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Education
Ph.D. in Economics, New York University, 2016-2022 (expected)
    Thesis Title: *Essays in Empirical Industrial Organization*
M.Phil. in Economics, New York University, 2020
B.S. in Economics, B.S. in Mathematics, *summa cum laude*, University of Kentucky, 2012-2016

References

Professor Alessandro Lizzeri
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Professor Daniel Waldinger
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Professor Paul T. Scott
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Professor Christopher Conlon
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Teaching and Research Fields
Primary fields: Industrial Organization

Secondary fields: Environmental Economics, Applied Microeconomics

Teaching Experience
Spring & Fall 2020, Spring 2021	Statistics, NYU, TA for Timothy Roeper
Fall 2019	Industrial Organization, NYU, TA for Sylvain Chassang
Spring 2019	Statistics, NYU, TA for Lucius Riccio
Spring 2018	Introduction to Microeconomics, NYU, TA for Marc Lieberman

Research Experience and Other Employment
2019	RA for Daniel Waldinger
2018	RA for Paul Scott
2015-2016	RA for William Hoyt

Research Papers

Investment, Emissions, and Reliability in Electricity Markets (Job Market Paper)

How should we design electricity markets to promote investment in clean energy while maintaining a reliable electricity grid with a low likelihood of blackouts? These two topics are related because zero-emission renewable energy sources, such as wind and solar, are intermittent. Their supply is less reliable than traditional, greenhouse gas-emitting generators like coal and natural gas, so an increasing share of renewables can potentially lead to increased blackouts if the addition of intermittent renewables causes these generators to retire. Quantifying the full impact of electricity market policies therefore requires an understanding of how investment responds in equilibrium. To that end, I build a structural equilibrium model of investment and dis-investment in generators of different energy sources. Oligopolistic firms make dynamic decisions to build or retire generators based on the profits they receive from wholesale electricity markets, which respond to the composition of generators in the market. I estimate this model using data from the Western Australia Wholesale Electricity Market and use the estimated model to simulate investment and production under counterfactual policies. Carbon taxes reduce emissions but, for certain values, can cause an increase in the likelihood of blackouts by causing retirement of coal and some natural gas generators. Subsidizing capacity prevents this from occurring, but at the expense of a high level of emissions. Using both policies together, however, keeps high-emitting but reliable generators in the market but prevents them from being used unless necessary, substantially lowering emissions while keeping the likelihood of blackouts low. I also explore alternative environmental policies, which are less effective at reducing emissions but have a lower cost on consumer surplus.

Market Structure, Investment, and Technical Efficiencies in Mobile Telecommunications (with Georges V. Houngbonon, Marc Ivaldi, and Paul T. Scott)

We develop a model of competition in prices and infrastructural investment among mobile network providers. Market shares and service quality (download speed) are simultaneously determined, for demand affects the network load just as delivered quality affects consumer demand. While consolidation typically has adverse impacts on consumer surplus, economies of scale, which we derive from physical principles, push in the other direction. We find that consumer surplus is maximized at a relatively high number of firms, and that the optimal number of firms is higher for lower-income consumers. Total surplus, meanwhile, is maximized at a moderate number of firms. Our modeling framework allows us to quantify the marginal social value of allocating more spectrum to mobile telecommunications, finding it is roughly five times an individual firm's willingness to pay for a marginal unit of spectrum.

<u>Research In Progress</u>

Patient-Specific Information and New Drug Adoption: Evidence from Digital Health (with Milena Almagro)

With the rise of digital health technologies, health care professionals increasingly have access to detailed real-time data on their patients. We evaluate to what extent access by physicians to this patient-specific information leads to more efficient patient-drug matches, especially in the context of the introduction of new drugs. To do so, we use data on hemophiliacs from a digital health app that allows patients to record treatments and symptoms (bleeding). A unique feature of our data is that we observe whether physicians access patient information and what information they observe. We leverage this aspect of the data to establish how patient information about drugs' effects influences own prescriptions and the adoption of new drugs, which vary in effectiveness and in the rate of adoption. Additionally, we examine how the information diffuses across patients common to a physician and also within physicians' social networks. We find that patient-specific information has a significant effect on the probability of adoption of new drugs and that there are large spillover effects across a physician's patients as well as within physicians' social networks.

Private Hospital Capacity in a Single-Payer System: Evidence from Denmark (with Anders Munk-Nielsen and Daniel Waldinger)

<u>Other Information</u>
    Programming: Python, R, Stata, Matlab, C++, LaTeX
    Languages: English (native), Chinese (basic), Spanish (basic), Russian (basic)
    Citizenship: USA