

Mehtab Hanzroh

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About Me

Born on October 6, 1995.

Canadian Citizen.

Research Interests: Industrial Organization, Online Markets, Consumer Search

Education

Ph.D. Economics, Queen's University, 2025 (Expected).

M.A. Economics, Carleton University, 2019.

B.Com. Finance and Economics, University of Toronto, 2018.

Research

Position Auctions with Organic Search
with Qidi Hu

Abstract: Recent regulatory actions, such as the FTC v. Amazon antitrust case, have raised concerns about the impact of sponsored advertisements on consumer welfare in online search platforms. While theoretical models of position auctions typically predict that sellers are ranked by consumer-match/seller-quality in equilibrium, these models often abstract from the coexistence of sponsored and organic listings. We develop a model in which sellers can appear in both sponsored and organic positions and examine how this affects equilibrium outcomes and consumer welfare. Our model captures a key tradeoff: high-quality sellers value the visibility from sponsored placement but also expect to appear prominently in organic rankings. As a result, under certain conditions, lower-quality sellers may outbid them to obtain the sponsored position - lending some support to the FTC's concern. However, we show that this outcome only arises when all sellers are relatively high-quality, which limits potential consumer harm.

Consumer Search for Experience Goods and Retailer Information Quality: Evidence from Online Search for Cameras

Abstract: This paper develops and estimates a consumer search model for experience goods - products that are challenging to evaluate without direct use - available across multiple retailers. Beyond price uncertainty, consumers also face uncertainty about product suitability (match values) and form expectations about the quality of match information, such as consumer reviews, across retailers. Consumers direct search across retailers based on their expectations about prices, retailer preferences, and expectations about match information quality. Consumers gain more precise match signals at retailers with higher quality match information, which makes finding well-matched products more efficient. Analyzing clickstream data on camera searches, I document search behaviors

that cannot be explained by models lacking expectations about information quality. Structural estimation indicates that larger retailers, such as Amazon and Walmart, provide higher-quality information, which I quantify enhances consumer welfare by 8.35%. Additionally, I show that retailers with superior information quality have an increased capacity to steer consumers and extract rents.

Job Market Paper, Presented: Canadian Economics Association Annual Meeting 2024

Using Search Data to Crowd-source Unobserved Substitution Patterns for Demand Prediction

Abstract: Many demand models rely on the characteristic-space approach to representing products and estimating consumer preferences. A practical limitation with the approach in some markets is that if demand-relevant characteristics are not observed, the substitution patterns the model predicts are unreliable. To address this limitation, this paper proposes a method of learning substitution patterns directly from search data. The approach is to treat the sets of products that consumers search for as their revealed consideration set, and measure product substitution between a pair of product by their frequency of co-searches across *all* consumers' search sets. This substitution measure can then be mapped to vectors of latent characteristics representing each product. I validate the latent characteristics by using them as an input to a simple predictive demand model applied to data on online shopping at a large UK eCommerce platform. The aim is to predict which product a consumer will purchase given the set of previously searched products, as in a recommender system. I find that representing products with latent characteristics leads to improvement in prediction performance.

Presented: Canadian Economics Association Annual Meeting 2023

Experience

Queen's University

Instructor

ECON 250: Introductory Statistics

Winter 2022, Fall 2022, Fall 2023

Teaching Assistant

PPEC 200: Intro to Politics, Philosophy, and Economics

Fall 2024

ECON 262: Labour Markets and Gender Differences

Winter 2024

ECON 445: Industrial Organization and Public Policy

Winter 2023

ECON 882: Research Problems and Methodology (Machine Learning), MA Level *Winter 2021, Winter 2025*

ECON 850: Econometrics I, PhD Level

Fall 2020, Fall 2021

ECON 351: Introductory Econometrics

Fall 2019, Winter 2020

Carleton University

Teaching Assistant

ECON 2220: Introductory Econometrics

Fall 2018, Winter 2019

Research Assistant, Econometrics

Matt Webb

May-August 2019

Technical Skills and Competencies

Python, R, MATLAB, Stata, SQL

UNIX

Fluent in: English, Hindi, Punjabi

Beginner: French, Korean, Japanese

Awards and Recognition

Graduate Research Fellowship, Queen's University (2023, 2024)

Morgan Brown Award, Queen's University (2022)

Norman D. Wilson Fellowship, Queen's University (2021)

E.G. Baumann Fellowship, Queen's University (2020)

Ontario Graduate Scholarship, Queen's University (2019)

Gilles Paquet Scholarship in Economics, Carleton University (2019)

References

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Professor, Stephen J.R. Smith Chair in Economic Policy
Queen's University, Department of Economics
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Nahim Zahur
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Queen's University, Department of Economics
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