Research Statement – Konan Hara
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My research centers around policy-relevant issues building on the tools primarily developed in the field of industrial organization. The first project in my dissertation considers policies incentivizing renewable power investors to achieve the policymaker's environmental objectives. The second project relaxes econometric assumptions in dynamic games to enhance the robustness of policy suggestions implied by the structural estimates. The third project explores how physicians and patients interact and how these interactions affect the productivity and disparities of the healthcare system. The overarching theme of my research has been to employ cutting-edge applied microeconomic approaches to answer important, policy-relevant questions. I am particularly interested in environmental and health topics because they are areas where frontier economic analysis can help us to understand the role of intricate regulation and rapid technological change in improving social outcomes.

My background as an M.D. with a Ph.D. in Public Health motivates me to tackle environmental and health issues and boosts my understanding of their institutional details. In Japan, an M.D. degree is obtained in a six-year undergraduate program, which includes two years of liberal arts at the beginning. I became a research-oriented physician and chose public health to address policy-relevant issues after two years of junior residency. In my public health studies, I learned a lot about evaluating the impact of policies but found that I was particularly interested in modeling actors' choices and behaviors. Specifically, my colleagues and I found that patients are apparently not responding to prices when choosing between brand-name and generic drugs. We modeled patients' decisions—incorporating inertia and unobserved heterogeneity as was done in the context of health insurance choice in health economics—to rationalize the puzzling patient drug choice behavior. This study was published in the *Journal of Economic Behavior & Organization* as "The Effect of Inertia on Brand-Name versus Generic Drug Choices." This experience made me realize that economic approaches fit better with how I wanted to address policy questions, so I pursued an economics degree to improve my ability to produce high-quality research.

I have continued my work on actor decision-making and policy in the three chapters of my dissertation. In my job market paper, "Encouraging Renewable Investment: Risk Sharing Using Auctions," I propose a structural framework of policymakers using risk-sharing contracts to support risk-averse investors' new renewable energy projects. I successfully build and estimate a model of risk-averse bidders to quantify the policymaker's trade-off from risk sharing.

In my work in progress with Yuki Ito, a Ph.D. candidate at the University of California, Berkeley, and Paul Koh, an economist at the Federal Trade Commission who has recently earned a Ph.D. at Columbia University, "Estimating Dynamic Games with Unknown Information Structure," we study a way of relaxing an unconvincing assumption in modeling actor decision-making in the context of dynamic games—a workhorse in industrial organization—to aid policymakers' robust decision-making.

In another work in progress with Yuki Ito, "Primary Care Physician-Specialist Racial Concordance in Forming Referral Networks," we find that primary care physicians refer patients to the same race specialists more than otherwise, especially when the patients are also the same race. We build on this fact to study the consequences of the organic interactions of people inside health organizations.

Moving forward, I anticipate that I will continue to conduct research on how actors respond to uncertainties around technology adoption and how actors' interactions affect productivity in environmental and health contexts. I also foresee continuing to push the frontier of econometric methods that will help other researchers further our understanding of actor decision-making.