

# Rudolf-Harri Oberg

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INTERESTS	<i>Substantive:</i> Advertising, Online Marketplaces, Digital Economy, Consumer Decision-Making <i>Methodological:</i> Causal Inference, Structural Models, Experiments
EDUCATION	<b>Duke University</b> , Durham NC, USA July 2014 – May 2020 (expected) PhD program in Economics Thesis Committee: Carl Mela, Daniel Xu, Bryan Bollinger, Peter Arcidiacono  <b>University of Tartu</b> , Tartu, Estonia September 2013 – June 2014 MSc studies in mathematics  <b>University of Toronto</b> , Toronto, Ontario, Canada September 2012 – May 2013 (exchange year)  <b>University of Tartu</b> , Tartu, Estonia September 2009 – June 2013 B.A Economics, <i>cum laude</i> ; side-degree in mathematics
RESEARCH PROJECTS	Job Market Paper: 1. <b>Should Consumer Subsidies Be More Flexible? A Structural Analysis and Case Study of the Food Stamps Program</b> Works in Progress: 2. <b>Tackling External Validity in Marketing Decisions: The Case of Media Planning in Online Display Advertising</b> 3. <b>Consumption and Generation of Reviews in Online Platform Markets</b>
SCHOLARSHIPS AND AWARDS	Duke Graduate School Summer Research Fellowship (2018) Research Travel Grant, Economics Department Duke University (2017) Full Scholarship, Economics Department, Duke University (2014–2020)

Best Bachelor Thesis in Economics, University of Tartu (2013)  
3rd place, University of Tartu mathematics competition (2013)  
Honourable Mention award, International Mathematics Competition (IMC) (2012, 2013)  
Alice and Albert Tattar scholarship (2012)  
Silvere and Pant Memorial award (2012)  
KPMG scholarship (2011)

CONFERENCE PRESENTATIONS\* AND PARTICIPATION 40th ISMS Marketing Science Conference\*, Philadelphia, PA, June 2018  
Marketing Science Doctoral Consortium, Philadelphia, PA, June 2018  
Workshop on Quantitative Marketing and Structural Economics, St. Louis, MO, July 2017  
Conference on Digital Experimentation, Boston, MA, October 2016

PROFESSIONAL EXPERIENCE **Duke University, USA.**  
*Graduate assistant for Prof. Carl Mela* July 2016 – present

**Duke University, USA.**  
*Teaching assistant for Prof. Rachel Kranton* January 2016 – May 2016  
Course: Intermediate Microeconomic Theory

**Duke University, USA.**  
*Teaching assistant for Prof. Huseyin Yildirim* September 2015 – December 2015  
Course: Microeconomic Theory I (MA)

**University of Tartu, Estonia.**  
*Teaching assistant for Prof. Valdis Laan* February 2014 – June 2014  
Course: Algebra I

**University of Toronto, Toronto, Ontario, Canada.**  
*Research assistant for Prof. M. Tombak* September 2012 – May 2013

**Centre for Applied Social Sciences, Tartu, Estonia.**  
*Research assistant for K. Krillo* June 2011 – August 2011

SKILLS Languages: Estonian (native), English (fluent), French (intermediate)  
Computer Skills: R, Matlab, Gauss, L<sup>A</sup>T<sub>E</sub>X

SELECTED PHD  
COURSEWORK

Course	Description	Instructors
<b>Core Economics</b>		
ECON 701	Microeconomic Analysis I	Philipp Sadowski, Vijay Krishna
ECON 702	Macroeconomic Analysis I	Craig Burnside
ECON 703	Econometrics I	Federico Bugni
ECON 705	Microeconomic Analysis II	Curtis Taylor
ECON 706	Macroeconomic Analysis II	Juan Rubio Ramirez
ECON 707	Econometrics II	Andrew Patton, Matthew Masten
<b>Quant. Mktg and IO</b>		
BA 961	Quant. Marketing Res. Sem.	Carl Mela
ECON 881-11	R&D, Prod. & Tech. Change	Yi (Daniel) Xu
ECON 881-15	Models of Entry	Allan Collard-Wexler
ECON 881-20	Dynamic Discrete Choice	Peter Arcidiacono
ECON 881-14	Demand Estimation	James Roberts
<b>Econometrics and Statistics</b>		
ECON 883-09	Econometrics of Equil. and Simul.	Matthew Masten
ECON 883-03	Econometrics of Treatment Effects	Arnaud Maurel
ECON 883-14	Point and Partial Identification	Adam Rosen
STA 601	Bayesian and Modern Statistics	Rebecca Steorts
STA 831	Probability and Statistical Models	Mike West

REFERENCES

**Carl F. Mela** (Principal Advisor)

T. Austin Finch Foundation Professor of Business Administration

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RESEARCH  
ABSTRACTS

Job Market Paper:

**1. Should Consumer Subsidies Be More Flexible? A Structural Analysis and Case Study of the Food Stamps Program**

**Abstract:** Many government funded welfare programs provide its recipients in-kind transfers which are subject to different spending restrictions. What would be the consequences if benefits from such programs are replaced with more flexible benefits or simple cash benefits? In the context of SNAP (commonly known as the Food Stamps Program), we analyze the effect of SNAP benefits from the perspective of recipients (who care about overall consumer welfare) and the policymaker (who prefers that funds are used to buy food). To simulate consumer behavior under different benefit systems, we develop a structural model of consumer demand which integrates consumer decisions for brands, categories, and stores. Our main finding is that expanding food stamp benefits to include household goods would be preferred by both benefit recipients and the policymaker. The mechanism driving this result is that flexible benefits give access to a wider selection of items which provides greater incentives to visit stores. In addition, we quantify trade-offs between different benefit designs and also study the effect of banning benefit use on sweetened soda. Finally, our model of brand, category and store choice makes a technical contribution that could be interesting beyond the application considered in this paper.

Keywords: structural modeling, supermarket demand, food policy.

Works in Progress:

## **2. Tackling External Validity in Marketing Decisions: The case of Media Planning in Online Display Advertising**

**Abstract:** In this paper, we propose two ideas: (i) a method that measures ad effectiveness leveraging quasi-experimental variation in auction outcome data, and (ii) a model of optimization that helps decision makers account for parameter variability when setting advertising strategy. The two methods ((i) and (ii)) are integrated to develop a decision aid for advertisers tasked with setting campaign strategy, with a focus on out-of-sample performance. In the application, we examine parameter variability in the context of campaign-level decision variables (e.g., choice of audience segments, ad visuals, and ad placement) and study implications for optimal firm spending across publishers when launching a new campaign with design choices (e.g., new choice of audience segments, new ad visuals, new ad placement) that are not present in observed data.

**Keywords:** attribution modeling, multichannel marketing, causal inference, selection bias, robust optimization.

## **3. Consumption and Generation of Reviews in Online Platform Markets**

**Abstract:** In markets with many products – e.g., vacation rentals, consumer electronics, restaurants – consumers rarely have access to vertical quality measures (like hotel star ratings) and often rely on reviews written by other consumers to choose among products. Learning from reviews is complicated because review information is a mix of vertical quality signals and horizontal preferences of the respective reviewers who are often unknown to the customer reading reviews. As a result, review scores and content hide two types of quality signals, creating a challenging problem for the platform to order search alternatives and review content to match each customer’s tastes. In this paper, we develop a model that allows us to decompose review scores along two dimensions, corresponding to vertical and horizontal preferences. We use data from an online marketplace for vacation rentals and study how ordering search alternatives and review content based on two preference dimensions instead of one aggregated dimension affects search and choice, and the attendant implications for customer satisfaction and platform revenue.

**Keywords:** structural modeling, consumer reviews, platform design.