

## Research Statement

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### Summary

I am an applied microeconomist specializing in Labor, Public and Applied Econometrics. *One strand of my research* focuses on evaluating state and local government policies that aim to improve human capital accumulation among underprivileged and marginalized groups. This includes analyzing the unintended spillover effects of such reforms on non-targeted groups as well as characterizing the policies' winners and losers. In these projects, I attempt to understand the drivers and consequences of government intervention in the presence of market imperfections and information frictions. This analysis can help policymakers allocate scarce resources where they are required the most. *The other strand of my research* addresses the role of workplace policies and recruitment committees in advancing racial equity among medical trainees.

In both strands, I employ causal and machine learning methods, leveraging rich and large scale administrative and survey-based micro datasets which include both individual and institution level longitudinal data. Below, I describe my recent and in-progress research projects.

### ***“Making distressed areas more desirable: Longitudinal evidence from a local supply-side reform for physicians” (Job market paper)***

Do temporary positive labor supply programs cause physicians to move to and stay in undesirable areas? To what extent do these programs improve the health of the elderly population in those areas? I investigate these questions by studying a novel state and local policy experiment for newly trained eligible physicians which was rolled out over the last four decades in specific counties across US states. It provides lumpsum funding to newly-trained eligible physicians who agree to practice for the duration of at least the minimum obligation period at a pre-approved site.<sup>1</sup> These programs can be seen as informational to potential job seekers about places lacking physicians, where it might be fruitful to look for job opportunities. Leveraging a new individual

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<sup>1</sup>I use the terms physician and “Primary Care Physician(PCP)” interchangeably.

longitudinal dataset that tracks the universe of physicians from their medical school to mid-career, and exploiting both space and year variation of the policy, I find that the reform increases the number of MDs per 100,000 population by 4.9% in treated counties vs untreated counties, within a treated state. The inflows of new physicians are driven by higher paying eligible specialties. Despite these positive net inflows, I observe a small 1.2 percentage point decline in a new physician's likelihood of staying in the treated county one year after the minimum obligation period of that state, when their benefits expire. While the policy screens out lower debt physicians from participating, its design also deters some physicians facing higher debt from unranked US medical schools. The reform modestly spurs trainees to enter eligible specialties in treated states by substituting away from ineligible specialties. My estimates also imply an increase in Medicare enrollees' visits to physicians in treated counties, accompanied by an economically meaningful reduction in their hospital admissions and emergency visits. Using richer patient level data from California, I demonstrate that these results are not driven by selective admission of patients to treated hospitals. A welfare analysis of this reform suggests that every \$1 of net government spending provides \$1.8 of benefits to the beneficiaries of the policy. Overall, this project contributes to the current literature's focus on local labor demand shocks designed to move physicians, by allowing for a better and more direct way of affecting physicians' mobility in a developed country.

***“Intended and unintended effects of state tuition benefits to undocumented students: Institution and individual-level evidence”***

Since 2001, twenty-two US states have allowed lower tuition rates for undocumented students at public colleges. I look at how the degree of exposure to the policy affects novel institution-level education outcomes of these students and the unintended negative spillover effects on other students. Exploiting state-time variation in these policies in a difference-in-differences framework and comparing within institutions, I find higher enrollment and graduation among likely undocumented students in less selective community colleges, in states with high pre-policy levels of undocumented immigrants. This is supported by their increased enrollment in high-transfer, technical and vocational

colleges, as per the Carnegie classification. My results also indicate that an increasing number of these students graduate in health & medicine, trades & personal services in more policy-exposed states, consistent with their occupations. There seems to be negligible displacement of domestic students in community colleges in more policy-exposed states. Due to the higher in-state tuition charged by both public four-year and two-year colleges as a result of the policy, around 16% of the average annual subsidy provided to undocumented students is borne by other students in the form of higher tuition. The likely undocumented female students also respond to their increased educational attainment by reducing their fertility, driven by delayed marriage and household formation decisions. Using individual longitudinal data from the Survey of Income and Program Participation (SIPP), I find no substantial migration of likely undocumented students to the treated states to take advantage of the policy. Overall, my findings indicate that the education and fertility benefits to likely undocumented students dominate any unintended spillover effects on non-targeted students.

***“Are female leaders good for education? Evidence from India: A comment”***

This comment makes two main observations about Clots-Figueras’(2012) paper on female leaders and education in India. I mainly use the Employment-Unemployment schedule of the 55th round of National Sample Survey data and reports published by the Election Commission of India for these comments. First, after correcting for multiple outcomes, the presence of female politicians does not seem to have a significant effect on the fraction of villages having primary schools in urban areas. More specifically, I control for the False Discovery Rate using the procedures of Benjamini and Hochberg (1995) and Benjamini, Krieger and Yekutieli(2006). My findings reveal that, although increasing female leadership does improve primary educational attainment in urban areas, it may not be through the channel of constructing more primary schools in those areas, as suggested by the author. Second, to assess the credibility of the regression discontinuity design in section D of the paper, I apply the newly developed and more powerful Canay Kamat (2018) permutation test for the null hypothesis that the distribution of baseline covariates is continuous at the cutoff. I demonstrate

that the continuity of the distribution of baseline covariates is violated at the cutoff for a majority of covariates in urban areas. This provides suggestive evidence that some features of the distribution of baseline covariates, other than the mean, may be discontinuous at the cutoff. Despite these two observations, the results in Clots-Figueras (2012) are largely robust to alternative specifications and strategies.

***“Spillover effects from short-duration strikes: Evidence using high frequency data” (In progress)***

Work stoppage in the health care sector is a serious concern. It disrupts the timely delivery of health care services and thereby harms patients’ health. During the period 2005-2017, there were 161 strikes in the California health care sector. These strikes were of much shorter duration (lasting on average for less than 10 days), relative to the nurses’ strikes in New York state considered by Gruber and Kleiner(2012). Additionally, unlike Gruber and Kleiner, I consider variation in the types of health care workers (i.e. nurses, engineers, technicians) covered by these brief strikes. Utilizing daily patient level data from all hospitals in California over the period 2004-2017 and exploiting the variation in strike timing across hospitals in a difference-in-differences and event study design, I analyze the spillover effects of these short strikes on the nearby, non-striking hospitals. Specifically, I consider admission, readmission, mortality, emergency room use and intensity of care outcomes. Based on the residential locations of the patients, I also explore changes in patients’ admissions to a neighboring hospital if the striking hospital is closer to their home vs if it is farther from their home. I also examine whether these short strikes benefit the striking hospitals in the long run in terms of productivity, and how these benefits(if any) in turn affect the productivity of non-striking hospitals in close proximity. Overall, this project aims to determine the winners and losers of short-term negative shocks to the healthcare sector in the US, a relatively understudied area.

***“The role of recruitment committees in the selection of medical residents”  
(In progress)***

Doctors and medical trainees of certain racial backgrounds - notably African American, Hispanic, American Indian and certain Asian subgroups- are under-represented in medicine relative to the larger population. This lack of racial equity is an important issue, given that, racial concordance between doctors and patients leads to improved communication and higher demand for preventive care (Alsan et al., 2019). Similarly, doctors from underrepresented minorities have a higher likelihood of serving underserved and uninsured populations (M. Komaromy et al, 1996). It has been suggested in the medical literature that a lack of minority faculty on resident selection committees is one of several factors contributing to lower racial equity among trainees. Consequently, many institutions are adding minority faculty to selection committees. In view of this, I examine whether an increased presence of these faculty on a recruitment committee improves the hiring probability of minority trainees, leveraging the sequential rollout of a plausibly exogenous race reform across specific institutions. I utilize the dataset of medical trainees with their training institutions and specialities from my job market paper. I add to this dataset information on the members of the recruitment committees, obtained from their respective training institutions. I further include details on work schedules, employment policies and benefits, compensation and leave structures for each trainee, based on their training institution. I predict the races of the medical trainees and recruitment committee members from their full names. This analysis can shed light on the unstudied role of recruitment committees relative to other workplace policies in advancing racial equity among medical trainees.

I look forward to continuing my work on topics related to bargaining agreements and work stoppages. In another future study, I would like to use longitudinal data to estimate the causal impact of moving across locations on lifetime earnings in the medical field. Finally, I would like to extend my current work on selection of medical trainees to look at network effects in their hiring, using data from online portals.