Application to Attend the Digital Economics and AI Tutorial (NBER)

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Graduate Study Background and Research Interests

I am a fifth year PhD candidate in Quantitative Marketing at New York University Stern School of Business, where I began my doctoral studies in August 2021. My training combines quantitative marketing, empirical industrial organization, and digital economics with additional coursework in machine learning and deep learning. My work applies rigorous empirical and structural methods to study platform design, search and ranking systems, and information provision in digital markets.

My research interests lie in digital platforms, sequential search, ranking algorithms, and the role of AI in shaping information environments. I study how platforms structure choice sets and information flows and how these mechanisms affect consumer decision processes and market outcomes. In a separate research stream, I examine sustainable technology adoption under financial constraints, developing a dynamic structural model to capture how households make intertemporal decisions about green durable goods.

Related Research Projects

Carbon Labels and Consumer Flight Choices (with Raluca Ursu, Under review at Marketing Science)

Climate change concerns have led many companies to adopt labels that disclose their carbon footprint to consumers. However, the effectiveness of such labels for both firm outcomes and consumer behavior remains largely unexplored. To measure these effects, we rely on data from a major flight search platform that exogenously timed the introduction of carbon labels for qualifying flights on its platform. These data allow us to use quasi-experimental methods to understand how labels affect firms and consumers. We find that consumers are more likely to make a purchase when labels are present, which benefits the platform. However, such converting consumers are not necessarily more likely to buy a lower-emission/labeled flight. In addition, they search more when environmental information is available. Finally, among a subset of similar flights, we find that options with a label have higher conversion rates. Heterogeneity across traveler types and political orientation is also explored. Our findings suggest consumers value/trust the platform more when labels are present, but will only switch to labeled options if they can avoid sacrificing other product features. These results highlight nuanced effects of carbon labeling, offering insights for firms and policymakers designing sustainability disclosures in digital marketplaces.

Search, AI, and Sequential Decision Making (with Raluca Ursu, Work in progress)

This project studies how AI generated summaries, recommendations, and ranking cues modify sequential search. We aim to measure how AI supplied information affects search depth, belief updating, and attention allocation. The research combines experimental variation in AI generated guidance with a structural framework for sequential search under modified information architectures.

The goal is to capture the interaction between AI driven information tools and consumer search frictions in order to understand how these systems alter match quality and platform incentives.

Disintermediation, Platform Competition, and Ranking Algorithms (with Hanlin Zhao, Work in progress)

This project examines how platforms adjust ranking mechanisms in response to disintermediation incentives and competitive entry by alternative intermediaries. The focus is on linking platform strategy, seller responses, and user outcomes in environments where ranking functions influence both sides of the market. The project aims to clarify the strategic use of ranking systems in multi platform competition.

Dissertation Status

My dissertation studies the co adoption of durable green technologies under financial constraints. The project develops a dynamic structural framework that examines household adoption of electric vehicles and residential solar systems when credit constraints and financing options shape intertemporal decision making. The empirical analysis merges credit bureau data, property level housing characteristics, vehicle registration records, and municipal tax data. The goal is to understand how liquidity and financing frictions affect the timing and sequencing of sustainable technology adoption.

Committee Members

Bryan Bollinger
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