

Research Statement

Parker Rogers

Executive Summary. I study how institutions and policy shape innovation in health—a domain central to human flourishing. My work examines how FDA regulation and U.S. payment policy influence which technologies are developed, who develops them, and how they diffuse through health care providers, along supply chains, and into global markets. Methodologically, I combine quasi-experimental designs, AI-enabled data linkages, and structural models spanning the healthcare supply chain.

In *The Long-Run Impacts of Regulated Price Cuts: Evidence from Medicare* (with Yunan Ji; revise and resubmit, *Review of Economic Studies*), we examine large Medicare payment reductions for medical devices and trace their dynamic consequences for innovation, quality, and patient safety. Following sharp price cuts, exposed device classes see 29% fewer new models and roughly 80% fewer patents; entry falls, outsourcing rises, and defect/adverse-event rates increase, consistent with reductions in quality-control measures.

Regulating the Innovators: Approval Costs and Innovation in Medical Technologies is currently under review at the *Journal of Political Economy*. Exploiting FDA deregulation events, I show that lowering premarket frictions increases both the quantity and the quality of innovation—especially among smaller and less-experienced firms—while reducing medical procedure prices. Safety does not worsen; in mature technologies and higher-liability settings, severe adverse events decline, consistent with postmarket safeguards substituting for some premarket oversight. Conceptually, the paper links regulatory design to firm incentives and safety effort; empirically, it introduces novel, comprehensive data built with AI tools to measure innovation, market structure, prices, and safety at scale.

In ongoing work, *The Impact of Private Equity Ownership on Medical Technologies* (with Atul Gupta) examines how private-equity acquisitions reshape medical technology firms' product portfolios, safety performance, finances, and pricing. Linking patents, FDA regulatory submissions, adverse events, Census microdata, and hospital transaction data, we estimate effects on innovation, device quality, firm outcomes, and downstream prices, and test whether PE ownership reallocates effort toward late-stage assets and products with faster approval pathways. The project—an NIHCM Research Grant awardee (2026–27)—informs policy on how financial ownership structures interact with innovation incentives in health care.

In *Entry Regulation and the Health-Care Supply Chain* (with Yunan Ji and Connie Xu), we study how deregulation propagates beyond manufacturers by developing a structural model of price setting and bargaining among manufacturers, providers, and insurers. Estimated on linked device–procedure and purchase data, the model quantifies how regulatory changes affect wholesale prices, adoption, substitution across platforms, and downstream procedure prices. The counterfactuals quantify how tightening entry regulations or increasing horizontal consolidation would ripple through the supply chain.

In *Global Spillovers from U.S. Regulation* (with Fernando Stipanovic), we measure how U.S. medical technology regulation propagates to global markets. Exploiting U.S. deregulation

events and linking customs microdata to worldwide patent filings, we trace effects on trade flows, the geography and intensity of R&D, inventor migration, and product quality. We test whether countries with stronger pre-event trade ties to the United States are more exposed and how deregulation interacts with trade policy. The findings clarify the international incidence of U.S. health policy and the returns to domestic innovation efforts abroad.

Careers of Innovators under U.S. Health Policy (with Yunan Ji) uses restricted-access Census microdata to build person–firm matched panels and examine how U.S. health policy—price cuts and deregulation—shapes the careers of inventors and scientists: employment and mobility, scientific output and impact, field pivots, and entrepreneurship. By tying policy shocks to individuals, the project links short-run market responses to long-run human capital formation and the direction of innovation.

A complementary project, *Demand Shocks, Procurement Policies, and the Nature of Medical Innovation* (with Jeffrey Clemens, forthcoming at the *Review of Economics and Statistics*), studies how contracting and administered prices steer innovation. We show that procurement generosity shapes whether inventors emphasize cost-saving versus quality-enhancing features, using wartime prosthetics as a natural experiment.

A recurring theme of my work is measurement at scale. I use AI-enabled linkage to connect siloed datasets and deliver comprehensive evidence on public-policy impacts, including outcomes that are otherwise hard to observe. I integrate patents, FDA submissions, MAUDE adverse-event reports, insurer claims, provider purchasing records, customs/export filings, and—in new work—restricted Census microdata. Empirically, I pair event-study designs with structural estimation where market interactions are central.

Looking ahead, we will: (i) develop a generalizable structural bargaining framework to quantify how tighter entry regulation and greater horizontal consolidation ripple through the health care supply chain; (ii) expand the global-regulation project to measure dynamic firm relocation and follow-on innovation; (iii) complete Census-based analyses that map how health-policy shocks reshape the careers and output of U.S. innovators; and (iv) use Census microdata to estimate the impact of private-equity acquisitions on firm performance.