

RICARDO MONTOYA

Industrial Engineering Department
University of Chile
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EDUCATION

Graduate School of Business, Columbia University, NY, USA
Ph.D. Marketing, 2008.

Graduate School of Business, Columbia University, NY, USA
M.Phil. Marketing, 2005.

School of Engineering, University of Chile, Chile
Master in Operations Management, 2002.

School of Engineering, University of Chile, Chile
Industrial Engineer, 2002.

School of Engineering, University of Chile, Chile
Bachelor in Engineering Science, 1998.

RESEARCH INTERESTS

Development of methodologies to learn about consumer and firm behavior with applications to marketing, economics and operations management problems.

Marketing: retailing, pricing, marketing/operations management interface, customer relationship management, reward programs, dynamic allocation of marketing resources, product design, eye-tracking, non-compensatory decision processes.

Operations Management: optimal product design, feature selection, dynamic pricing, out of stocks, marketing/operations management interface.

ACADEMIC EXPERIENCE

UNIVERSITY OF CHILE, INDUSTRIAL ENGINEERING DEPARTMENT
Associate Professor (March 2019-Present)
Assistant Professor (August 2008-March 2019)

COLUMBIA UNIVERSITY
Lecturer (Summer 2008 – 2012)

JOURNAL ARTICLES

1. “Components of attentional effort for repeated tasks ” with Andres Musalem, Martin Meißner, and Joel Huber (2020). *Journal of Behavioral Decision Making*, forthcoming.
2. “A hidden Markov model to detect on-shelf out-of-stocks using point-of-sale data,” with Carlos Gonzalez (2019). *Manufacturing and Service Operations Management*, 21(4):932-948.
3. “Buying free rewards: the impact of a points-plus-cash promotion on purchase and reward redemption,” with Constanza Flores (2019). *Marketing Letters*, 30, 107-118.
4. “The effect of house ads on multichannel sales,” with Marcel Goic and Rodolfo Alvarez (2018). *Journal of Interactive Marketing*, 42, 32-45.
5. “Simultaneous preference estimation and heterogeneity control for choice-based conjoint via support vector machines,” with Sebastián Maldonado and Julio Lopez (2017). *Journal of the Operational Research Society*, 68 (1), 1323-1334.
6. “Embedded heterogeneous feature selection for conjoint analysis: a SVM approach using L1 penalty,” with Sebastián Maldonado and Julio Lopez (2017). *Applied Intelligence*, 46, 775-787.
7. “Contingent preannounced pricing policies with strategic consumers,” with Jose Correa and Charles Thraves (2016). *Operations Research*, 64(1),251-272.
8. “Advanced conjoint analysis using feature selection via support vector machines,” with Sebastián Maldonado and Richard Weber (2015). *European Journal of Operational Research*, 241, 564–574.
9. “Dynamic learning in behavioral games: A hidden Markov mixture of experts approach,” with Asim Ansari and Oded Netzer (2012). *Quantitative Marketing and Economics*, 10, 475–503.
10. “The design of durable goods,” with Oded Koenigsberg and Rajeev Kohli (2011). *Marketing Science*, 30(1), 111-122.
11. “Package sizes decisions,” with Oded Koenigsberg and Rajeev Kohli (2010). *Management Science*, 56(3), 485-494.
12. “Dynamic allocation of pharmaceutical detailing and sampling for long-term profitability,” with Oded Netzer and Kamel Jedidi (2010). *Marketing Science*, 29(5), 909-924.
13. “Linear penalization support vector machines for feature selection,” with Jaime Miranda and Richard Weber (2005). *Lecture Notes in Computer Science*, 3776, 188-192.

BOOK CHAPTERS

“Dynamic marketing mix allocation for long-term profitability,” Co-authors: Kamel Jedidi and Oded Netzer (2016). In **From Little's Law to Marketing Science: Essays in Honor of John D.C. Little**.

WORKING PAPERS

“Heterogeneity in HMMs: Allowing for heterogeneity in the number of states,” with Nicolás Padilla and Oded Netzer.

“Probabilistic lexicographic models,” with Kamel Jedidi and Rajeev Kohli.

“Probabilistic choice in optimal product design,” with Rajeev Kohli.

WORK IN PROGRESS

“The effects of reward programs,” with Ran Kivetz and Oded Netzer.

“Identification of attribute non attendance using SVM,” with Verónica Diaz and Sebastián Maldonado.

“The effect of pregnancy and child birth on consumption behavior,” with Verónica Diaz and Oded Netzer.

“Disentangling the short and long-term effects of marketing actions: A HMM approach,” with Eva Ascarza, Oded Netzer, and Nicolás Padilla.

CONFERENCE PRESENTATIONS

Montoya, Ricardo (2018), “Optimal pricing of points in points plus cash reward programs,” XL Marketing Science Conference, INFORMS, Temple University, Philadelphia, Pennsylvania.

Montoya, Ricardo and Carlos Gonzalez (2017), “A hidden Markov model to detect on-shelf out-of-stocks using point-of-sales data,” XXXIX Marketing Science Conference, INFORMS, University of Southern California, Los Angeles, California.

Montoya, Ricardo and Carlos Gonzalez (2016), “A hidden Markov model to detect on-shelf out-of-stocks using point-of-sales data,” XXXVIII Marketing Science Conference, INFORMS, Fudan University, Shanghai, China.

- Montoya, Ricardo, Andrés Musalem, and Marcelo Olivares (2015), "Stock-out detection system based on sales transaction data," Informs Conference, Philadelphia, Pennsylvania.
- Montoya, Ricardo, Sebastián Maldonado, and Julio Lopez (2015), "Identifying relevant attributes in conjoint analysis using support vector machines," XXXVII Marketing Science Conference, INFORMS, Johns Hopkins University, Baltimore, Maryland.
- Montoya, Ricardo, Marcelo Olivares (2013), "Empirical analysis of the effect of out-of-stocks of fast-moving products on customer behavior," XXXV Marketing Science Conference, INFORMS, Özyeğin University, Istanbul, Turkey.
- Montoya, Ricardo, Jose Correa, and Charles Thraves (2012), "Contingent Pricing Policies with Strategic Consumers," XXXIV Marketing Science Conference, INFORMS, Boston University, Boston.
- Montoya, Ricardo, Ran Kivetz, and Oded Netzer (2011), "The Effects of Loyalty Programs," XXXIII Marketing Science Conference, INFORMS, Rice University, Houston.
- Montoya, Ricardo, Rajeev Kohli, and Kamel Jedidi (2010), "A Probabilistic Lexicographic Model," XXXII Marketing Science Conference, INFORMS, University of Cologne, Germany.
- Montoya, Ricardo, Oded Netzer, and Asim Ansari (2009), "Dynamic Learning in Behavioral Games: A Hidden Markov Approach," XXXI Marketing Science Conference, INFORMS, University of Michigan, Michigan.
- Montoya, Ricardo, Rajeev Kohli, and Kamel Jedidi (2009), "A Probabilistic Lexicographic Model," XXXI Marketing Science Conference, INFORMS, University of Michigan, Michigan.
- Montoya, Ricardo, Oded Netzer, and Asim Ansari (2009), "Dynamic Learning in Behavioral Games: A Hidden Markov Approach," Marketing Dynamics Conference, University of Waikato, New Zealand.
- Montoya, Ricardo, Oded Netzer, and Kamel Jedidi (2008), "Dynamic Marketing Mix Allocation for Long-term Profitability," XXX Marketing Science Conference, INFORMS, University of British Columbia, Vancouver, Canada.
- Montoya, Ricardo, Oded Netzer, and Kamel Jedidi (2007), "Dynamic Marketing Mix Allocation for Long-term Profitability," Marketing Dynamics Conference, University of Groningen, The Netherlands.
- Montoya, Ricardo, Oded Netzer, and Kamel Jedidi (2007), "Dynamic Marketing Mix Allocation for Long-term Profitability," XXIX Marketing Science Conference, INFORMS, Singapore Management University, Singapore.
- Montoya, Ricardo, Oded Netzer, and Kamel Jedidi (2006), "Managing Customers through Marketing Mix Allocation for Long-term Profitability," XXVIII Marketing Science Conference, INFORMS, University of Pittsburgh, Pittsburgh, Pennsylvania.
- Montoya, Ricardo, and Richard Weber (2002), "Penalized Support Vector Machines," XI Latin-Ibero-American Conference on Operations Research and Systems, Concepción, Chile.
- Varas, Samuel, and Ricardo Montoya (2002), "Optimal Attorneys' Allocation," XI Latin-Ibero-American Conference on Operations Research and Systems, Concepción, Chile.

HONORS AND AWARDS

Teaching Excellence Award, Global MBA, University of Chile, 2012.
Best Full-time Professor. Department of Industrial Engineering, University of Chile, 2010.
Alden G. Clayton Doctoral Dissertation Proposal Competition, Honorable mention, 2006.
AMA-Sheth Foundation Doctoral Consortium Fellow, 2006
INFORMS Marketing Science Doctoral Consortium Fellow, 2006-2007
Rudolph Fellow, Columbia Business School, 2005
Doctoral Fellowship, Graduate School of Business, Columbia University, 2003.
Presidente de la Republica, Fellowship, MIDEPLAN, Chile, 2003.
Remarkable Student, School of Engineering, University of Chile, 1997- 2000. (top 5% of 4,000 students).
Remarkable Student, Industrial Engineering Department, School of Engineering, University of Chile, 2000 -2001.
Junior instructor grant, School of Engineering, University of Chile.

ACADEMIC SERVICE

Reviewer for: Marketing Science, Management Science, Manufacturing Service and Operations Management, Journal of Marketing Research, International Journal of Research in Marketing, European Journal of Operational Research, Naval Research Logistics, Annals of Operations Research, Journal of the Operational Research Society, Production and Operations Management, Journal of Choice Modelling, Alden G. Clayton Dissertation Proposal Award, FONDECYT (The Chilean Research Fund Council).

DOCTORAL THESIS & DOCTORAL QUALIFICATION EXAM COMMITTEES

Verónica Diaz (Universidad de Chile's Industrial Engineering Department, Complex Engineering Systems, Thesis Advisor, graduation year: 2020)

Luis Aburto (Universidad de Chile's Industrial Engineering Department, Complex Engineering Systems, Qualification Exam Committee Chair, exam year: 2016)

Daniel Yung (Universidad de Chile's Industrial Engineering Department, Complex Engineering Systems, Qualification Exam Committee Member, exam year: 2016)

Juan Perez (Universidad de Chile's Industrial Engineering Department, Complex Engineering Systems, Thesis Committee Member, graduation year: 2012)

Sebastián Maldonado (Universidad de Chile's Industrial Engineering Department, Complex Engineering Systems, Thesis Committee Member, graduation year: 2011)

GRANTS

Fondecyt Project # 1151395: "Product design and assortment planning with non-compensatory preferences under competition". Role: Principal Investigator. Co-Investigator: Denis Saure.

Fondecyt Project # 11110173: "Probabilistic non-compensatory choice models". Role: Principal Investigator.

Fondef Project # ID14I10388: "Desarrollo de Tecnologías para Mejorar la Experiencia de Compra de los Clientes en un Ambiente Multicanal" (translation: "Development of technologies to improve customers' purchase experience on a multichannel environment")

Fondecyt Project # 1120898: "Estimating the Value of Customer Service in Retailing". Role: Co-Investigator. Principal Investigator: Marcelo Olivares.

Fondef Project # IT13I20031: "Desarrollo de una herramienta para la evaluación económica de niveles de servicio al cliente en retail" (translation: "Development of a tool for the economic evaluation of service levels towards customers in retail").

Complex Engineering Systems Institute (ISCI, Basal #AFB180003). Role: Researcher. The institute has received funding from the Millenium Science Initiative (Ministry of Economics, Development and Tourism) and Conicyt/ANID.

TEACHING EXPERIENCE

UNIVERSITY OF CHILE

Appointed Instructor in the following undergraduate courses:

Marketing Analytics, Fall 2016-2019
Introduction to Marketing, Fall 2009-2015
Optimization, Fall 2002
Marketing Research, Spring 2002
Marketing Models, Fall 2003

graduate courses

Operations Management in the Service Industry, Spring 2011, Fall 2014, Spring 2016, Spring 2018 (Master in Operations Management)
Marketing I, Spring 2009-2014 (Global MBA)
Marketing I, Fall 2010 (MBA)

COLUMBIA UNIVERSITY

Lecturer:

Introduction to Marketing and Marketing Management (core MS course, Summer 2008 - 2012)

ADMINISTRATIVE SERVICE AND CONFERENCE ORGANIZATION

Organizing Committee member of the 2020 University of Chile's Management Science Workshop, Puerto Varas, Chile.

Organizing Committee member of the 2017 University of Chile's Management Science Workshop, Puerto Varas, Chile.

Search and Hiring Committee, Industrial Engineering Department, University of Chile, 2017-present

Organizing Committee member of the 2016 University of Chile's Management Science Workshop, San Pedro de Atacama, Chile.

Advisory Board, Global MBA Program, University of Chile 2012-2016

Director Center of Retailing (CERET), University of Chile (2011-2014)

Elected Council Member, Industrial Engineering Department, University of Chile (2011-2015).

Workshop Coordinator, "New Trends in Management Science and Economics", Department of Industrial Engineering, University of Chile, 2009 – 2013.

INDUSTRY PROJECTS

"Designing a new reward program at Domino restaurant". The company is determining the key elements of its new Reward Program. 2017-2018.

"Methodology to determine the Breakage rate for Latam Airlines", with Marcel Goic. 2015.

"Methodology for the pricing of TV advertising", with Marcel Goic. This methodology was developed for one of the largest Chilean TV networks. 2014.

"Methodology to generate out of stock early warnings", with Andres Musalem and Marcelo Olivares. This methodology was developed for one of the largest global retailers. 2013-2014.

LANGUAGES

English and Spanish (native).