

My broad goal in research is to understand economic phenomena by combining detailed data with microeconomic models. My primary field is Empirical Industrial Organization, but I also consider myself to be within the field of Applied Microeconomics. By using tools in both fields, I carefully consider how to apply economic theory to answer empirical questions and how to get sound identification from data. My dissertation applies these tools to study health care markets in the U.S., particularly as they relate to public programs.

The U.S. government is increasingly relying on markets to deliver public health care benefits. This can be seen by the growth in private firms that operate in Medicare and Medicaid, the two main public health insurance programs. The Affordable Care Act (ACA) established subsidized insurance markets (“exchanges”), which further expanded the reliance on private markets to deliver government benefits. While the ACA has faced some opposition, all serious replacement policies have suggested using similar market mechanisms. This suggests these private markets will continue to have a large role in passing public benefits to program beneficiaries. Therefore, it is important to understand how regulations impact these markets. Of particular interest to me is how insurer and provider market structures interact with these policies, shaping prices and quality.

My job market paper is my first examination into this broad area. The motivation behind this study was to reconcile different patterns that have surfaced in the ACA exchanges. First, there is a relatively high share of consumers that do not buy health insurance, despite the availability of generous subsidies and a penalty associated with not having insurance. Second, enrollment is much higher in plans that are considered less desirable (ignoring price), such as those that require high copayments or that exclude well-known hospitals from their networks. And third, even when insurers have high enrollment, many of them face financial difficulties. My paper explores to what extent these patterns represent some kind of failure in the market versus an efficient outcome in a competitive environment.

To answer this question, I focus narrowly on two regulations targeting firm pricing: community rating and risk adjustment. Community rating prevents plans from using characteristics other than age to set premiums. While this has benefits in making coverage affordable to sick consumers, absent other remedies it has the known consequence of adverse selection: healthier consumers will be driven away from desirable plans due to higher prices, which could perpetually increase. Risk adjustment requires that plans with healthy enrollees make payments to those with sick enrollees, which can offset some of the “unraveling” effect of adverse selection. Given the particular type of risk adjustment used in the ACA, it is theoretically possible that there could be residual adverse selection. While this might explain the low enrollment in generous plans as described above, my results show this is unlikely to be the case. Instead, I find this pattern can be explained by a high-price sensitivity among this

population. Consumers are strongly attracted to the lowest cost option, regardless of any adverse selection. I find that risk adjustment in the ACA is quite effective and any residual adverse selection is minimal.

The implication of this work is that markets such as the ACA exchange in California can effectively deliver health care at premiums close to costs and provide plans that people value. This is especially true in California where regulators have taken additional steps to ensure a competitive environment, such as plan standardizations and quality requirements. Risk adjustment also plays an essential role in keeping the prices of desirable plans from spiraling upward. In the paper, I examine an alternative method of risk adjustment closer to that of Medicare and discuss advantages and possible disadvantages.

For this study, I combine detailed data on all 1.5 million consumers in California with directories of all plan provider networks. I specify a model of supply and demand with all the key features of the ACA markets, such as imperfect competition and the regulations. I estimate this model by adapting methods from Industrial Organization to fit this setting. The estimation procedure involves high dimensional optimization so I draw from methods at the frontier of statistics using software in R.

In addition to my job market paper, my dissertation includes a paper with Wesley Yin and Isaac Menashe on a randomized trial in the ACA market in California. As noted earlier, even with large subsidies, there is a relatively low level of insurance take-up in the ACA. We wanted to explore to what extent this is due to a lack of information on the insurance options available. Our study randomized a group of roughly 120,000 potential enrollees into groups given different amounts of information. The control group received basic email communication while the treatment groups received letters with varying levels of detail regarding subsidies and plans. Relative to email communication, receiving information in the mail increases the probability of enrolling in a plan. Providing targeted information on the generosity of subsidies appears to further increase that probability, but only among those with the highest subsidies. Notably, we examined the composition of the marginal enrollees and found that they are relatively low risk. Hence, this type of outreach can bring in healthier enrollees which has important benefits to the market as a whole.

In the last paper of my dissertation, I examine the relationship between plan choice and provider networks more deeply. In my job market paper, I find a strong demand response to provider networks for both hospitals and physicians. Consumers are more likely to choose a plan that offers more or better in-network providers. Interestingly, I find that for many plans, these provider network measures spatially vary within the region, such that networks are concentrated in geographic areas. Enrollment shares vary in a similar way and are highly correlated with the network variation. This led me to question the source of the correlation,

i.e. what is the main direction of causation? Given the aforementioned demand response, there is a clear causal effect of provider networks on enrollment. However, my preliminary findings suggest that this only explains a small share of the provider-enrollment correlation. It appears that plans concentrate their networks in areas that consumers would most value the plan, most likely for price reasons. This has interesting welfare implications for the increasing prevalence of “narrow networks” that have received a lot of attention.

Beyond these studies, I have a number of related ongoing projects which I plan to continue in the coming years. With coauthors Wesley Yin and Nicholas Tilipman, I am working on other studies related to the ACA exchanges. One of these examines how much of government spending gets passed on to consumers as opposed to suppliers in the market. The other explores the determinants of plan entry and why there are so few entrants in some markets. I also have an array of studies examining similar questions in Medicare Advantage, a program for the elderly similar to the ACA exchanges. By introducing new ways to use Medicare data, I have individual-level variation that has yet to be explored in this program. One area of particular interest to me is quantifying the quality of the different plans and examining under what market conditions quality plans arise.