? The Effects of Recipient Traits, Online Social Ties, and Post Characteristics on Liking

Kaichi Saito, Meiji Gakuin University, ksaito@eco.meijigakuin.ac.jp, Atsuko Inoue, Takashi Teramoto, Jeff Inman, Akira Shimizu

In the current social media age, “Likes” to user generated content can have a substantial impact on brand sales. The authors investigate the effects of recipients’ psychological traits, online social ties, and post characteristics on liking using data collected at a Japanese SNS, which has about 4,000 active members. The results reveal that (1) people who have strong community commitment and perspective takers are more like-prone, (2) people are as likely to give likes to a post from a follower as to a followee, and (3) a post with positive valence is more likely to obtain likes from others.

■ FD14

5H, 5th Floor

Building and Leveraging Social Influence

Contributed Session

Chair: Naohiro Matsumura, Osaka University, 1-7 Machikaneyama, Osaka, 560-0043, Japan, matumura@econ.osaka-u.ac.jp

1 - Building Opinion Leadership in Online Review Forums

Sara Lo, Hang Seng Management College, Hang Shin Link, Shatin, Hong Kong, saralo@hsmc.edu.hk, Haksin Chan

Recent research has consistently demonstrated the significant influence of online reviews on consumer behavior (e.g., Ludwig et al. 2013; Mayzlin and Chevalier 2006). We draw on the opinion leadership literature to shed new light on this evolving phenomenon and to advance theory and practice in the fledgling field. However, in contrast to prior literature, which has conceived opinion leadership as individual behavior, we propose that opinion leadership is often characterized by collective behavior in this digital age. Arguably, successful online review forums establish themselves as opinion leaders by (1) soliciting and presenting credible product reviews from a myriad of contributors and (2) attracting and influencing a large following of frequent users. In this research, we explore how online review forums can build or enhance opinion leadership (i.e., achieve the aforementioned objectives) through the use of specific forum design features– display of pertinent information, interface between forum participants, etc. For example, we suggest that contributors' willingness to submit credible, even-handed reviews is a function of the nature and salience of existing reviews (Sridhar and Srinivasan 2012). On the other hand, users' susceptibility to the influence of online reviews (Watts and Dodds 2007) is contingent upon the level and type of user-contributor interactivity. These preliminary results are rich in theoretical and managerial implications.

2 - Rise and Fall of Online Opinion Leaders

Yasunari Ikeda, Keio University, 2-15-45 Mita, Minato-ku, Tokyo, 108-8345, Japan, yasunari.ikeda@keio.jp, Xin Feng, Kanoko Go, Shumin Liu, Xinyan Zhang

Since Lazarsfeld, Berelson, and Hazel (1948), the concept of "opinion leader (OPL)" has attracted both marketing scholars and practitioners. Although previous research on OPL has clarified its characteristics, how a consumer becomes an opinion leader remains unexplored. This research tackles this problem by utilizing a novel dataset: sixteen years' online product reviews at Amazon.com (McAuley and Leskovec 2013; McAuley,Pandey, and Leskovec 2015; McAuley, Targett, Shi, and van den Hengel 2015). Opinion leader is operationalized as the top 1% reviewers with most helpful reviews and they are classified by long-term review posting patterns as: (1) all time OPL, those who post reviews for 15 years (8% of OPLs) and (2) temporary OPL, those who post reviews only for a certain period of 5 to 6 years. The relationships between these patterns and other variables, including characteristics of reviewed products and review, support from readers, position at social network, are analyzed to understand what makes a consumer an OPL and what degenerates an OPL.

3 - Climb or Jump: The Impact of Initial Status on the Emergence of Fame

Andreas Lanz, University of Mannheim, Mannheim, Germany, andreas.lanz@bwl.uni-mannheim.de, Jacob Goldenberg, Daniel Shapira, Florian Stahl

The paper addresses optimal seeding policies and challenges the role of hubs in communication and dissemination processes. Using data from SoundCloud, a well-established, worldwide online social network in the domain of music, the paper studies unknown artists who seek to build and increase their follower bases by directing promotional actions to other users on the social networking platform. Focusing on the status of both the artist and its seeding targets, we find that especially unknown artists do not benefit from seeding hubs as such a policy seems to be almost always ineffective. In fact, unknown artists should ignore predominant seeding policies and slowly "climb" across status levels of seeding targets rather than "jumping" towards those with the highest status. Drawing on the von Neumann-Morgenstern utility function, we study the resulting dynamics of reciprocity. We show that unknown artists are choosing a portfolio of seeding targets and solve risk versus return trade-offs according to their aversion to risk and their beliefs regarding the potential returns. We discuss implications for information dissemination and practice.

4 - Examining the Social Values of Loyal Customers

Naohiro Matsumura, Osaka University, 1-7 Machikaneyama, Toyonaka, Osaka, 560-0043, Japan, matumura@econ.osaka-u.ac.jp, Hikaru Yamamoto

The goal of our paper is to calculate engagement value of users in mobile SNS. Past research suggests that engagement value is a combination of different aspects of customer behavior. In this paper, we focus on three components of customer engagement behavior, i.e., customer lifetime value (CLV), which is the monetary value of a user, customer referral value (CRV), which is the social value of a user, and customer influencer value (CIV). Using the dataset provided by mobile social networking site, we calculate three components of customer engagement value. Also, we identified the relationships between the CLV, CRV, and CIV. The results of empirical analysis show that the customer who score high on one dimension do not necessary score high on other dimensions of customer engagement value. The customer with high CLV, high CRV, and high CIV are different segment of users and each segment contribute to the social networking site differently.

■ FD15

5I, 5th Floor

Multichannel Marketing II

Contributed Session

Chair: Vibhanshu Abhishek, Carnegie Mellon University, 4800 Forbes Avenue, 3024 Hbh, Pittsburgh, PA, 19104, United States, vibs@cmu.edu

1 - Customer Migration to Online Purchase Channels in Competitive Environment. Cross Channel and Cross Retailer Effects

Umut Konus, Assistant Professor, University of Amsterdam, Amsterdam Business School, Plantage Muidergracht 12 M Building M.2.05, Amsterdam, 1018TV, Netherlands, u.konus@uva.nl, Jing Li, Fred Langerak

Customers switch and migrate across different channels offered by multiple firms in the shopping process. This implies that customers' channel choice also depends on the availability and customers' use of channels offered by competitors. To what extent competitions' existing channel offerings are influential on the adoption and use of a new online channel introduced by a firm? Despite its importance this issue remains untapped by researchers since its analysis requires not only multi-channel but also multi-firm data. In this research we investigate the impact of customers' past and current purchases from competitors' online and offline channels on the purchases from a newly-introduced online channel of a focal firm in terms of purchase incidence and order size. The data contains purchases from ten competing multichannel home decoration retailers during eight years of time span. Our results reveal that customers' previous purchases from competitors' online channels increase the probability of online channel adoption from the focal firm introducing its online shopping channel later than its competitors. This effect is stronger for existing customers of the focal firm than the new customers acquired after the introduction of the new online channel. Customer adoption and use of this new online channel reduce purchase frequencies of competitors and increase purchase frequencies of the focal firm, for both existing and new customers.

2 - The Impact of Adding Online-to-Offline Channels on Firm's Offline and Total Revenues

Sha Zhang, Assisstant Professor of Marketing, University of Chinese Academy of Sciences, Beijing, China, zhangsha@ucas.ac.cn, Koen Pauwels, Chenming 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 IT 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) for companies 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 treat 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 35 psychical stores and introduced four leading food delivery 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, a0105026@u.nus.edu, Dai Yao, Junhong Chu

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 marketplaces. 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 option. 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.

4 - When the Bank Comes to You: Effect of the Branch Network on Multi-Channel Banking Behavior

Vibhanshu Abhishek, Carnegie Mellon University, 4800 Forbes Avenue, 3024 Hbh, Pittsburgh, PA, 19104, United States, vibs@cmu.edu, Beibei Li, Dan Geng

Branches have played an important role in customer interactions with their banks. However, changing consumer preferences have lead to the migration of banking activities to digital channels. Several banks are riding on this change to rethink the distribution of physical branches, particularly to reduce operational costs. In this paper, we explore the effects of a bank's branch network on multi-channel customer behavior. Using data from ~200,000 customers of a large commercial bank in US across 6 years, we investigate the interaction between the traditional, self-serve and online channels and build a model of customer banking behavior. Our results show that branch opening is associated with an increase in the number of transactions at the branch and online transactions, but it leads to a reduction in other channels like the voice response unit (VRU) and call centers. This the complimentarily in the branch and online channel, while a substitution between the these channels and channels like VRU and callcenters. On the other hand, branch closures are associated with reduced transaction at the branch and self-serve channels, while they increase online transactions. Our results suggest that branch network change, particularly branch closing, is likely to result in the customer migrating from offline channels to online banking. We also observe that branch opening increases the customers' probability of signing up for new financial products, but branch closures do not alter consumer behavior in the long term. This finding has significant implications for banks' decision to reconfigure their branch network.

■ 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 ways making 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

Advance 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 measures 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-Boas 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. Given that a sizable proportion of organic products consumed in the US are imported and the organic certification process has been criticized of 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, junbum.kwon12@rotman.utoronto.ca

1 - Online Advertising and Retailer Platform Openness

Jianqing Chen, The University of Texas at Dallas, Scholl of Management SM33, 800 West Campbell Road, Richardson, TX, 75080, United States, chenjq@utdallas.edu, 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 valuation advantage that may come from its reputation and information advantage that may come from its brand awareness. We find that the 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 its platform. 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 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 consumers' 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 data. Overall, we find considerable targeting gains.

3 - Cumulative Effects of Media

Justin Kim, Managing Partner, Sapient mPHASIZE, 274 Riverside Ave, 1st Flr, Westport, CT, 06880, United States, jkim5@sapient.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 Steenburgh, 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, & FMCG. (3) Finally, the current research also extends the resultant generalizations to digital media tactics (Honishi, 2011) while addressing the intrinsic challenges in online media, and discuss the directions which future research should take.

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, 35 Charles Street West, APT 604, Toronto, ON, M4Y 1R6, 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.

■ SA02

3A, 3rd Floor

Dynamic Models I

Contributed Session

Chair: Lan Luo, University of Southern California, 3660 Trousdale Parkway, ACC306, Los Angeles, CA, 90089, United States, lluo@marshall.usc.edu

1 - Friends or Enemies? The Dynamic Impact of Foreign Products on Domestic Counterparts in Emerging Markets

Jingcun Cao, Indiana University Bloomington, 1309 E. 10th Street, HH 742, Bloomington, IN, 47405, United States, jingcao@indiana.edu, Shibo Li

In emerging markets, domestic firms commonly face heavy competition from global brands. In the meantime, foreign brand entries are oftentimes governed by the focal 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 levels. 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 and 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.

2 - Learning in Daily Deals with Dirichlet Prior

Mantian Hu, Chinese University of Hong Kong, Cheng Yu Tung Building, Room 1105, Shatin, Hong Kong, mandyhu@baf.cuhk.edu.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 characteristics, 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 (Teh 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.

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 collected 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 constructed 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 of consumer usage on both 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).

■ SA03

3H, 3rd Floor

Customer Relationship Management I

Contributed Session

Chair: Shihyu Chou, National Taiwan Normal University, 162 Heping East Road, Section 1, Taipei, 106, Taiwan, sychou@ntnu.edu.tw

1 - Effect of Product Introductions and Replacements on Customer Acquisition and Retention

Nicolas Padilla, Columbia Business School, 3022 Broadway, Uris Hall, 5th Floor, New York, NY, 10027, United States, npadilla19@gsb.columbia.edu, Eva Ascarza

We measure the effect of marketing communications (online and offline), product introduction and product replacement on customer acquisition, expansion and retention. We investigate this issue in a retail context, analyzing two years of transactional data from an international retailer present in multiple markets. First, we separate the effect of marketing communications and product introductions/replacements on new vs. existing customers. Second, we measure the long-term effect of those actions and analyze whether customers who were acquired via product introductions/replacements differ in their future behavior (e.g., are more sensitive to product or price changes) from those customers who were acquired via different marketing actions (e.g., price promotions). We find that product introductions and replacements have a stronger effect on acquisition than they do on customer expansion/retention. Regarding the firms' communications, while offline communications seem to have no impact on customer behavior, e-mails have a positive effect on repeated purchases. We also find that the observed heterogeneity in long term profitability can be explained, partially, by the firm actions at the moment of acquisition.

2 - Privacy Calculus: Developing an Index to Predict when Consumers are Willing to Disclose Personal Information

Frank T Beke, University of Groningen, Nettelbosje 2, Groningen, 9747 AE, Netherlands, f.t.beke@rug.nl, Peter C. Verhoef, Felix Eggers, Jaap Wieringa

An important driver for improving Customer Relationship Management has been the collection of customer-specific, personal information. Using new sources of personal information, firms personalize their offerings to satisfy the needs of individual consumers at one specific place and moment in time. However, as consumers worry firms know too much about them, more understanding is 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 information disclosure beforehand, rather than explaining afterwards why consumers refused.

3 - 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.

■ SA04

3D, 3rd Floor

Promotion I

Contributed Session

Chair: Ruibing Wang, City University of Hong Kong, Tat Chee Avenue, Kowloon, Hong Kong, 1, Hong Kong, ruibiwang2-c@my.cityu.edu.hk

1 - Pricing, Commission and Sales Promotion in a Distribution Channel

S. Chan Choi, Professor, Rutgers Business School, 100 Rockafellar Road, Piscataway, NJ, 08854, United States, chanchoi@rutgers.edu

Distributing goods through channel intermediaries is known to mitigate intense price competition by delegating pricing decisions to the downstream channel members particularly when products are highly substitutable. In practice, however, manufacturers also frequently use promotional tools to directly influence the demand. One of these promotional tools is to offer a push money directly to the retailer's sales force in order to promote sales. A SPIFF (Sales Person/Performance Incentive Fund) is a bonus money directly paid to salespeople by a manufacturer for meeting a specific sales goal. It is frequently used to move inventories or boost new product sales. Thus, a salesperson is compensated with a sales commission from the retailer and the push money from the manufacturer. In addition, the salesperson often has a discretion to adjust the retail price for individual customers to make sales, which in turn affects his sales commission. This paper presents an analytical model to examine the effects of different income sources for a salesperson on channel profits in a market of monopolistic competition and derives equilibrium strategies in the game of pricing, commission, and sales promotion.

2 - The Effect of Free Gift Voucher in Conditional Promotions

Yan Zhang, Assistant Professor of Marketing, National University of Singapore, 15 Kent Ridge Drive, NUS Business School, 8-22, Singapore, 119245, Singapore, yan.zhang@nus.edu.sg

To boost sales, companies commonly conduct conditional promotions in which a free gift is offered conditional on purchase of a focal product. The free gift can be given directly, that is, given without involving other intermediaries, or in many other cases, be redeemed with a gift voucher. This article examines whether using a gift voucher influences consumers' intentions to purchase the focal product. We suggest that vouchers separate the gift from the focal product, and reduce people's tendency to compare the free gift value with the focal product price. Thus, presenting a voucher, as compared to presenting a free gift directly, decreases purchase intention for promotions that offer high-value gifts but increases purchase intention for promotions that offer low-value gifts. In the first two experiments, we found evidence consistent with this prediction using decision contexts that involved hypothetical scenarios (Experiment 1) or real product purchases (Experiment 2). We further demonstrated that the effect is driven by a reduced tendency to compare the value of the gift with that of the focal product. We found that encouraging people to consider the value of the gift before purchase decisions were made induced people to compare the gift value with the price of the focal product, thus effectively diminishing the effect (Experiment 3), and that priming participants a comparison mind-set increased the chance that people compare the gift value with the price of the focal product, reducing the effect of voucher as well (Experiment 4). Although vouchers have no economic value in themselves, they significantly influence consumers' purchase decision.

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 perception made by the mental accounting theory (MAT). According to MAT, 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, Ruibiwang 2-c@my.cityu.edu.hk, Wei-yu Kevin Chiang, Xiaojuan Puyang

We consider a firm selling a search product in a market consisting of 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 promotional strategies, hype 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 program 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 customers have to make 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.

■ SA05

3E, 3rd Floor

Consumer Behavior: Perception I

Contributed Session

Chair: Subimal Chatterjee, Binghamton University, School of Management, 224 Academic A, Binghamton, NY, 13902-6000, United States, schatter@binghamton.edu

1 - A Study of Product Attribute Classification Based on the Construal Level Theory

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According to the construal level theory, when the psychological distance to the object is close, construal level becomes low and people perceive the subject concretely, secondarily, and goal-relevantly. On the other hand, when the psychological distance is far, construal level becomes high and people perceive the subject abstractly, primarily, and goal-irrelevantly (Liberman and Trope 1998; Trope and Liberman 2003). In many prior researches, it indicates that the product attributes are classified to "concrete-abstract", "secondary-primary" and "goal relevant-irrelevant". However, whether such classifications changes on an individual basis or it is independent of individual product category is ambiguous. In other words, based on construal level theory, it is difficult to classify the product attributes to high or low levels. The reason is that objectives and situations of each customer varies. Therefore, in this study we did not classify the product with their attributes. Instead we have focused on classifying them to two attributes of price and out of price. As Yan and Sengupta (2011) have identified, this study also verify that price is perceived as high level and out of prices are also perceived as low level. In addition we have verified that by using the regulatory focused theory promotion-focused consumers put more value to the price compared to the prevention-focused consumers.

2 - Scale Development: Customer Perceived Cognitive Legitimacy

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

New ventures face the problem of surviving and becoming established. Consequently, to survive and to become successful a new venture has to focus on gaining cognitive legitimacy from their customers (Townsend et al., 2010, Shepherd and Zacharakis, 2003, Nagy and Kacmar, 2013), because customers are the most significant external partner for new ventures (Coviello and Joseph, 2012). 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 (Aldrich and Fiol, 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 (CPCL) related to a new venture's first product offer is missing. Therefore, we develop a new scale to measure CPCL. Two studies are conducted to gain a reliable and valid CPCL-scale. A pretest examines the consistency between the definition of CPCL 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 CPCL 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-Wen 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 (assimilative) 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.

4 - Moral Judgments of Speculative Finance: The Role of Intuition and Thought

Subimal Chatterjee, Professor, Binghamton University, School of Management, 212 Academic A, Binghamton, NY, 13902-6000, United States, schatter@binghamton.edu, M. Deniz Dalman

Our research, lying at the interface of consumer behavior and speculative finance, shows that whereas consumers judge "short" speculation (profiting on falling asset prices) more harshly than "long" speculation (profiting on rising asset prices), this difference reduces to insignificance once they are made to think about the similarity in their nature or purpose. In a 2 x 3 between subjects design varying the type and description of the speculation activity, 200 M-Turk participants read about an investor buying either short or long derivatives of a company, under three description conditions: (1) no further description (control), (2) long/short speculation is likened to gambling heads or tails on the company's fortunes, and (3) long/short speculation is depicted as fostering efficiency by providing information about good/bad companies. Thereafter, they judged the morality of the speculation (moral/immoral, ethical/unethical, good/bad), the investor's character (good/bad person, holding high/low moral standards), and the likelihood of their participating in such speculations (attractive/unattractive option, likely/unlikely to invest), all on 9-point scales. We find that although the judgments and intentions are typically harsher under the short (relative to the long) position in the control conditions (e.g., for morality, M's of 5.45 and 6.26; for intention, M's of 5.74 and 6.73), the difference reduces to insignificance when more information is provided, be it negative (the gambling frame: M's of 5.56 and 5.7, and M's of 5.10 and 5.09) or positive (the efficiency frame: M's of 5.27 and 5.87, and M's of 5.57 and 5.82). These results indicate that the prevalent view of the relative immorality of short-speculation may be intuitively driven, and therefore can be corrected by providing consumers with information about its nature and purpose. This finding is important for financial firms who wish to attract ordinary investors to complex derivatives that typically carry an immoral stigma.

■ SA07

3B, 3rd Floor

Consumer Behavior: Preference I

Contributed Session

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

1 - Need and Intertemporal Choice: A Dual Goal Hypothesis

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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 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

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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 Ratner 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, Mcdonough 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.

■ SA08

5A, 5th Floor

Pricing VIII

Contributed Session

Chair: Robert Zeithammer, University of California-Los Angeles, 1330 Stanford St., Santa Monica, CA, 90404, United States, robert.zeithammer@anderson.ucla.edu

1 - Consumer Price Fairness and Strategic Retail Obfuscation: An Experimental Approach

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Firms are increasingly using technology to enable targeted, or "personalized" pricing strategies. In settings where prices are transparent to all buyers, however, there is the potential that inter-personal price differences will be perceived as inherently unfair. If perceptions of unfairness cause consumers to avoid sellers who use personalized pricing, then such strategies will be infeasible, and markets based on personalized pricing will collapse. In response, firms may strategically obfuscate their prices so that direct interpersonal comparisons are nearly impossible. In this article, we conduct an experimental analysis of strategic obfuscation in an environment in which price transparency varies, and consumers are inherently inequity-averse. We find that perceptions of peer-induced unfairness can ruin discriminatory pricing schemes, but obfuscation strategies can restore their profitability, and likelihood of survival. We also find, under certain conditions, that price transparency is more profitable than strategic obfuscation.

2 - Empirical Generalizations on Cross-Price Elasticities

Johannes Auer, University of Tuebingen, Nauklerstr 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 benefitted from several important modelling 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.

3 - Pricing Strategies with Reference-Dependent Preferences

Zuhui 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.

4 - Paying for a Chance to Save Money: Participation Fees in Name-Your-Own-Price Selling

Robert Zeithammer, Associate Professor of Marketing, University of California-Los Angeles, 110 Westwood Plaza, Room B408, Los Angeles, CA, 90095, United States, robert.zeithammer@anderson.ucla.edu, Martin Spann, Lucas Stich, Gerald Haubl

We report results of an incentive-compatible experiment that tests the theoretical prediction that name-your-own-price retailers, such as Priceline, should benefit from charging upfront participation fees. As predicted, such fees are profitable, but we do not find evidence of several exact predictions of the risk-neutral theoretical model we are testing. We thus propose and estimate (at the individual level) a behaviorally enriched model of the observed consumer entry and bidding behavior. The model generalizes cumulative prospect theory to account for the behavioral effects we find: partial myopia and excess entry. Based on the estimated model, we find the optimal fee the retailer should charge, and investigate the sensitivity of the fee's profitability to behavioral influences on entry and bidding.

■ SA10

5C, 5th Floor

Marketing Analytics I

Contributed Session

Chair: Yu-Chung Tsao, National Taiwan University and Science and Technology, 1, Taiwan, 1, Taiwan, yctsao@mail.ntust.edu.tw

1 - Text Analysis of Factors Related to the Extent of Interest in Articles

Hiroko Suzuki, Fujitsu Laboratories LTD., 1-1, Kamikodanaka 4-chome, Nakahara-ku, Kawasaki, 211-8588, Japan, hiroko.suzuki@jp.fujitsu.com, Isamu Watanabe, Yoko Sugitani

A synopsis of articles is important for Internet articles. This study aims to (1) clarify the factors related to the extent of interest in summaries compared to entire articles and (2) analyze the differences in interest trends. 814 subjects took a web survey on the extent and reasons for their interest, first for article summaries and then for entire articles. Morphological and dependency analyses were performed, and similar statements were summarized for the main analysis. Multivariate regression analysis revealed that interest in both summaries and entire articles were positively related to self-relevant (e.g., “It related to me”) and novel (e.g., “It was novel to me”) statements. Statements about unknown information (e.g., “I want to know more”) positively related to the extent of interest in the summary. Statements about reader friendly characteristics (e.g., “It was easy to read”) and knowledge acquisition (e.g., “It was informative”) positively related to the extent of interest in the entire article. Multivariate regression analysis was also performed with the extent of change in interest as dependent variable. When subjects reported offensive or distasteful statements in a summary, their interest did not increase. However, even when a subject reported low or no interest when they read the summary, interest was found to increase if they felt novelty (e.g. It was innovative) after reading the entire article. This study reveals that the extent of readers’ interest in a summary or entire article increases or decreases because of specific statements in the texts.

2 - Modelling the Return on Advertising Investments for the Optimization of Media Campaigns

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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 30+ 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 spanned 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, lliu@stern.nyu.edu, Yuxin Chen, Daria Dzyabura

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 sharing 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 implementing 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.

■ SA11

5D, 5th Floor

Working Paper XVII

Contributed Session

Chair: Baohong Sun, Cheung Kong Graduate School of Business, 601 Lexington Avenue, Suite 2640, New York, NY, 10069, United States, bhsun@ckgsb.edu.cn

1 - Paying Incumbents and Customers to Enter an Industry by Buying Downloads

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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 newest mass market industry, mobile apps, has these features. Success among apps is highly concentrated, in part because 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@ckgsb.edu.cn, Liye Ma

Although mobile applications account for 86% of consumers’ time on mobile devices, and in-app advertising spending is eclipsing that of mobile web, little is known about either phenomenon. 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%.

■ SA12

5E, 5th Floor

Working Paper XVIII

Contributed Session

Chair: Yan Ma, Zhongnan University of Economics and Law, South Lake Avenue, Wuhan, 430073, China, 953582061@qq.com

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, Jingwen Chen

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.

■ SA13

5F, 5th Floor

Mobile Marketing Session IV: Promotion Strategies and Field Experiments

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: Yuchi Zhang, Temple University, Fox School of Business, Philadelphia, PA, 19122, United States, yuchizhang@gmail.com

1 - Linking Mobile Shopping to Product Returns: Know Your Unfavorable Customers

Yufei Zhang, Michigan State University, 1725 Nemoke Trail, Haslett, MI, 48840, United States, zhangyu@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 higher level of returns.

2 - Mobile Marketing Communications for Online-to-Offline Shopping

Yifan Dou, Fudan Unviersity, Fudan Unviersity, 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, zfee@sina.com, Yuchi Zhang, Xueming Luo

Marketers often use sweepstakes as an initial promotional contact 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-à-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 marginal 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. Thus, managers can better allocate their 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. The findings also reveal that customers' app engagement levels, measured by the frequency of app login, is significantly associated with the effect of mobile app adoption on IPT. The greater a consumer'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.

■ SA14

5H, 5th Floor

Spreading Social Messages

Contributed Session

Chair: Angela Xia Liu, Tsinghua University, Weilun Building 353, SEM, Beijing, 100084, China, liux@sem.tsinghua.edu.cn

1 - Tweet or Retweet? Interaction Utility Derived from User-Generated Content in Social Media

Jing Zhou, PhD Candidate, Peking University, Beijing, China, jing.zhou@pku.edu.cn, Hansheng Wang, Qiaowei Shen, Ping Tu

With the flourish explosion of online social networks (e.g. Facebook, Twitter or Weibo), user-generated content (UGC) is becoming a dominating way for people to communicate with each other on social platforms. For platform providers, a good UGC performance can attract more advertisers and directly influence their revenue. Therefore, how to encourage people to contribute content becomes a problem of interest. However, the underlying motivation on user generated content is still not well understood. Although previous literatures suggest the motivation can be driven by intrinsic utility and image-related utility, they ignore the interaction perspective of social media. Therefore, we propose in this paper a more comprehensive utility framework. Combining with previous utility theory, we propose an interaction utility concept which is used to describe the utility that users derive from interacting with their friends. Then incorporating interaction utility is our first contribution in this paper. As our second contribution, we exert a time budget constraint in our utility framework and this enables us to evaluate the tradeoff between generating and consuming content. Finally, we differentiate the impacts from different social neighbors on users' tweet and retweet. Both analytical model and empirical approach are proposed in this paper.

2 - Tweets as Geographical Canaries: Message-Communities and the Spatial Distribution of Retweeting Behavior

Nima Jalali, Assistant Professor of Marketing, University of North Carolina Charlotte, 9201 University City Blvd, Charlotte, NC, 28223, United States, nyahyapo@uncc.edu, Purushottam Papatla

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 one benefit of such tweets is that they may generate retweets thus stimulating 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 BBC) 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 messages rather than promoting to all geographies with the same tweet. There is, however, little research into spatial variations in retweeting behavior. This is the issue that we investigate in this research. We suggest that, similar to brand communities (e.g., Bagozzi and Dholakia 2006), tweets stimulate message-communities in geographies where they are relevant. We empirically demonstrate the occurrence of geo-demographics based message-communities using a Hierarchical Bayesian Poisson mixture model of retweets of tweets about the Papal visit to the US in 2015. The first-level controls for the tweet's structure (e.g., presence of hyperlinks) while the second-level models demographics-related fixed-effects of county-level geographies.

3 - Followees in Mobile Network: An Assessment of the Influence Value

Kyungmin Choi, KAIST, Seoul, Korea, Republic of, kmc@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 that an individual who has many followers (so-called "followee") can be considered as the influential in various social media platforms (e.g., Twitter), we argue that subscribers in the mobile network will be more susceptible to the followee's churn. To demonstrate our argument, using a unique individual-level 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 followees. We run a series of logistic regressions to assess the spillover effect of the followees on their neighbors' churn. Our results consistently show that the subscribers connected to followees are more likely to churn than those who are not connected to followees, suggesting that followees are highly likely to affect their neighbors' churn 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 followees 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 which boosting retention of followees may create "hidden value" by reducing churn rate.

4 - Ideology Matching, Message Congruency and Social Media Rebroadcasting

Angela Xia Liu, Tsinghua University, Weilun Building 353, 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 Proposition 37, a California ballot concerning the GMO labeling, we explore the relationship between ideology matching, message congruency and social media rebroadcasting decision at individual level. Based on moral foundation theory, we create the ideology disposition measures for each message and each user in our data using text-mining techniques. We find ideology matching between individuals and the message congruency between an individual and message content both impact an individual's social media rebroadcasting decision, yet these impacts are moderated by the source authority of the content contributor.

■ SA15

5I, 5th Floor

Online Pricing

Contributed Session

Chair: Sanjoy Ghose, Lubar School of Business, University of Wisconsin-Milwaukee, 3202 N. Maryland Ave., Milwaukee, WI, United States, sanjoy@uwm.edu

1 - Demand and Price Analysis of China Group Buying Hotpot

Meng Jiang, Texas A&M University, 3132 E 29th Street, Apt 32, Bryan, TX, 77802, United States, christinajiang400@gmail.com

Group buying is a booming and popular purchasing style in China. In 2014, the whole industry sales is around 11.5 billion in U.S. dollars, more than 587 million consumers involved in online group buying purchase. Not only consumers could enjoy lower price and high discount, but also merchants find it more profitable and gain popularity for themselves. In this, we would like to see how consumers react to price, discount, volume of sales and other factors. Hotpot Data was collected from group buying website, including current price, discount, volume of sales, average expenditure and square, duration since posted. A double-hurdle function would be applied in this paper.Further more, in order to see how merchants could benefit most, we will use undercut-proof equilibrium to find out optimal price for each merchant.

2 - Optimal Pricing and Deal Size for Selling through Daily Deal Website

Xuan Jiang, Zhongnan University of Economics and Law, 1 82# Nanhu Avenue, East Lake High-tech Development Zone, Wuhan 430073, P.R.China, Wuhan, China, judyx.jiang@gmail.com, Shiming Deng, Yanhai Li

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 capacity constraints given minimum deal size limit. 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 channel may be not always better than the single offline channel. We further discuss the impact of capacity limit on the selection of optimal strategy. We find that selling out capacity may be not optimal for sellers even though 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.

3 - 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 Papies

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 data base since December 2013. Third-party providers (e.g., mobile apps, price comparison sites) can then tap this data base to inform their customers about real-time gasoline prices. In the wake of this regulatory change, many price comparison Apps and websites entered the market, and consumer usage of these price comparison tools surged. We exploit this surge in consumer search for price information to study its effect on the pricing behavior (price level and price dispersion) of the firms. To this end, we compile a panel data set that contains all price changes for all German gas stations (close to 14,000 stations) for more than 400 days and information on consumer search for gas prices. 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.

■ SA16

5J, 5th Floor

Technology and Marketing

Contributed Session

Chair: Mathew Chylinski, South Wing 3rd Floor, Quadrangle Bldg, Sydney, Australia, m.chylinski@unsw.edu.au

1 - Technology use in Marketing Departments: Antecedents and Performance Implications

Marian Paul, University of Hamburg, Kieler Strasse 272, Hamburg, 22525, Germany, marian.paul@uni-hamburg.de, Karen Gedenk

The digitalization of the 21th century has a major influence on companies and especially on marketing. Marketing-related technologies (MarTech), like location-based mobile couponing or augmented reality advertising, provide new opportunities to contact and interact with customers. Using MarTech typically requires the collaboration of the marketing with the IT department. Often, marketing managers have limited IT knowledge, while IT managers are not well aware of opportunities and challenges in applying technologies in interactions with customers. Thus, companies need to manage the marketing-IT interface. Based on a management survey of marketing and IT executives of B2C business units in Germany, we estimate structural equation models to answer the following research questions: (1) To which degree are business units using MarTech? (2) What are the antecedents of MarTech use? Are their effects mediated by quality of the cooperation between the marketing and IT departments? (3) How does MarTech use affect firm performance? Is this performance effect moderated by the use of marketing analytics and/or the intensity of customer targeting? As potential antecedents of MarTech use, we study organizational variables (e.g., power of different departments and top management support), HR variables (e.g., IT background of marketing staff), and IT variables (e.g., integrated customer database).

2 - The Trends of Mobile Information Services to the Quality of Lives

Fumiyo Kondo, University of Tsukuba, 1-1-1 Tennoudai, Tsukuba-shi, 305-8573, Japan, kondo@sk.tsukuba.ac.jp, Qazi Mahdia Ghyas

Mobile information technology that improves the quality of users' lives will ultimately lead to profit for the firm that provided. The purpose of this paper is to identify how mobile information services (MIS) contribute to the quality of life for young Japanese mobile users. We examined relationships between individual life domains and the domain of overall quality of life based on bottom-up spillover theory. The following fifteen individual life domains are included: leisure life, family life, friend life, cultural life, work life, community life, consumer life, financial life, health life, safety life, self-life, health monitoring life, informational life, educational life and trustworthy life. Comprehensive analyses of the relationships between constructs were conducted by PLS-SEM, of which analytical method is appropriate for a model of non-established nature with many constructs and a small sample size. Online questionnaire surveys were conducted among young Japanese mobile users of university students. We obtained the data of 189 effective respondents. Results from this study clearly indicated that two kinds of latent variables, individual contribution and overall contribution, are valid and reliable to analyze. Contribution to the culture life has the highest influence on the overall contribution for Japanese young adults, followed by community life, leisure life, informational life health monitoring life, financial life, trustworthy life, health life, and safety life.

3 - Experience Infusion

Mathew Chylinski, UNSW, South Wing 3rd Floor, Quadrangle Bldg, Sydney, Australia, m.chylinski@unsw.edu.au

The paper investigates a framework based on compensatory process experience, where positive experiences compensate for negative ones, in the context of online retailing. We analyze data obtained from an elaborate experiment on experience regulation by testing a panel dynamic system of equations using a Bayesian (MCMC) approach. This approach allows us to capture the simultaneous interaction between different activities and experiences over time. We find that infusion of an intrinsically enjoyable but unrelated activity such as gameplay with a principal-agent conjoint task improves the overall experience of the decision task, and increases the accuracy of the decision making.

Saturday, 10:30am - 12:00pm

■ SB01

3C, 3rd Floor

Advertising VI

Contributed Session

Chair: Xi Li, University of Toronto, 304-409 Huron St., Toronto, ON, Canada, xitheory@gmail.com

1 - Viewership of Original TV Programs and their Online Streaming

Hiroshi Onishi, Assistant Professor of Marketing, Tokyo University of Science, Tokyo, Japan, hohnishi@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 the 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 VOD(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 1.306C, 1 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 mere 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 that 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, xi.he@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 complement to rather than a substitute for both TV 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, xi.li13@rotman.utoronto.ca, Xin (Shane) Wang, Mengze 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.

■ SB02

3A, 3rd Floor

Dynamic Models II

Contributed Session

Chair: Joonwook Park, Iowa State University, 3361 Gerdin Building, Ames, IA, 50014, United States, jwpark@iastate.edu

1 - A Dynamic Model of (quiting) Service Usage

Nan Yang, Assistant Professor, National University of Singapore, 15 Kent Ridge Drive, Mochtar Riady Building, 6-3, Singapore, Singapore, yangnan@nus.edu.sg, Juin Kuan Chong

We develop a dynamic structural model of service usage to study customer retention. This model features forward-looking customers engaging in costly but rewarding usage of service, while the benefits of continuing with the same service provider is uncertain. It differs from the traditional dynamic discrete choice models in one key aspect: We explicitly incorporate “customer loyalty”, an unobserved and persistent state variable in the decision process. Two differences make our specification of the loyalty variable more flexible than past ones. First, we allow the loyalty variable and usage experience to jointly determine their evolution. Second, our specification captures the multidimensional nature of usage experience. Both differences are necessary to realistically characterize how unobserved interests towards certain service arise and wane in response to usage experience, and vice versa. We estimate the proposed model using a panel data of users' behavior in a large online role-playing game, where customer retention is the first order issue for the game developer: On average, 14.9% of the game users exit every week. We believe that this empirical exercise offers relevant managerial insights to the game developers specifically and demonstrates the usefulness of our model in general.

2 - A Dynamic Modeling Approach for Hierarchical Time-Series Cross-Sectional Data

Joonwook Park, Assistant Professor, Iowa State University, 3361 Gerdin Building, Ames, IA, 50014, United States, jwpark@iastate.edu, William R. Dillon

While there is a vast literature investigating the impact of customer satisfaction, not all studies have found significant positive effects of customer satisfaction on performance metrics. One explanation for the lack of significant effects has been customer heterogeneity, but the possible effects of individual-level response heterogeneity on the relationship between customer satisfaction and market metrics has been under-researched. In this study we explore the long-term effects of customer satisfaction on brand sales and the salutary benefits of controlling for individual-level response heterogeneity. Our study is motivated by three fundamental questions: Does customer satisfaction and accounting for response heterogeneity matter for improving the ability to predict brand sales? What are the long-term impacts of customer satisfaction on brand sales after controlling for endogeneity, own marketing effect, competition effect, and sales feedback effect? And is overall customer satisfaction the best measure to use in understanding the impact of the customer experience on brand sales? To inform these questions we develop a dynamic multilevel time-series cross-sectional modeling approach. We demonstrate that (1) controlling for response heterogeneity significantly improves model fit and allows us to tease out the effects of customer satisfaction on brand sales, (2) overall satisfaction may not be the "best" operational satisfaction metric to use in understanding the impact of the customer experience on brand sales, (3) overall- and feature-level satisfaction add explanatory power in predicting brand sales with varying degrees, and (4) including feature-level satisfaction metrics provides a different perspective on how best to effectively position a brand.

■ SB03

3H, 3rd Floor

Customer Relationship Management II

Contributed Session

Chair: Tammo H 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

Sadrac Cenophat, Europa-Universitat 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, core 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), neuroticism (Antonioni, 1994), and inherent 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 hypothesises 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 consumers 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 of satisfaction to loyalty. We explore 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 term 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 that (1) hierarchical Bayes models borrowing other company'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 with 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 observed; (iii) marginal 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 in general.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

Qian Chen, PhD Candidate, Pennsylvania State University, 132 Beagle Run Court, State College, PA, 16801, United States, quc20@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 natures 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 answers beyond the findings of a homogenous 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 homogeneous 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 H A Bijmolt, University of Groningen, Faculty of Economics and Business, P.O. Box 800, Groningen, 9700AV, Netherlands, T.H.A.Bijmolt@rug.nl, Manfred Krafft, Javier Sese, Vijay Viswanathan

Numerous firms have introduced a loyalty program that explicitly discriminates 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 the current status level and 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.

■ SB04

3D, 3rd Floor

Promotion II

Contributed Session

Chair: Michal Herzenstein, University of Delaware, Department of Business Administration, 319 Alfred Lerner Hall, Newark, DE, 19716, United States, michalh@udel.edu

1 - 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 unanswered. Therefore, in this study, we provide a framework 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. Further, we explore 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 for both prospects and existing customers, and efficient marketing resource allocations to increase the level of customer engagement.

2 - 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

Uncertain consumer promotions (providing probabilistic rewards) have become more prevalent in retailing. And indeed, a growing body of research has started to make pairwise comparisons concerning (a) certain monetary promotions and uncertain monetary promotions, (b) certain non-monetary promotions and uncertain non-monetary promotions, and (c) certain monetary promotions and certain 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 more 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 with equal values; (3) The differential attractiveness between an uncertain price discount and an uncertain free-gift promotion is mediated by the perceived relevance associated with the two types of promotions; (4) the depth of the gap between the highest and the lowest possible outcomes in the uncertain promotions (deep vs. shallow) moderates the attractiveness of the promotions such that as the gap becomes deeper, it increases the attractiveness of an uncertain free-gift promotion, but not that of an uncertain price discount; and (5) the perceived relevance associated with the promotions mediates the above-described moderating effect. We discuss the important theoretical and managerial implications of these findings.

3 - 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 whether democratization 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 leadership roles women must be 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 incongruent with women's role in society. Can crowdfunding change that?We operationalized self-promotion by counting the appearances of the project leader's name in the listing. Hyland (2001) argues that self-mentions (repeating one's name rather than using the pronoun "I" or the third form "she" or "he") is a powerful rhetorical strategy for emphasizing one's contribution, and thus considered a form of self-promotion. To that end, we extracted each project leader's first name and automatically gender-categorized it based several common dictionaries. Controlling for project characteristics, we find that self-promotion is associated with greater funding success across genders. Interestingly, on average, women do not self-promote significantly less than men, unlike in the offline world. This result is especially pronounced in project categories in which the majority of leaders are women (e.g., dancing, food), while men self-promote less in these categories. Moreover, in these categories the majority of backers are also women, suggesting that perhaps women, more so than men, find it palatable that other women self-promote. We conclude that a woman project leader is more likely to successfully raise funds when there is a fit between her self-promotion efforts, her project category, and the gender of most of her backers. Democratization is partial.

■ SB05

3E, 3rd Floor

Consumer Behavior: Perception II

Contributed Session

Chair: Gilles Laurent, INSEEC, 13 Avenue De Poitou, Sceaux, 92330, France, glaurent@inseec.com

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

Haruka Kozuka, Graduate School of Keio Unversity, 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 prevent accurate volume perception, 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 Seong-buk, Seoul, 02841, Korea, 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 eand 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 basis 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 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) seems 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 district 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, INSEEC, 27, avenue Claude Vellefaux, Paris, 75011, France, glaurent@inseec.com, Raphaëlle 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.

■ SB06

3G, 3rd Floor

Special Topics

General Session

Chair: Przemyslaw Jeziorski, 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 N. 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 categories that are not used to drive store traffic. We explore how a retailer uses this market power to affect the evolution of manufacturers' shares in a given product category. Specifically, we explore 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 - Skimming from the Bottom: Empirical Evidence of Adverse Selection When Poaching Customers

Przemyslaw Jeziorski, University of California-Berkeley, przjez@gmail.com

This paper studies implications of competitive customer poaching in markets with heterogeneous and privately known costs to serve. Using individual-level driving records from a large car insurer in Portugal, we show that poached customers generate 21% larger cost to serve than observationally equivalent own customers. Screening on all available consumer characteristics and behavioral variables, with the exception of switching behavior, can only alleviate 50% of adverse selection. We provide evidence for unobserved heterogeneity in riskiness among switchers, which suggests that even further screening on switching behavior would not eliminate the lemons problem. The currently employed system of sales-force-based pricing through discretionary discounts does not improve screening. Finally, we propose solutions based on information sharing across insurers and incentive contracts for sales force.

3 - An Empirical Analysis of The Sunk Cost Fallacy In Penny Auctions

Pranav Jindal, UNC, Pranav_Jindal@kenan-flagler.unc.edu

The sunk cost fallacy is a widely known decision-making bias. We explore how the sunk cost fallacy impacts bidding behavior in penny auctions where individuals pay a non-recoverable bidding fee to increment the current price by a penny. To do this we utilize a large, proprietary data set encompassing 1.2 billion bids from approximately 14 million people across 10.3 million auctions for nearly 150,000 products over a five year period. The detail of our data set allows us to go further than previous research and distinguish between financial and psychological sunk costs. We find that the sunk cost fallacy is primarily driven by the financial side of previous bids but the psychological cost is also important. We also explore how intrinsic ability and learning mitigate the two sunk cost fallacy mechanisms. Finally, we explore bidder and product heterogeneity in the extent to which learning occurs.

■ SB07

3B, 3rd Floor

Consumer Behavior: Preference II

Contributed Session

Chair: Meltem Kiygi Calli, Okan University, Tuzla Campus, IIBF Akfirat Tuzla, Istanbul, 1, Turkey, meltem.kiygicalli@gmail.com

1 - Choice of Cellular Plan with Anticipation of Future Preference over Usage Bundle

Yixiang XU, Chinese University of Hong Kong, Chinese University of Hong Kong, Jockey Club Postgraduate Hall, C201, Hong Kong, Hong Kong, xuyixiang1011@gmail.com

This research intends to increase our understanding regarding an important type of consumer choice, which is made on the basis of the anticipation of the future self's preference over a bundle of continuous variables. We are going to explore this issue making use of a dataset provided by China Telecom, one of the three biggest network carrier in China. This data records actual usage and plan choice of around 40000 newly adopted users during October 2013 to February 2014. It enables us to materialize the idea in concrete, i.e. consumer's anticipation could be elicited from her plan choices, whereas the actual preference over bundle consisting of both calling minutes and network data could be revealed from the actual usage. We are going to show how a real consumer's choice deviates from an agent with unbounded rationality and the consumption relationship within the usage bundle.

2 - Can Trivial Attributes Provide Sustained Competitive Advantage?

Charan Kamal Bagga, Visiting Assistant Professor, T ulane 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 preference formation, and provide insight on how competitive dynamics play in consumers' cognitive representations of the market place. We contribute managerially 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 Kiygi Calli, Okan University, Tuzla Campus, IIBF Akfirat Tuzla, Istanbul, Turkey, meltem.kiygicalli@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 structure 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 for the two selected eco-products. A total number of 480 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.

■ SB08

5A, 5th Floor

Meet the Editors II

Invited

Invited Session

Chair: Murali Mantrala, University of Missouri, Columbia, MO, Contact: mantralam@missouri.edu

1 – Meet the Editors II

The following editors will be attending to dicuss the Journals:

International Journal of Research in Marketing - Peter C. Verhoef, University of Groningen (RUG), Groningen, Netherlands. p.c.verhoef@rug.n

Journal of Consumer Research - Vicki Morwitz, New York University, New York, NY, vmorwitz@stern.nyu.edu

Journal of Retailing - Murali Mantrala, University of Missouri, Columbia, MO, mantralam@missouri.edu

Marketing Science - K. Sudhir, Yale University, New Haven, CT, k.sudhir@yale.edu

Journal of Interactive Marketing- Brian T. Ratchford, Univeristy of Texas, Dallas, TX, btr051000@utdallas.edu

Journal of Personal Selling & Sales Management - Manfred Krafft, University of Muenster, Muenster, Germany. marketing@uni-muenster.de

■ SB09

5B, 5th Floor

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 shows 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.

2 - Investigating Pharmaceutical Detailing as a Personal Selling Process

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

We propose to model pharmaceutical detailing as a personal selling process that generates sales through effective sales communication between the sales representative and the physician using a unique survey data set that records physicians' self-indicated prescription intentions following detailing events and a large number of communication components of those detailing events. In particular, we adopt a Bayesian hierarchical ordered probit model to model the effectiveness of a detailing event as a function of not only specific detailing communication components but also each pair of these communication components. To select "promising" main predictors and interaction predictors from a large number of candidate predictors, we propose a Bayesian stochastic search variable selection (SSVR) procedure with g-prior of Zellner on regression coefficients. The variable selection procedure we propose is able to accommodate strong or weak heredity principle that governs the relationships between interactions and their corresponding main effects. Our preliminary results suggest interesting main effects and interaction effects of some sales communication components. Our study intends to make unique contributions to the literature on personal selling and Bayesian variable selection, as well as generate useful insights for marketing practitioners in the pharmaceutical industry.

■ SB10

5C, 5th Floor

Marketing Analytics 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, zhaokf.math.hit@gmail.com, Saeed Bagheri

Marketing Mix Model (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 over time-unvarying MMM 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-dimensioned 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 $709 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 causes 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 will 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.

■ SB11

5D, 5th Floor

Working Paper XIX

Contributed Session

Chair: Bing Jing, CKGSB, Beijing, China, bjing@ckgsb.edu.cn

1 - The Repellent Effect of Waste: Evidence from a Pricing Field Experiment

Katerina Kormusheva, Australian National University, Canberra, Australia, katerina.kormusheva@anu.edu.au

An axiom from basic utility theory is that for a specific price, if more value is offered, consumer's utility will increase and therefore probability to purchase will increase. We carried out a field experiment in pricing and found that removing some value from the same product and keeping the price unchanged actually made consumers want to buy it more. For the same price, customers were getting less value, but buying it more. We propose the concept of the 'repellent effect of waste'. The difference between value-in-absolute-terms and value-in-use, between what is bought and what can be used by the customer, or the "waste" from a product, can put customers off. Extra load in products repels customers. Our contribution to knowledge is as follows: • Pure utility is overridden by evaluations of utility-in-use, or value-in-use. • Waste turns customers away, it has a repelling effect. Giving less can be a better way to market a product. • Different segments have a different degree of sensitivity for waste, with the repellent effect of waste being more pronounced in lower-priced products. In view of efficiency for the economy, profitability for the company, and sustainability for consumer consumption, the repellent effect of waste should be evaluated, quantified and avoided. The implication for scientists is that utility theory and models of pricing decisions must account for the repellent effect of waste in products. There is an inflection point at which utility becomes negatively affected by the repellent effect of waste.

2 - Behavior-based Pricing, Production Efficiency and Quality Differentiation

Bing Jing, CKGSB, Beijing, China, bjing@ckgsb.edu.cn

In a two-period vertical duopoly, we examine how behavior-based price discrimination (BPD) affects the firms' endogenous quality differentiation and profits. The firms' relative production efficiency, defined as the ratio between their unit cost difference and their quality difference, plays a crucial role. With exogenous product qualities, BPD always decreases the profits of the more efficient firm but increases those of the sufficiently less efficient firm. Anticipating its period-2 disadvantage in price discrimination, the less efficient firm competes more vigorously and also gains more in period 1 than its competitor. For the sufficiently less efficient firm, its period-1 gain dominates its period-2 loss, and its total profits increase. With endogenous quality choices, BPD does not alter the low-end quality (at the lower bound of the quality space) but increases the high-end quality, enlarging quality differentiation. This is because under BPD each firm's profit gain decreases (or its profit loss increases) in its relative production efficiency. Interestingly, BPD may increase both firms' profits under endogenous quality differentiation. Aside from causing mismatch between consumers and products, we further show that BPD lowers social welfare through inducing excessive quality differentiation.

■ SB12

5E, 5th Floor

Working Paper XX

Contributed Session

Chair: Somnath Banerjee, North Dakota State University, North Dakota State University, 811 2nd Avenue North, Fargo, ND, 58102, United States, s.banerjee@ndsu.edu

1 - The Denomination-Spending Matching Effect: When the Denomination Matches the Spending, it is Less Painful to Pay

Yi Li, Assistant Professor, IESEG School of Management, 1 Parvis de La Défense, Socle de la Grande Arche, Paris-La Défense, 92044, France, y.li@ieseg.fr

Labeled as denomination-spending matching effect, this study shows that paying with a denomination the size of which matches the amount of spending value can reduce consumer's pain of paying. Subsequently, this matching effect enhances consumers' purchase satisfaction. To illustrate, it is less painful for consumers to use money in the format of small denominations (i.e., two $10 bills) than in the format of large denominations (i.e., a $100 bill) to pay for a small purchase (i.e., $18). Similarly, it is less painful for consumers to use one single large denomination (i.e., a $100 bill) than using small denominations (i.e., five $20 bills) to pay for a large purchase (i.e., $88). A processing fluency account is proposed to explain this matching effect: when the denomination matches the value of the spending, consumers feel right about the purchase, which in turn makes the payment less painful. Four experiments demonstrate the "denomination-spending matching effect" and provide processing evidence in support of the processing fluency account. The findings have implications on retailers' design of payment methods and consumer welfare.

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 firms 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 regulations like Non-Compete clauses or the use of tacit 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.

■ SB13

5F, 5th Floor

Mobile Marketing Session V: Appliication and Customer Engagement

Content- Mobile Marketing: General

General Session

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

Co-Chair: Xhenxi Li, Fudan University, 34, Shanghai, tbd, China, lichenxi89@gmail.com

1 - Not All Greed is Bad: How Does Greed Mindset Affect Market Behaviors?

Jaakko Aspara, Aalto University, jaakko.aspara@aalto.fi, Xueming Luo, Chenxi Li, Xiaoyi Wang

A long-lasting debate among scholars in economics and psychology is whether human selfishness or greed is always detrimental, i.e., whether greed can facilitate social functioning of markets and society. Extending prior literature, we investigated the extent to which a psychological, subtle greed mindset increases individuals' opportunistic behavior in a marketplace vis-à-vis non-opportunistic, general economic activity in the market with field experiments. Our field experiments are based on over 87,400 users of an online book marketplace, and we find that a psychological frame with subtle greed mindset does not increase opportunistic behavior (immediately seize the gratis market offers that are promoted as free books). However, greed mindset frame does have spillover effects and increase individuals' general economic activity in the marketplace (more purchase and deeper engagement in the non-promoted books). The spillover effects are robust to checks with user engagement, reversed frame of greed, and a frame of humidity.

2 - The Impact of Mobile App Adoption: Evidence from the Hotel Industry

Xian Gu, University of Maryland, xian.gu@rhsmith.umd.edu, Pallassana K Kannan

Increasingly companies are realizing that their branded mobile applications have become an indispensable channel to provide services, engage with customers, and increase customers' spending. The purpose of this paper is to investigate the impact of customer's dynamic adoption behavior of branded mobile application. Specifically focusing on a major international hospitality company, we study how customers decide to adopt its mobile application, and examine how this further impact customers' mobile usage, the specific features they use, and their purchase using alternative channels as well as increasing customer value to the firm in other ways.

3 - 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 Google and Apple app stores exhibit different competition structures across high-type and low-type apps. Counterfactual experiments investigate market policies regarding platform designs.

4 - 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 consumers engagement.

■ SB14

5H, 5th Floor

Network Effects

Contributed Session

Chair: Liye Ma, 3323 Van Munching Hall, University of Maryland, College Park, MD, 20742, United States, liyema@rhsmith.umd.edu

1 - Regulation of Network Effects of Online Reviews for Dynamic Social Interactions

Sreyaa Guha, PhD Student, IE Business School, IE University, Calle Maria De Molina 12, Madrid, 28006, Spain, sreyaa.guha@student.ie.edu, Shameek Sinha

Product reviews on e-commerce websites generate social interactions which subsequently shape consumer perceptions and purchase decisions towards favourable, unfavourable or neutral courses. Research has shown that when social interactions are incorporated within individual utility functions in non-cooperative setting, it leads to multiple equilibria and network multiplier effects. With a social planner exercising complete control, the effects of extreme positive or negative social interactions on individual choices are trimmed, thereby resulting in unique equilibrium outcomes under cooperation. However, the degree of control a social planner employs to manage the extremity of social interaction outcomes can have repercussions on equilibrium choices which are mutually beneficial for individuals and the society. In the context of online reviews, the e-commerce firm essentially assumes the role of a social planner, manipulating social interactions by playing non-mutually exclusive roles within the continuum of degree of regulation, thereby cushioning the effects of extreme reviews. In this paper, we develop an endogenous spatial network formation model with heterogeneous rational expectations across individuals. When the firm implements regulation of reviews within the continuum of 'strict' to 'lenient', we expect that more lenient interventions lead to multiple equilibrium outcomes with stronger network multiplier effects while stricter interventions cause weaker network multiplier effects. However, repeated dynamic interactions within the network results in reduction of the multiplicity of equilibria under lenient control along with diminished network multiplication. Also, the firm can potentially incentivize individual purchase behaviour and facilitate stronger multiplier effects while simultaneously exercising higher degree of control.

2 - Modeling Latent Homophily in Large-Scale Social Networks: A Markov Random Field Approach

Liye Ma, University of Maryland, 3323 Van Munching Hall, University of Maryland, College Park, MD, 20742, United States, liyema@rhsmith.umd.edu

The rapid growth of social media and mobile platforms makes large scale social network data increasingly commonplace. Inferring consumer preference and developing targeting strategies using such data, however, are still challenging. In this study, we introduce a modeling technique, Gaussian Markov Random Fields (GMRF), which is widely used in spatial analysis and image processing, to model the preference correlation of connected consumers, i.e. latent homophily. We show that this modeling approach has several attractive properties. First, it can be applied to networks of arbitrary topology. Second, its conditional independence property is conceptually appealing and enables straightforward estimation. Finally, the Gaussian setup affords model parameters intuitive interpretations. We analyze different model configurations where one or more GMRFs are incorporated to account for different aspects of consumer traits and the context in which they make decisions. We demonstrate the use of this modeling approach using a mobile network dataset with consumer communication and purchase information.

■ SB15

5I, 5th Floor

Online Consideration and Choice

Contributed Session

Chair: Zhenling Jiang, Washington University in St Louis, 605 Leland Ave Apt 506, St Louis, MO, 63130, United States, zjiang26@wustl.edu

1 - Search Frictions and Consumer Decision Making With User-Generated Content: Mobile Versus Fixed Devices

David M Muir, Assistant Professor of Marketing, University of Delaware, 20 Orchard Rd, Newark, DE, 19716, United States, muir@udel.edu, Yi-Lin Tsai

The use of mobile devices for research/search, decision making, and, importantly, m-commerce is growing exponentially, and companies have been relatively slow to adapt to this rapidly changing phenomenon. The screen size of mobile devices increases search frictions in several ways, which in turn affects the size and composition of consumers' consideration sets and, consequently, their choices. Because of the relatively smaller screen sizes of mobile devices, both the highest-ranked item and the highest-ranked user-generated content, such as ratings/reviews and questions/answers, receive increased attention in consideration. To what extent is the use of user-generated content - which affects consideration via its impact on search frictions - and, consequently, consideration and choice different on mobile versus fixed devices? Using data on durable goods from a UK retailer similar to Amazon, we create a model of awareness, consideration, and choice, in which consumers search for products non-sequentially, and estimate significantly higher search costs due to mobile devices: the size and composition of mobile consumers' consideration sets are smaller. Product choices on mobile devices differ because of the increased search frictions, leading to sub-optimal choices when lower-ranked items on consumers' mobile screens are not part of consumers' consideration sets. Using our model results, we also investigate several counterfactual scenarios, including how the environment changes when consumers makes all purchases on mobile devices - in the not too distant future, this scenario will become a reality for many e-commerce retailers.

2 - An Eye-Tracking Exploration to Adaption between Image-Based and Text-Based Processing in Assortment Choice

Jin Lang, Shanghai Jiaotong University, Shanghai, China, marketing_lang@hotmail.com, Hai Che, Savannah Wei Shi

This paper examines how pictorial and textual elements of a product matrix drive consumers' visual attention throughout the inspection process, and more importantly, how this is moderated by product-variety levels. By applying a non-homogeneous hidden Markov model, we recover two frequently switching, latent-information-processing states, i.e., the visual- and verbal-oriented processing states, which govern participants' eye-movement path. In general, higher product-variety level leads to increased likelihood of switching to or staying with the visual-oriented state. The preference for verbal processing monotonically increases as inspection progresses in the low-variety case, while it exhibits an inverted U-shape in the high-variety situation. The state-switching frequency mediates the effect of product-variety level on decision-process evaluations. Our study demonstrates the importance of simultaneously adjusting the pictorial and textual presentations of products and product matrix (assortment) sizes, and enriches our understanding as to dynamic visual and verbal processing in e-commerce websites with various product-variety levels.

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 two different product categories and offer several novel insights. 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 backtrack and expand 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, Youwei 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 buying from a seller before search to be systematically different from the realized value after search. Model estimation shows that the proposed model can generate the observed behavioral patterns and outperform other search models. Based on the results, we further use counterfactuals to investigate how an online retail platform can help consumers to conduct effective product searches and improve conversion rate.

■ SB16

5J, 5th Floor

E-Commerce

Contributed Session

Chair: Wen-Lung Shiau, MCU, 1, Taipei, na, Taiwan, mac@mail.mcu.edu.tw

1 - Measuring Efficiency of Online Retailer: Evidence from Direct Online Shopping in Asia

Changhee Joshua Kim, Ph.D. Candidate, Seoul National University, 58-517, Daehakdong, Seoul, Korea, Republic of, heeslife@snu.ac.kr, Hongsuk Yang

This paper deals with a comparative efficiency of online retalers in Asia. We have applied data envelopment analysis(DEA) which is a form of nonparametric frontier analysis and measured efficiency of online retailers in Asia. Specifically, the efficiency levels of direct online shopping are compared respectively, and relations among the the types of efficiency in accordance with the products of online retailers are analyzed.

2 - Does Regulatory Focus Moderate E-tailing Activities?

Gopal Das, Assistant Professor, Indian Institute of Management Rohtak, M.D University Campus, Rohtak, 124001, India, gopal.das@iimrohtak.ac.in

This study explores the moderating roles of regulatory focus in shopper e-tailing activities. Hypotheses were tested with a laboratory experiment of 275 participants. Statistical analysis reveals that shoppers' perceptions of online product review, online purchase intentions, and spreading positive word-of-mouth vary from promotion-focused shoppers to prevention-focused shoppers. However, no difference is found in spreading negative word-of-mouth by promotion-focused and prevention-focused shoppers after encountering an unpleasant shopping experience. Finally, results find that both the regulatory focus oriented shoppers are motivated by sales promotions. The results have both theoretical and managerial implications. Keywords: promotion focus; prevention focus; purchase intention; product review; word-of-mouth.

3 - Does Media Richness Change Readers' Attitude and Intention by Central Route or the Peripheral Route? An Empirical Study of E-Book

Wen-Lung Shiau, Professor, Ming Chuan University, Taipei, 324, Taiwan, mac@mail.mcu.edu.tw

With the proliferation of e-book, persuasion can be found anywhere, especially in the marketing sector. Hence, there is a particular necessity to understand readers' attitude and intention toward e-book through persuasion process. Based on the elaboration likelihood model (ELM) of persuasion, this study examines the effects of media richness on attitude and intention toward e-book through central route (argument quality) and/or peripheral route (source credibility). Data were collected from an online survey with e-book readers. Data analysis considers structural equation modeling technique. Empirical results showed that argument quality and source credibility are important persuasion to affect readers' attitude toward e-book. Media richness is a critical factor to affect readers' attitude and intention toward e-book through both argument quality (central route) than source credibility (peripheral route). Implications for managers and scholars are further discussed.

Saturday, 1:30pm - 3:00pm

■ SC01

3C, 3rd Floor

Global Branding

Contributed Session

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

1 - Local Versus Global Brands: Local Brands Reduce Consumer Self-Control by Lowering Construal Level

Eline de Vries, Dr., University Carlos III Madrid, C/ Madrid 126, Getafe, 28903, Spain, eline.devries@uc3m.es

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 chocolates, consumers may either perceive the shop in its entirety, 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; Förster & 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) described four dimensions of psychological distance: temporal, spatial, social and hypothetical. In the present research we identify a fifth dimension: cultural distance. Similarly as objects that are close in terms of temporal, spatial, social or hypothetical 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

Yuanyuan Cai, Shanghai University, Shanghai, China, cyy724_0@126.com, Yi Wu, Jiaxun 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 aggressive tendencies, 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 reward. On the contrary, avoidance emotion, as a passive motivation state, arises 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) × 2 (brand position: global vs. local) between-subjects design. In Experiment 2, negative emotions (sad and anxious) were used 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, wuy5.15@sem.tsinghua.edu.cn, Jiaxun He

Global brand equity is the value sources that drive consumers' preference to global brand as a whole. Recently, international academia 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 study has been proposed on how global brand equity affect consumers' purchase 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 Modeling technique and revealed several novel findings: (1) perceived quality and global myth positively affect credibility, symbolism, continuity and integrity (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 Compability

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' product purchase likelihood. The authors propose a conceptual model, in which cultural compability plays as mediator while global identity and local identity as moderators. Specifically, several hypothesis are generated: (1) perceived novelty directly affects product purchase likelihood; (2) cultural compability partially mediates the effect posed by perceived novelty on product purchase likelihood; (3) global identity positively moderates the effect of cultural compability on purchase likelihood, while local identity negatively moderates the same effect stage. 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 compability 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's role as consumer-level characteristics 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.

■ SC02

3A, 3rd Floor

Dynamic Models III

Contributed Session

Chair: Ramarao Desiraju, University of Central Florida, College of Business Administration, Department of Marketing, BA2 Room 308 B, Orlando, FL, 32816, United States, rdesiraju@ucf.edu

1 - 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 dynamic factor model that relates attribute satiation to brand preferences. The factor model employs a threshold specification that triggers preference changes when customer 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@dii.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 visual inspections that monitor the state 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, BA2 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.

■ SC03

3H, 3rd Floor

Customer Relationship Management III

Contributed Session

Chair: Jun Duan, 1 University Station B6700, 2100 Speedway Cba 7.250, Austin, TX, 78712, United States, duanj@mccombs.utexas.edu

1 - Relationship Dynamics and their Impact on Customer Cocreation

Iguacel Melero, Assistant professor, University of Zaragoza, Plaza de la Constitucion, Huesca, 22001, Spain, imelero@unizar.es, Jesus Cambra, F. Javier Sese

This research focuses on investigating the effect of relationship quality on customer co-creation from a dynamic perspective. Customer-firm relationships pass through different stages (exploration, buildup, maturity and decline) characterized by distinct customer behaviors. Hence, studying the role of the relationship life cycle as a moderating effect of this link is necessary to understand how customers behave depending on their relationship stages. To do so, we propose a conceptual framework, drawing from the Theory of Relationship Dynamics, aimed at understanding how the relationship life cycle moderates the link between relationship quality and customer co-creation. The framework is tested empirically in the financial services using data for a sample of 2,000 customers. Subjective customer information obtained from the questionnaire that we carried out was combined with objective data about the same customers that the financial entity provided us. The results demonstrate that the relationship life cycle plays a key moderating role in our conceptual framework revealing that, in the buildup and maturity stages, the influence of relationship quality on customer co-creation is stronger than in the decline stage. However, for customers in the exploration stage, relationship quality does not lead to co-creation behaviors. Today, due to the importance of relationship management, the implementation of personalized marketing strategies adapted to the specific relationship life cycle of their customers to encourage customer co-creation should be a top priority for firms.

2 - The Impact of Customer's Cross-Buying on Firm's Profitability

Seung Min Lee, Doctral Student, Korea University, Ichondong 106-703, Soeul, Korea, Republic of, flyfar7948@naver.com, Sang Yong Kim

To date, numerous studies show that cross-buying behavior of customers has a positive effect on firm's financial outcomes. Business reality, however, has a different perspective that high level of cross-buying may not always be linked to firm profitability. It is implied that cross-buying will exert a negative impact on profitability, thereby calling for further examination of cross-buying behavior. By developing a one dimensional model (brand dispersion index), we found that high level of cross-buying at period t has a positive impact on increasing the frequency and transaction size of customer visits in the subsequent (t+1) period. In addition, cross-buying can be unprofitable when the moderating effect of spending growth on the relationship between the level of cross-buying propensity and transaction size is accounted for. Specifically, the effect of cross-buying on transaction size weakens when the customer's spending size is shrinking. Managers should be aware that cross-buying will not always link to an increase in sales (unprofitable cross-buying conditions). Additionally, firms should be able to distinguish between customers who tend to patronize a limited number of brands and customers who tend to patronize various different brands by adopting a brand dispersion index model.

3 - The Dark Side of Transaction-Specific Investments: An Experimental Study

Raghabendra KC, Cambridge Judge Business School, University of Cambridge, Trumpington Street, Cambridge, CB2 1AG, United Kingdom, rk492@cam.ac.uk, Dominique Lauga, Vincent Mak

Previous literature has established empirical evidence of the "dark side" of transaction-specific investments in customer relationships, with a focus on the risk of ex post reneging by the other party. However, the evidence has been largely survey based, and cannot demonstrate a clear causal link between transaction-specific investments, benefits (if any) of the parties involved, and ex post reneging. In the present study, we examine these issues using laboratory experimentation. Our experiment captures the relevant decision situation via a modification of the ultimatum bargaining game, with which the proposer may forego an outside option (in effect paying an opportunity cost as a transaction-specific investment) in return for an increase in the total amount to be bargained. The investment decision therefore involves a tradeoff between reduced protection against subsequent bargaining breakdown, and an increase in the total bargained value. Our results suggest that, typically, transaction-specific investment would not be reciprocated by the non-investing party during ex post bargaining. However, the investing parties in our experiment also did not demand more relative to a comparable control condition, so that bargaining breakdown did not occur more frequently with investment. As a result, the non-investing party typically extracted all the surplus from the investment, while the investing party did not benefit from the investment on average. Our study demonstrates that, while transaction-specific investments have a "dark side", the "dark side" does not lie in the risk of reneging per se, but in the investing party being unable to gain from the increased value.

4 - A Dynamic Structural Model for Heterogeneous Mobile Data Consumption and Promotion Design

Jun Duan, University of Texas at Austin, 1 University Station B6700, 2100 Speedway Cba 7.250, Austin, TX, 78712, United States, duanj@mccombs.utexas.edu, Lizhen Xu, Yu Hu, Cheng Yuan, Yan Zhu

We study how individual smartphone users dynamically use mobile data every day facing limited monthly data plans. Employing a unique data set on users' daily data usage from a leading mobile carrier in China, we develop a dynamic structural model in which an individual user maximizes her data usage utility considering the intertemporal trade-o between current and future consumption. We construct the model with individual-speci c parameters to fullycapture the signi cant heterogeneity among mobile data users (e.g., in price sensitivity). We derive theoretical properties of the model to uncover users' dynamic usage patterns. Based on these theoretical results, we develop an empirical test for forward-looking usage patterns to control for possible consumer myopia. We estimate the structural parameters individually for those users with usage patterns consistent with our dynamic model in a computationally efficientmanner. Simulated usage data based on the model estimates well capture the dynamic trends observed in the actual data. We conduct counterfactual simulation studies to design pro table promotion strategies near month end when excess bandwidth capacity is often available.

■ SC04

3D, 3rd Floor

International Marketing

Contributed Session

Chair: Guang-Xin Xie, University of Massachusetts, College of Management, 100 Morrissey Boulevard, Boston, MA, 02125, United States, vincent.xie@umb.edu

1 - Mutual Effects of Macro and Micro Country Images on Consumers' Willingness to Buy "Made-in-China" Products: Evidence from UK and US

Yi Wu, Tsinghua University, Beijing, China, wuy5.15@sem.tsinghua.edu.cn, Jiaxun He

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 country image. Also, in consistent of earlier work, we examined how macro country image affects consumers' evaluation on Chinese products via micro country image. Large-scale online survey with 1222 respondents was conducted in both US and England, with ten most common categories in local markets selected as study objects. Data Analysis indicate that: (1) Multi-dimensionality of macro country image is validated through both EFA and CFA; (2) Both political and economic macro country image positively and directly affects micro country image, while they only poses indirect positive effects on consumers' willingness to buy "made-in-China" products. Similar results can be generated in both markets.This paper mainly contributes to previous literature by identifying the inner dimensionality of macro country image, while currently several scholars pays more attention to the combination effect of both cognitive (i.e. macro country image) and affective country image. Specifically, due to the different political systems between China and western developed countries, American and British consumers perceive political and economic macro country images differentially and saliently. In addition, the mutual effects of these macro image dimensions and micro country image on consumers' product attitude are examined. Furthermore, important managerial implications for policy makers and managers are discussed in the end.

2 - Is there Country of Origin Bias in the Mobile Handset Market?

Daegon Cho, KAIST College of Business, Hoegi-ro 85 Dongdaemun-gu, Seoul, 02455, Korea, Republic of, dgcho@business.kaist.ac.kr, Moon Young Kang

This study aims to examine the effect of brand and country-of-origin (CoO) on consumer demand in the global mobile handset market, with an emphasis on the home-country bias of multi-national manufacturers. Smartphones can be treated as differentiated products, and global brands are competing across borders. While it appears that domestic brands gained relatively high market share (e.g., Apple in the United States and Samsung in Korea), no study attempts to quantify the number of units sold can be related to home-country bias. The effect of CoO has long been of interest in the marketing literature, and most previous studies suggested that CoO may give a substantial influence on product evaluation and purchasing behaviors. It is also widely believed that the impact of CoO may differ across product type, competition strength, industry characteristics, and country's level of development; therefore, considering its huge market size, an empirical investigation of the smartphone industry is necessary. To analyze, we use a unique dataset on quarterly smartphone sales manufactured by more than twenty different brands in fifteen developing and developed countries. A random coefficient discrete choice model is applied for estimation by accounting for possible heterogeneity. The results of this study provide managerial implications for both large multinational firms and small local firms of the industry and offer a few recommendations for policymakers by understanding market demand and competitive positioning of firms.

3 - Cultural Influence of the Use of Social Media in Consumer Complaint

Guang-Xin Xie, Associate Professor of Marketing, University of Massachusetts-Boston, College of Management, 100 Morrissey Blvd., Boston, MA, 02125, United States, vincent.xie@umb.edu, Raymond Liu, Jessie M Quintero Johnson

With the increasing adoption of social media platforms, consumer complaint behaviors have evolved from being relatively more individual-focused to network-focused. To date, though, how and why consumers use social media to complain about negative product or service experiences remain inconclusive, especially in the cross-cultural domain. The present research addresses this gap by examining the cultural influence on consumer tendency to complain via social media in China and the U.S. A series of surveys reveal interesting within- and between-country patterns. In particular, vertical individualism and horizontal collectivism are positively associated with the complaint tendency in the China sample. By contrast, the U.S. sample supports the positive effect of vertical individualism only. Further, the effects of vertical individualism are mediated by consumer motives to pursue personal (vs. social) benefits using social media in both samples. This research contributes to the cross-cultural marketing literature by specifying the effects of individualism-collectivism on consumer complaint tendencies in line with the vertical-horizontal dimension. The findings also shed light on the underlying mechanisms based on consumer self- vs. others-focused motives, providing a novel and in-depth understanding of the cultural influence on consumer complaints via social media.

■ SC05

3E, 3rd Floor

Consumer Behavior: Perception III

Contributed Session

Chair: Yi-Wen Chien, NTU, Dept of Bussiness Admin 1, Sec 4, Roosevelt Road, Taipei, 10617, Taiwan, ychien@ntu.edu.tw

1 - Exploring Luxury Brand Eco-Friendly Images in Online User-Generated Content and Materialism Impact

Tiffany Ting-Yu Wang, Associate Professor, Kainan U, No.1 Kainan Road, Luzhu Dist, Taoyuan City, 33857, Taiwan, tiffanyt.wang122@gmail.com

Despite negative images of exploiting rare natural resources such as ivory and fur, some luxury brands have recently undergone shifts to more eco-friendly production. In this study, we explore two luxury brands' eco-friendly vs. -unfriendly images as revealed in online user-generated content through mining relevant e-news comments and social media posts by text analytics, including refined sentiment analysis. We develop a corpus of e-news comments and tweets items regarding luxury brands for a one-month period. The corpus is further coded and prepared for analysis by text mining algorithms. With additional evidence shown in survey data analysis, the implications about how consumer materialism values influence perceptions of luxury brand eco-friendliness will shed light on digital branding strategies.

2 - How Peers' Choices Affect Decision Maker's Risk Perception?

Hui Cen, PhD Candidate, The Chinese University of Hong Kong, CYT Building, 11th Floor, Hong Kong, Hong Kong, huicen@baf.cuhk.edu.hk, Hwang Kim, Jianmin Jia

We study how risk perception of the risky attributes of products can be affected by peer influence. Risky attributes can prevalently 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 maker's risk perception of the lottery can be influenced by peers' choices. To study this further, we develop a choice model wherein peer influence on both preference and risk perception 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 crucial roles in consumers' decision making process. We offer valuable managerial implications for how to leverage the social networks to reduce risk perception to help marketers design new products and accelerate new product diffusions.

3 - Examining the Influences of Target-Context Category Congruency, Target Ambiguity, and Dimensional Ranges on Context Effects Through the Dimensional Range Overlap Model

Yi-Wen Chien, Associate Professor, NTU, Dept. of Bussiness Administration, 1, Sec. 4, Roosevelt Road, Taipei, 10617, Taiwan, ychien@ntu.edu.tw, Chung-Chiang Hsiao

Many irrelevant 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. Dimensional 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 (the ambiguity of target: familiar/new) X 2 (the category of context: target category/non-target category) X 2 (dimensional range: overlap/non-overlap) between-participants factorial design and the results demonstrate that it is the range overlap/non-overlap that determinates 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 possess 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.

■ SC06

3G, 3rd Floor

Customer Lifetime Value

Contributed Session

Chair: Patrick Bachmann, University of Zurich, Andreasstrasse 15, Zurich, 8050, Switzerland, patrick.bachmann@business.uzh.ch

1 - Does the Cellphone Agreement have an Influence on the Consumer Lifetime Value?

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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 belongs to non-contractual settings, while plans with agreement belongs to semi-contractual settings. In the past most of the telecommunication services belongs 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 the 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 201101 to 201311. We set the monthly charge data with cellphone agreement as 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 Glady

Multichannel retailers need to develop effective tools for customer segmentation and resource allocation and the relationship 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 the 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 improve 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 relationship 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 among channels and marketing activities.

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

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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 customers buy products of all categories offered while others buy a part of their assortment. Moreover, the purchase frequency varies by customers depending on what kind of products they purchase. In this study, we propose a new model to predict buying behavior of customers 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 Hardie 2009). We use 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 (Abe 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 ISMS Durables Goods Dataset 1, and compared to the existing models of this field.

4 - Time-Varying Covariates in the Pareto-NBD Model

Patrick Bachmann, University of Zurich, Andreasstrasse 15, Zurich, 8050, Switzerland, patrick.bachmann@business.uzh.ch, Markus Meierer, Rene Algesheimer

Customer lifetime value (CLV) is a central metric to describe long-term economic value of customers. To model CLV in a non-contractual business setting, probabilistic customer attrition models such as the Pareto/NBD model are the preferred choice in literature and practice. Their ability to simultaneously forecast customer lifetime and future transactions is unique.However, empirical evidence suggests that standard probabilistic customer attrition models do not outperform basic management heuristics. A reason for the limited predictive performance of the Pareto/NBD model is the missing ability to control for time-varying, external determinants.In particular, studies have found that two categories of time-varying, external determinants, i.e. regularity patterns and non-random direct marketing activities, influence the accuracy of CLV estimates. Industries with strong seasonal business or strong direct-marketing activity would profit from a statistical approach that addresses this shortcoming. Recently, an extension to model time-varying covariates in discrete non-contractual business setting has been proposed. However, for continuous non-contractual business settings no comparable approach has been published.This study proposes an extension of the Pareto/NBD model that allows to model time-varying covariates in continuous non-contractual settings. Thereby, time-varying covariates can influence either the purchase or the attrition process, or both.Our findings have strong implications for both, marketing practice and research. Besides giving detailed recommendations on when to use which modeling approach, we also provide practical advice for estimating these models.

■ SC07

3B, 3rd Floor

Consumer Behavior: Preference III

Contributed Session

Chair: Keith Botner, Lehigh University, 621 Taylor Street, Bethlehem, PA, 18015, United States, keith.botner@lehigh.edu

1 - How Regulatory Fit Affects Financial Product Choice in Single and Joint Decision Contexts

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Regulatory fit occurs when a consumer pursues a goal in a manner that is consistent with their regulatory orientation (prevention or promotion). We propose that a consumer's financial product decision can be influenced by the level of regulatory fit concerning the advertisement of the product and the mode in which the product is evaluated (single vs. joint). Specifically, we investigate whether experiencing regulatory fit with a financial product advertisement will lead consumers to a) have higher confidence in their choice and b) be willing to invest higher amounts. Further, we also examine whether fit between the respondents regulatory orientation choice strategy and evaluation mode impacts confidence in and choice of financial product. A combination of classic and discrete choice experiments (DCE's) is used. Experimental results suggest that regulatory fit does impact confidence and investment decisions. A factor-analytic choice model is used to retrieve changes in consumers' aggregate preferences and patterns in the preference heterogeneity due to regulatory choice strategy fit. Our study provides marketing managers and public policy makers' strategic insight into how financial decisions can be influenced by regulatory fit.

2 - Product Customization with Context-Dependent Preference

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Behavioral economics suggests that individuals may compare the options' multiple attributes separately, and preference between options is often dependent of the presence of other options or the specific choice context. When consumers exhibit context-dependent preferences, should competing firms change their product customization strategies? To address this question, we construct a theoretical model involving two firms, each offering a product which is potentially customizable. Specifically, the product is characterized by two non-price attributes. Each firm could choose whether and which attribute(s) to customize, leading to distinct product customization strategies: complete customization in which both firms customize on both attributes, partial customization on the same attribute, partial customization on different attributes, and no product customization where both firms offer only standard products. We consider a three-stage game. Firstly, the firms choose their product customization strategies simultaneously, which will become the common knowledge at the second stage where both firms simultaneously set their prices. Finally, customers choose whether and which product to buy from with context-dependent preference. We derive the equilibrium of such a game and discuss the results and implications.

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 and 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.

■ SC09

5B, 5th Floor

Health Science II

Contributed Session

Chair: Tongil Kim, Emory University, 1300 Clifton Rd NE, Atlanta, GA, 30322, United States, ti.kim@emory.edu

1 - Behavioral Violations of Consumption

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Statistical models for choices buyers make have a rich history in economics and marketing. An investigation of consumption patterns of consumers, in contrast, has drawn a limited attention. Consider a context in which respondents report their intake of acetaminophen, a common analgesic. For this over-the-counter medication, which is also the empirical focus of this paper, it is important that consumers don't take acetaminophen too soon, or too much. The purpose of this paper is to develop a statistical model that helps quantify such behavioral violations of consumption using diary data and to suggest interventions to prevent them. We build a hidden Markov model to uncover the transitions among latent consumption states and their effect on consumption behavior. Conditional on the current state, we propose a joint model of consumption timing (when) and quantity (how much). The timing decision is captured by using a discrete Proportional Hazard Model and the quantity decision is modeled as a linear function of the current state and past behaviors. We apply our model to consumption dairy data in which over 5000 respondents report their intake of acetaminophen. We uncover the extent of behavioral violations (too much/occasion, too soon, and >4000mg consumption over a 24 hour window), identify individuals who are at the greatest risk of violating the recommended dose, and recommend strategies to reduce such violations. Our proposed methodology is applicable to other categories (e.g. foods and soft drinks) to help identify "at risk" consumer groups and suggest methods to correct undesirable behaviors.

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 needs 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, ti.kim@emory.edu, Diwas 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 counterfactural analysis confirms that patients choose much closer hospitals if advertising is banned.

■ SC10

5C, 5th Floor

Working Paper XXI

Contributed Session

Chair: Robert Rooderkerk, Rotterdam School of Management, Erasmus University, Burgemeester Oudlaan 50, Rotterdam, 3062 PA, Netherlands, rooderkerk@rsm.nl

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

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A product's position on the shop 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 an 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, lies in utilizing spatial demand parameters as inputs to a simple optimization routine.

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

Robert Rooderkerk, Assistant Professor of Empirical Research Methods, Rotterdam School of Management, Erasmus University, Burgemeester Oudlaan 50, Rotterdam, 3062 PA, Netherlands, rooderkerk@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, informs@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 Chaudhry

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' responses 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, informs@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 ef- fects 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 encouragements to 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 focal 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: Sylvia 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

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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.

2 - How Do Vertical Contracts Affect Product Availability? An Empirical Study of the Grocery Industry

Sylvia 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 assortments 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, 12, Shanghai, China, 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, jjia@hku.hk, Jianmin Jia, Christopher K. Hsee, 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 Wittkowski, Fue Zeng

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, 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@bwl.lmu.de, 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

5H, 5th Floor

Managing Consumer Engagement Online

Contributed Session

Chair: Myoung-Jin Chae, Georgia Tech, 800 West Peachtree Street NW, Atlanta, GA, 30308, United States, jinnychae@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 smart phones 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 text 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 - Cultivate Consumer Engagement with Mobile Advertising and Gameification

Siyuan Liu, Visiting Assistant Professor of Information System, Pennsylvania State University, University Park, PA, United States, sxl68@psu.edu, Lei Wang, 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.

3 - 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, jinnychae@gmail.com, Omar Rodriguez-Vila, Sundar G Bharadwaj

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 interpret, 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

5I, 5th Floor

Online Shopping and Purchase Behaviors

Contributed Session

Chair: Wei Zhang, Iowa State University, 3123 Gerdin Business Building, Ames, IA, 50011, United States, wtzhang@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, Tuan Q. Phan, Khim Yong Goh

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 brick-and-mortar retailer to study the offline purchase behavior of the SNS brand page members. Using a suite of statistical and text mining approaches, we present evidence that individuals on joining the brand page reduce their offline purchase expenditure on average. However, this reduction is significantly attenuated for individuals who self-present more than others on the SNS. The findings from our study not only illuminate our understanding of the economic impacts of online self-presentation, but also present newer ways of performing behavioral targeting of online users.

2 - Online Social Shopping: Impact of Social and Commercial Activities on User Behaviors

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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 commercial activities. In this study we propose a conceptual framework of user behavior in an online social shopping environment using a set of social and commercial actions that users can take on the website. Using these set of actions users' behavior is captured in their four distinct states: engagement, interaction, shopping, and transaction. Furthermore, their behavior into these four states is operationalized using incidence and time spent. We define attributes of user actions through their ranking and distance. Then, using a novel clickstream dataset at individual level we model how these action attributes (ranking and distance) along with situational variables and user characteristics affect user incidence and time spent in each of these four states. Our results suggest ranking of consumer actions and distance between their online activities have significant effects on their incidence as well as time spent on an online social shopping site. The insights from this study can be utilized to design the online social shopping site effectively using only the customers' path navigational clickstream data from the parent website only.

3 - Retargeting Pornography: How Adult Content Affects Purchase Decisions

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In a recent press release, pornhub.com - 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 (Ariely & 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 Bergh 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 Gerdin Business Building, Ames, IA, 50011, United States, wtzhang@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.

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