# Ryan James Martin

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Canada K1A 0G9 Date: February 2020

#### Positions Held

Senior Economist, Bank of Canada Since July 2019

## Education

Ph.D. in Economics, UCLA	June 2019
M.A. in Economics, UCLA	April 2015
Graduate Statistics Minor (Unofficial–9 Courses, 3.97 GPA), UCLA	June 2017
Graduate Math Training (Real Analysis 245ABC, Prob 275BC), UCLA	June 2017
B.S. Math (Probability and Statistics), University of California, San Diego	June 2012

#### Thesis Advisors

John Asker, Rosa Matzkin, Denis Chetverikov, Jinyong Hahn, Elisabeth Honka

## Working Papers

Identifying Consumer-Welfare Changes when Online Search Platforms Change Their Lists of Search Results.

Abstract: Online search platforms influence product demand through their choices of how to order search results in response to their users' queries. I study the identification of consumer-welfare changes in response to exogenous changes in these choices. I focus on the case of consumers engaging in costly searches for a single, indivisible (discrete) product among a collection of substitutes. I show that exact consumer-welfare changes—that is, compensating variation and equivalent variation—can be calculated with the use of straightforward integrals of the aggregate demand. I apply my results to shopping data provided by an online travel agency (OTA). I estimate that when the OTA changes the way it orders search results from random to its proprietary method, welfare improves by an average of \$8.11 per user. I estimate an average welfare loss of \$23.87 per user when the OTA removes the top five products from all of its search-result lists.

### Bank-Note-Demand Volatility and Crises in Canada

Abstract: I study the volatility of the demand for Canadian bank notes from January 1998 until August 2020. I use GARCH variance estimates, semi-parametric regression, and visualizations as my primary analytic tools. I find bank-note variation is highest from December 1999 through January 2000 and from March 2020 through May 2020. December 1999 through January 2000 correspond to the swift run-up and subsequent lapse of the Year 2000 (Y2K) Crisis fears in Canada. March 2020 through May 2020 correspond to the height of Canadian COVID-19 cases and government responses. In contrast, times of other recent financial crises are weakly associated with bank-note variation. I find that net withdrawals in December 1999 reflect a relative increase in the demand for \$100 notes, while net withdrawals in March through May 2020 reflect a relative increase in the demand for \$20 and \$50 notes, with a decrease in the relative demand for \$100. The relative demand for \$5 and \$10 notes was stable during both events.

### Professional Experience

Research Intern for Justin Rao and Georgios Zervas, Microsoft (MSR)

### **Awards and Honors**

Graduate Research Mentorship with Professor Rosa Matzkin, UCLA

Fall 2015–Spring 2016

### Skills

Programming: R, Python, JavaScript, SQL, Stata, Matlab, C++, C#, Java, Go, Bash, LATEX Language: English (native); Intermediate Chinese, Korean, Japanese, Spanish; Beginning French

#### Presentations

Competition Bureau Canada	February 2020
Bank of Canada Microeconometrics and Survey Methodology Conference	August 2019
Bank of Canada Annual Conference (Poster)	September 2019
Federal Trade Commission	February 2019
Federal Communications Commission	February 2019

### **Additional Interests**

Website Development for sharing compelling data science visualizations:

- Single Page Applications built with Python (Flask), JavaScript (React Framework), and PostgreSQL
- Static Sites built with Jekyll

### Personal

Citizenship: USA, Canada