Peter Stüttgen

Contact Information

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Education

Carnegie Mellon University, Pittsburgh, PA (2006-present)
>   Ph.D. in Marketing (Expected December 2011)
>   Minor in Social Decision Sciences
>
>   M.S. in Industrial Administration (Marketing)

Berry College, Mount Berry, GA (2004-2005)
>   B.S. in Business Administration (Marketing)
>   Summa Cum Laude

Fachhochschule Koblenz, Remagen, Germany (2002-2004)

Research

Research Interests

- Non-Compensatory Choice Models
- Empirical Models of Consumer Behavior
- Bayesian Statistics

Working Papers

- 'A Satisficing Choice Model' with Peter Boatwright and Robert T. Monroe, revision invited at *Marketing Science*
- 'Stockouts and Restocking: Monitoring the Retailer From the Supplier's Perspective' with Peter Boatwright and Joseph B. Kadane, under review at the *Journal of Marketing Research*
- 'Adding Significance to the Implicit Association Test' with Joachim Vosgerau, Claude Messner, and Peter Boatwright, invited for resubmission at the *Journal of Personality and Social Psychology*

Work in Progress

- 'Maximizing or Satisficing? A Mixture Model to Identify Consumer Choice Rules' with Peter Boatwright
- 'Variety-Seeking and Must-Have Flavors'

Presentations

- 'A Satisficing Choice Model'
    - *Marketing Science Conference* (2011), Houston, TX
    - *Joint Statistical Meetings* (2011), Miami, FL
- 'Stockouts and Restocking: Monitoring the Retailer From the Supplier's Perspective'
    - *Haring Symposium* (2011), Bloomington, IN
      (titled: 'Identifying Stockouts and Shrinkage at the Micro-Level')
    - *Marketing Science Conference* (2009), Ann Arbor, MI
      (titled: 'Where's the Beef? Estimating inventory position, shrinkage, and out-of-stocks')
- 'Assessing the Assumptions Behind the IAT'
    - *Association of Consumer Research Conference* (2008), San Francisco, CA
- 'Masculinity and Sexuality in Advertising in Sports Publications in Four Countries'
    - *Conference of the Sports Marketing Association* (2005), Tempe, AZ
      (presented by Dr. Nancy Albers-Miller)

Teaching

Teaching Interests

- Marketing Analytics/Engineering
- Choice Models
- Pricing Strategy

Main Instructor

- Pricing
    - Carnegie Mellon University, Spring 2009
- Marketing Analytics
    - Carnegie Mellon University – Qatar campus, Spring 2012
- Principles of Marketing
    - Carnegie Mellon University – Qatar campus, Spring 2012

Recitation Leader

- Principles of Marketing
    - Carnegie Mellon University, Spring and Fall 2007
- Principles of Economics
    - Carnegie Mellon University – Qatar campus, Spring 2010

Teaching Assistant

- Regression Analysis
    - Carnegie Mellon University – Qatar campus, Spring 2010
- Intermediate Microeconomics
    - Carnegie Mellon University – Qatar Campus, Spring 2011

Selected Honors and Awards

- Travel Grant to the Joint Statistical Meetings 2011 by the Section on Marketing of the American Statistical Association
- AMA-Sheth Doctoral Consortium Fellow, Texas Christian University, 2010
- Doctoral Internationalization Consortium in Marketing at the University of Texas at Austin, selected participant, 2009
- INFORMS Doctoral Consortium Fellow, University of Michigan, 2009
- Haring Symposium, Indiana University, invited presentation, 2011
- William Larimer Mellon Fellowship, Carnegie Mellon University (2006-2011)
- Research grant from the Center for Behavioral Decision Research (2008)
- Who's Who Among Students in American Universities and Colleges 2006

Employment

Academic Positions

- Visiting Assistant Professor
  Carnegie Mellon University – Qatar campus
  Spring 2012

Other Positions

- International Paralympic Committee, Bonn, Germany
  Intern in the Membership Relations Services Department
  November 2002 – May 2004
- Heilpädagogischer Kindergarten Heiderhof, Bonn, Germany
  Civil Service at a kindergarten for challenged children
  September 2001 – June 2002

Miscellaneous

- Soccer
    - Coach (08/2010-05/2011) and Member (2006-2011) of the club team of Carnegie Mellon University
    - Member of the varsity team of Berry College (08/2004-12/2005)
        - NAIA All American 2005
    - Member of the semi-professional team Bonner SC in Bonn, Germany (07/2001-06/2004)
- Swing Dancing
    - Instructor for introductory Lindy Hop class (2011)
    - Member of Lindy Hop performance group (Fall 2009)

References

- **Dr. Peter Boatwright**
  Associate Professor of Marketing
  Tepper School of Business, Carnegie Mellon University
  Boatwright@cmu.edu

- **Dr. Joseph B. Kadane**
  Leonard J. Savage University Professor of Statistics, Emeritus
  Carnegie Mellon University
  Kadane@stat.cmu.edu

- **Dr. Joachim Vosgerau**
  Associate Professor of Marketing
  Tepper School of Business, Carnegie Mellon University
  Vosgerau@andrew.cmu.edu

Research Abstracts

A Satisficing Choice Model

While the assumption of utility-maximizing consumers has been challenged for decades, empirical applications of alternative choice rules are still very recent. We add to these growing body of literature by proposing a model based on Simon's idea of a "satisficing" decision maker. In contrast to previous models (including recent models implementing alternative choice rules), satisficing depends on the order in which alternatives are evaluated. We therefore conduct a visual conjoint experiment to collect search and choice data. We model search and choice jointly and allow for interdependence between them. The choice rule incorporates a conjunctive rule and, contrary to most previous models, does not rely on compensatory tradeoffs at all. The results strongly support the proposed model. We find that search is indeed influenced by product evaluations. More importantly, the model results strongly support the satisficing stopping rule. Finally, the proposed model comfortably outpredicts a standard utility maximizing model in a holdout prediction task.

Stockouts and Restocking:
Monitoring the Retailer from the Supplier's Perspective

Suppliers and retailers typically do not have identical incentives to avoid stockouts. Thus, the supplier needs to monitor the retailer's restocking efforts with the available data. We introduce a general model for this purpose and illustrate it using a specific application provided by a supplier to a national grocery chain. The model distinguishes between store stockouts (zero inventory in the store) vs. shelf stockouts (an empty shelf, but some inventory in other parts of the store), thereby identifying the cause of the stockout to be either a supply chain or a restocking issue. We find that the average stockout rates vary widely between stores, identifying two stores with stockout rates twice as high as for most other stores. Moreover, almost all stockouts are shelf stockouts. Thus, the model identifies stores that may have restocking issues. Stockouts lead to major losses in expected sales, where on average more than 60% of demand is lost when a stockout occurs. Finally, we also find major difference in shrinkage between stores, providing useful information to regional store managers.

Adding Significance to the Implicit Association Test

The Implicit Association Test has become one of the most widely used tools in psychology and related research areas. The IAT's validity and reliability, however, are still debated. We argue that the IAT's reliability, and thus its validity, strongly depends on the particular application (i.e., which attitudes are measured, which stimuli are used, and the sample). Thus, whether a given application for a given sample will achieve sufficient reliability cannot be answered *a priori*. Using extensive simulations, we demonstrate an easily calculated post-hoc method based on standard significance tests that enables researchers to test whether a given application reached sufficient reliability levels. Applying this straightforward method can thus enhance confidence in the results of a given IAT. In an empirical test, we manipulate the sources of error in a given IAT experimentally and show that our method is sensitive to otherwise unobservable sources of error.

Maximizing or Satisficing? A Mixture Model to Identify Consumer Choice Rules

We propose a mixture model allowing for both a satisficing choice rule and a standard compensatory utility maximizing choice rule. The model is estimated on data from visual conjoint experiments for different product categories. This allows us to explore not only inter-individual heterogeneity in choice rule usage, but also inter-category heterogeneity as well as effects of fatigue/experience with the choice task.

Variety Seeking and Must-Have Flavors

Consumers are known to be variety seeking, esp. when making simultaneous purchase decisions for multiple consumption experiences. However, they also may have clear preferences for certain flavors they always choose, the so-called "must-have" flavors. Using purchase data from the yogurt category, we propose a model to estimate must-have flavors (across shopping trips) as well as variety-seeking behavior (within one shopping trip) by inferring the unobserved evaluation sequence across products.