Research Statement

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I am an applied microeconomist who specializes in labor and higher education economics. My research focuses on two main themes: (1) analyzing barriers to higher education for underprivileged and underrepresented groups, (2) evaluating factors that contribute to gender gaps both in higher education and the labor market. My projects are policy-focused and often motivated by current events or deep issues related to economic and educational inequality. Methodologically, my work combines natural experiments and rich data with modern econometric techniques. Below, I summarize my current research projects and future research plans.

"The Effect of Statewide Policies on Community College Enrollment and Transfers" (job market paper)

In my job market paper, I focus on the issue of access to higher education and evaluate how statewide policies aiming to facilitate and increase transfers from community colleges to public four-year institutions affect not only transfer rates, but also enrollment patterns. Community colleges serve as the main pathway to a higher degree for around 42 percent of all undergraduates in the United States. The majority of students who enroll at community college, in particular 81 percent, express an intention to transfer to a four-year institution, but only a quarter manage to do so. Research highlights innate ability, socioeconomic background, and college quality as potential explanations for this pattern. However, student who do end up transferring lose almost a quarter of earned credits in the process. There is limited discussion on the role of challenges that students face, namely credit transfer, on low transfer rates. I address this gap in the literature by assessing the effectiveness of statewide transfer policies on increasing transfers, as well as examining their effect on community college enrollment as potential spillover.

The analysis begins with a case study of the state of California's STAR act reform. This reform created the Associate's Degree for Transfer (ADT) which guaranteed admission from a California Community College (CCC) into a California State University (CSU). Importantly, this policy, in principal, did not affect the University of California (UC) campuses. I utilize a difference-in-differences approach where I compare transfer-in rates at the CSU and UC system campuses. I document flat pre-trends and show that the ADT program resulted in a one percentage point increase in transfer-in enrollment at the CSU relative to the UC system. This result appears to be transitory, and fades over time. Next I examine the effect statewide articulation (SAA) policies on enrollment. Statewide articulation alters the cost and benefits to enrolling at a community college, and in turn, affects enrollment decisions. I use the temporal variation in state adoption of statewide articulation policies in a difference-in-differences analysis to estimate the effects on first-time freshmen enrollment and degree attainment at community colleges. I show that SAA lead to an increase in first-time freshmen enrollment at community colleges. Since, community colleges disproportionately serve nontraditional students, I test whether SAA policies have a stronger effect on this population. Using full and part-time enrollment as proxies - for traditional and non-traditional students, respectively - , I find that SAA are more effective in increasing non-traditional enrollment in the long-run. I further explore a possible mechanism through which enrollment could

increase, specifically, whether students substitute away from four-year institutions. I find no drop in first-time freshmen enrollment when pooling all four-year institutions together, however, when I disaggregate by four-year institution's selectivity, I find evidence that students are substituting away from less selective four-year institutions into community colleges.

"When Sarah Meets Lawrence: The Effect of Coeducation on Women's Major Choices"

In joint work with Avery Calkins, Ariel Binder, and Brenden Timpe, I shift my focus to the higher education gender gap by examining the effect of male peers on women's college major choice. In 2016, women earned 57 % of all baccalaureate degrees awarded in the United States, but only 37 % of degrees awarded in STEM fields. While women have achieved or exceeded parity in some STEM-related fields, they lag far behind men in the highest-paying fields of physical and computer sciences, math, and engineering, as well as in some quantitative social sciences such as economics. The gender gap in STEM majoring is partially responsible for inequality in the labor market: the gender wage gap remains large among the college-educated. A leading explanation for the gender gap in STEM majoring emphasizes gender differences in preferences for quantitative coursework and careers. Economists, drawing on a long tradition in the psychology literature, have increasingly speculated that these taste differences may originate in part from psycho-social factors. For instance, women may have an aversion to competition, be subject to social norms that only men should be breadwinners, or anticipate a need to enter a flexible job that allows them to support a family. Though many of these factors have been analyzed in laboratory settings, little real-world evidence exists on how they shape the gender gap in quantitative major completion.

In our paper, we leverage a unique setting that generates variation in women's exposure to male peers: the decline of women's colleges in the United States. We use the variation across time in which institutions switch from single sex to coeducational in a difference-in-difference research design to estimate the effect of changes in the gender composition of a college or university on women students' decisions to choose STEM majors. We estimate a series of event-study specifications that flexibly measure changes in major choice within a school after the switch to coeducation, across schools that made the switch at different times and with different patterns of integration of men. We find that the switch to coeducation altered the distribution of majors chosen by female students at former women's colleges. The share of women earning STEM degrees fell steadily over the first decade after the transition to coeducation, with the effect growing as men continued to enter. Over that first decade, coeducation induced a 24 % decrease in the share of women who graduated with STEM degrees. We estimate that every 10-percentage-point increase in the male share of a graduating class as a result of the transition to coeducation decreases the share of women earning a STEM degree by 17.4 %. We find no evidence that the faculty at former women's colleges became more male over the ten years after the switch, suggesting that changes in STEM majoring were a result of changes in the gender composition of women's potential peers. We also find no evidence of a decline in first-year women's STEM preparedness or of a migration of women interested in STEM to comparable colleges that remained women-only

"The Effect of Outside Options on Wages: Evidence from Orchestras"

Together with Russell Weinstein, I move beyond higher education to examine differential labor market outcomes for men and women. We study the effect of outside options on worker wages. In

particular, we examine the probability that a worker's wage increases after experiencing an outside opening and whether the effect differs by gender. Outside options are a key ingredient in search and mobility models. However, few studies empirically examine the role of outside options in wage setting. The main challenges in examining this link between outside options and wages are, first, the difficulty in defining relevant sets of outside options for workers. Second, identifying meaningful changes in outside options. Third, factors that affect a worker's outside options may also shift productivity in their current job. To address these challenges, we focus on the orchestra setting where vacancies are rare, making it straightforward to identify meaningful changes in outside options. Furthermore, the nature of the classical music industry makes it so that we can identify the relevant set of outside options for musicians in the orchestra. Using data from orchestra rosters and tax forms (Form 990), we estimate an event study analysis to find that musicians are 1.5% more likely be in the top five highest paid employees within one to two years after they experience an opening for their instrument-position in another orchestra. Additionally, this effect is most pronounced for male musicians.

Future Research:

My future research agenda closely follows the theme of the projects summarized above, particularly my job market paper. I plan to explore how statewide articulation agreements affect higher education finance. The effect of increasing transfers on higher education finance (especially the four-year institutions) is ambiguous. On the one hand, if more students choose to start at the community college, this leads to lower enrollment in larger lower-division courses, which are on average cheaper courses for the institution to have. On the other hand, if statewide articulation increases transfers, that can increase revenue for the four-year institution by increasing upperclassmen enrollment. As for the community college, part of the reason why these policies are implemented is to aid two-year institutions in improving their success metrics in order to increase their funding. This increased funding would then translate into higher quality education for community college students. Therefore, it is important to dive deeper into the effects of statewide articulation on higher education finances, since they would in turn have an impact on educational and labor market outcome. Next, I would like to go a step further and examine how these policies affect students' ultimate labor market outcomes. Do statewide articulation policies indeed decrease time to degree? Do they improve bachelor's degree completion rates for transfer students? These are all questions for which the answers have not been established. In another vein, I plan to continue my work on examining determinants of gender gaps in higher education that spillover into labor market outcomes. In particular, I will study factors that affect female students' STEM majoring, as well as how and why certain fields (both in higher education and occupations) are more gendered than others. In summary, in my future research agenda, my ultimate goal is to better understand how to improve access to and equity both in higher education and the labor market.