Research Statement

Jinyeong Son

I am an applied microeconomist with research spanning topics in health economics, public economics, and labor economics. My current and ongoing work falls into two broad areas: (i) understanding how the evolving healthcare environment—through market dynamics such as innovation and through public policy—shapes health care access, utilization, and health outcomes; and (ii) examining the determinants of children's human capital accumulation, particularly through the lenses of health status and living environment. I leverage quasi-experimental research designs along with administrative and survey data to provide causal evidence on questions in these areas.

1 Evolving Healthcare Environment

1.1 Medical Innovation

Technological progress has long been recognized as a major driver of productivity growth and welfare improvements across many sectors and in the broader economy. However, relatively little is known about its impact in the context of health care. One of my papers addresses this gap in the literature by examining the effects of medical innovation in surgical procedures.

My job market paper, "The Impact of Medical Innovation on Health and Disability" **(working paper)**, focuses on one of the most important surgical innovations in recent decades—the transition from traditional open surgery to minimally invasive surgery—and quantifies its impact on health, disability, and social insurance outcomes. Using an instrumental variables approach and administrative data on injured workers undergoing orthopedic surgery, this paper provides novel evidence that adopting minimally invasive surgical techniques generates substantial health and economic gains—reducing medical spending, accelerating recovery, and lessening long-term disability—which collectively lower social insurance costs by 28%.

The main contribution of this paper is to provide novel causal evidence on the effects of innovation in the practice of medicine. Documenting these effects has been challenging because, in contrast to pharmaceutical innovations, the development and diffusion of medical techniques are difficult to track systematically. Moreover, by quantifying these effects and providing credible estimates, this study offers a foundation for policy discussions on how to accelerate the adoption of beneficial medical technologies—such as through payment reform—and encourages further research on the role of innovation in health care.

1.2 Public Policy

While market-driven forces can transform health care from within, public policy remains a powerful external force shaping it in fundamental ways. The health insurance system, in particular, has long been one of the most important and debated social issues in the U.S., with policymakers implementing a wide range of interventions across markets and institutional contexts. Several of my papers examine

how these policies affect key outcomes—such as coverage, utilization, plan choice, and health—with the goal of providing empirical evidence to inform policy design.

In "Do Mandated Health Insurance Benefits for Diabetes Save Lives?" **(published in the *Journal of Public Economics*)**, I study whether state-level insurance regulations—specifically, state-mandated benefits requiring private plans to cover certain diseases—can save lives in the setting of diabetes mandates. Using a difference-in-differences framework that exploits variation in the timing of mandate enactment across states and restricted-use mortality data, I find that diabetes mandates lead to approximately 3.1 fewer diabetes-related deaths per 100,000 annually in mandate states relative to non-mandate states. This finding highlights the potential role of state-level efforts in reducing mortality from specific diseases through targeted mandated benefits and informs policy debates on strengthening or weakening coverage mandates, including the Essential Health Benefits under the Affordable Care Act.

The theme of exploring the effects of state-level insurance regulations also appears in my other work, in the context of prescription drug markets. In "What Happens When Drug Companies Can Cover Your Deductible? How State Bans on Copay Accumulators Affect Healthcare Utilization" **(working paper; draft available upon request)**, my coauthors and I analyze the consequences of copay accumulator bans, which require insurers or pharmacy benefit managers to count payments made through third-party contributions (e.g., manufacturer copay coupons) toward patients' deductibles and out-of-pocket maximums. Leveraging unique payer-sourced claims data from Inovalon and cross-state variation in the adoption of the bans, we estimate a modest 1.8% increase in adherence to and utilization of targeted medications—those most affected by the bans—with particularly pronounced effects among patients using drugs for autoimmune diseases. In addition, we find no evidence that these bans induce unintended spillovers on broader, particularly unnecessary, health care utilization beyond targeted medications. Our findings are policy-informing amid the ongoing expansion of these bans, as they address a key concern among policymakers—potential negative consequences from weakened cost-sharing incentives when patients' financial obligations are effectively covered by drug manufacturers.

My interest in studying government interventions in insurance markets extends to investigating the determinants of health insurance choice in Medicare—a setting with vast geographic variation in the share of individuals selecting Traditional Medicare (public option) versus Medicare Advantage (private option; MA). In "Partial Outsourcing of Public Programs: Evidence on Determinants of Choice in Medicare" **(forthcoming in the *Review of Economics and Statistics*)**, my coauthors and I quantify how much of this variation can be explained by place-based versus individual-based factors collectively. Drawing upon administrative data on the universe of Medicare beneficiaries within a movers research design, we find that roughly 40% of the variation is due to place-based factors (e.g., availability of local insurance plans), while the remainder—more than half—is attributable to individual-based factors (e.g., preferences, health). Our findings provide important insights for policy. While the geographic variation in MA enrollment is often interpreted as evidence of disparities in access to high-quality MA plans, given the importance of individual factors in these decisions, this variation alone is not a sufficient rationale for policy intervention. Moreover, our analysis suggests that even if policy efforts were to fully equalize place-based factors across areas, substantial variation in MA enrollment

would persist. Thus, the observed geographic variation is not an appropriate metric for measuring the success of such policies (e.g., MA subsidies).

2 Determinants of Children's Human Capital Accumulation

2.1 Teen Pregnancy

My interest in topics related to reproductive health is motivated by increasing policy focus—in the US and abroad—on declining fertility rates and the broader implications of these trends for society. In one line of my work, I study reproductive health among teenagers, considering pregnancy as a significant health shock and thus a key determinant of their human capital accumulation.

In "Every Year Counts: The Long-Run Consequences of Pregnancy Timing among Teenagers" **(working paper)**, I estimate the marginal impact of a one-year difference in pregnancy timing among teenagers aged 15–18 on their short- and long-run educational and labor market outcomes. Using unique administrative data from Texas—covering more than 250,000 pregnant students—I construct a matched sample and show that the matched pairs are observationally comparable across baseline characteristics (not used in matching), implying that the sole difference—a one-year gap in the age at which they give birth—is likely driven by chance. I examine both within-individual changes in outcomes surrounding pregnancy and across-individual comparisons in outcomes after pregnancy among these matched teenage mothers. I find that experiencing pregnancy one year earlier increases absences and the likelihood of leaving school, particularly during the postpartum year. I further find that becoming pregnant one year earlier has adverse long-term consequences—reducing high school graduation, college enrollment and completion, and employment and earnings in the mid-20s—with these detrimental effects most pronounced among the youngest group. Together, these findings suggest that the child penalty—the adverse effects of having children earlier—extends beyond adults to teenagers and that its scope is broader among teenagers, as adolescence is a critical period for human capital development.

2.2 Early Childhood Living Environment

Another angle of my research within this theme focuses on early childhood as a determinant of later-life outcomes. In "Living Environments and Child Development: Comparing Two Groups of Out-of-Home Children" **(published in the *Journal of Human Capital*)**, my coauthors and I examine how a family-like living environment during early childhood affects the cognitive and non-cognitive skill development of out-of-home children. We collect data on 210 Korean children living outside their homes through surveys and lab-in-field experiments and compare two distinct environments: traditional orphanage-type institutions and family-like group homes. To identify the causal effect, we employ an instrumental variables approach that exploits plausibly exogenous assignment of children to each type of institution, generated by capacity constraints in group homes across regions and over time. We find that children in group homes are more altruistic, emotionally stable, satisfied with school, and forward-looking. Our findings indicate that family-like environments with fewer co-residents and more intimate relationships are beneficial for children separated from their parents.

3 Future Work

My work in progress further expands my research agenda to several new topics.

Some of my work in progress uses the proprietary health claims data initially constructed for the copay accumulator project described above. These data contain detailed information on healthcare utilization for individuals enrolled in employer-sponsored health insurance plans—a population that is not well represented in other administrative health claims datasets in the U.S. In one ongoing project, entitled "Trade Barriers and Health: Evidence from U.S. Tariffs on Medical Devices," I leverage these data to provide novel evidence on the connection between trade policy and health. Using a 2018 tariff of 25% imposed on medical devices (e.g., pacemakers) as a natural experiment, I investigate whether—and to what extent—such tariffs disrupt health care service delivery and ultimately affect health outcomes. The findings from this study will inform ongoing policy discussions related to tariffs and the broader impacts of trade policy on population health and well-being.

Another branch of my future research agenda explores the impacts of health care market consolidation. For example, in "Is Vertical Integration Driving Seniors out of Traditional Medicare? An Analysis of the Effects of PBM-Insurer Mergers on Standalone Part D Plans," my coauthors and I investigate whether firms operating both standalone prescription drug insurance plans and integrated health and prescription drug insurance plans in the same geographic market engage in strategic behavior to direct enrollees toward their more profitable products. We empirically explore this question in the context of Medicare, using a difference-in-differences research design that exploits variation from mergers—such as CVS & Aetna in 2018—and compares markets where the merged firm has a presence in the integrated insurance market or does not.

Finally, one ongoing project—building on my first paper on teen pregnancy—examines the long-term impacts of policy interventions targeted at pregnant students. In "Save the Truth from Selection Bias: Revisiting the Impact of Attending a Specialized School for Pregnant Students," I study the effect of attending a pregnancy school—a school that exclusively serves pregnant students and female students with babies—on students' long-term human capital formation and labor market outcomes. Using administrative-linked data for all K–12 pregnant students and exploiting variation from pregnancy school closures in Texas, I compare across-cohort changes in outcomes between older cohorts (i.e., those who had access to pregnancy schools) and younger cohorts (i.e., those who did not, as nearby pregnancy schools had closed). My preliminary analysis shows that attending a pregnancy school has either null or weakly positive effects on teenage mothers, and that the negative outcomes—such as poor attendance—documented in previous studies and often cited as grounds for shutting down such schools are largely driven by negative selection into pregnancy schools. These findings have important implications for policymakers considering how to effectively provide education to teenage mothers.