

Research Statement

I am an Industrial Organization (IO) economist whose methodological approach uses descriptive data analysis and theoretical modeling to empirically motivate and develop structural models. My research agenda explores how firms optimally respond to policy or regulatory changes and how those responses impact welfare. While my main work focuses on the pharmaceutical industry, the insights and methods I've developed are applicable across sectors where regulatory changes influence firm strategies and market outcomes.

In my job market paper, "Rewarding Incremental Innovation – Pharmaceutical Line Extensions," I use a structural model to analyze how drug manufacturers make strategic launch and pricing decisions in response to current policies. This approach examines the economic incentives driving firm behavior, demonstrating how existing exclusivity policies may motivate manufacturers to delay bringing improved products to market. I develop and estimate a dynamic model of firm decision-making, to evaluate alternative policies that could enhance consumer welfare while maintaining incentives for innovation. Through simulations I can speak towards simple, but meaningful broader policy considerations. This work exemplifies my approach of using empirical analysis to inform policy decisions.

Alongside this work, I explore how Pharmacy Benefit Managers (PBM) practices may contribute to drug shortages, a critical issue in recent years. This research, joint work with Meagan Madden (UNC PhD Student) & Basil Isaac (Univ. Michigan PhD Student), examines how narrow formularies designed by PBMs might amplify the impact of shortages on patient access to essential medications. By analyzing the relationship between formulary restrictiveness and shortage severity, I aim to provide insights that could inform policy decisions, especially as frequent drug shortages have exposed a major shortcoming of pharmaceutical supply chains.

My research process of data-driven empirical work generates insights that bridge theoretical understanding with practical policy implications. The institutional background and modeling experience from industrial organization positions me well to continue addressing questions in Health IO while also tackling broader economic questions across health and other fields in the upcoming years.

Moving forward, I am interested in furthering our understanding of PBMs in pharmaceutical markets. Unpacking the complex interactions between PBMs, insurers, and manufacturers is key for meaningful policy measures regulatory bodies may consider. This research is timely given the recent FTC allegations against PBMs. I'm mainly interested in the potentially anti-competitive practice of "Rebate Walls", which may have welfare-harming consequences for product entry, innovation and drug pricing. This analysis could inform potential regulatory changes to ensure new policies achieve desired outcomes.

Outside of health, I'm excited to apply these methodologies to new areas within IO. In a new project, joint with Thomas Bollinger & Drew van Kuiken (UNC PhD Students), we are exploring how manufacturers across industries differently respond to rising costs, particularly how in firms in settings with very differentiated products (i.e. groceries) affects their responses to common cost shocks. Using a supply side model of differentiated products, we will analyze how firms strategically adjust prices or sizes in response to cost pressures. This relates to "shrinkflation", where some firms choose to downsize their products while others don't, when responding to cost pressures. Previous

literature has established that consumers tend to be more price than size sensitive. As these size differences may be less noticeable, it may be the case that consumers don't realize them, which makes downsizing an attractive strategy for firms. Understanding firms' strategic considerations and analyzing consumer responses can help inform regulation around price transparency and practices affecting inattentive consumers.

Ultimately, my research is driven by the belief that careful economic analysis can improve regulatory outcomes and societal welfare. I believe that my experiences and approach of using empirically driven structural models, allows for a comprehensive evaluation of high value issues across many industries. These meticulous models are needed address complex situations and evaluate a variety of counterfactual settings, to be able to meaningfully contribute to providing actionable insights for policymakers. As I continue my research career, I look forward to collaborating on projects that leverage my analytical skills to address pressing questions in industrial organization and regulatory economics across industries.