Research Statement

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Introduction

The primary goal of my research is to understand how school-based policies can affect student achievement and student health. In my current research, I use quasi-experimental methods and exploit state and local policies to study these effects. I have work on the effect of technology investment on student achievement, the effect of a US Food and Nutrition program on student achievement, the impact of sex education mandates on teenage sexual behaviors and health, and the impact of anti-bullying laws on school safety and youth violence.

In addition to my work on student achievement and health, I have work studying the effect of federal and state policies on key economic indicators of self-sufficiency. Specifically, I explore the effect of a paid parental leave scheme on maternal labor market outcomes, and I have coauthored work examining the effect of anti-poverty policies on disadvantaged neighborhoods.

My future work will use experimental methods to understand the role technology plays, specifically Internet connections, on the achievement of low-income students. Additionally, future work will use quasi-experimental methods to explore the effect of school-based social and emotional learning mandates on students' mental health and achievement. Finally, future coauthored work will use confidential Census microdata to understand the long-run effects of anti-poverty policies on disadvantaged neighborhoods.

Research on Student Achievement

The income achievement gap has grown significantly in the last three decades. The gap in standardized test scores is roughly 1.25 standard deviations among students born in 2000 – 40% larger than the gap three decades earlier (Reardon, 2013). A large part of my research focuses on the role state and local school-based policies play in impacting the income achievement gap.

Specifically, my job market paper examines the causal impact of technology investment on student achievement. By the end of 2015, the US spent $4.7 billion on instructional technology in K-12 schools (Schaffhauser, 2016). Students attending poor and high-minority schools have less access to most types of technology than students attending other schools (Coley et. al, 1999). Many proponents of providing more technology to schools hope that additional access will help close some achievement gaps, while opponents argue that such improvements are overvalued because little evidence exists that technology improves teaching and learning (McDermott and Gormley, 2016). My paper presents new evidence on whether technology investment affects student performance using a large scale technology expansion program in California K-12 public schools – the California Education Technology K-12 Voucher Program. The program provided public schools in which at least 40% of students enrolled were categorically eligible to receive free or reduced-price meals with technology vouchers to reimburse their purchases of qualifying computer hardware and software products and services.

I exploit the 40% eligibility cutoff in the technology voucher program and use a regression discontinuity design to identify the causal effect of technology investment on student achievement. Using data on voucher eligibility, voucher spending, and test scores, results show that the voucher program had positive impacts on student achievement. The effects are largest for middle schoolers, and are

concentrated among low-socioeconomic students. The results of this study suggest that technology investment can help narrow the income achievement gap.

In addition to studying the effect technology funding has on the income achievement gap, I also have work examining the effect of a US Food and Nutrition program on low-income student achievement. The Community Eligibility Provision (CEP) is an option that allows qualifying schools to offer breakfast and lunch at no charge to all students without collecting and processing individual school meal applications. Qualifying schools are those with an Identified Student Percentage of 40% or greater. I use a regression discontinuity design and school and student-level data from North Carolina to estimate the effect of CEP on student achievement. Preliminary results suggest that CEP increased the number of meals served to elementary school students, decreased their number of short-term suspensions, and increased their mathematics and science test scores.

My next project will use a field experiment and build upon the results of my job market paper to further examine the impact of technology resources, specifically home-based Internet connections, on low-income student achievement. Many school districts around the country have worked to increase Internet access in their schools, but little has been done to increase Internet access at students' homes. The lack of connectivity at home may intensify the income achievement gap, and research is needed to understand if home Internet access can affect student achievement. I plan to apply for external funding for this project from the Economic Self-Sufficiency Policy Research Institute.

Research on Student Health

School-based health policies have the capacity to influence educational success by addressing many barriers to learning. Barriers to learning may include poor sexual health, school safety and violence, and poor mental health. My current research uses quasi-experimental methods to examine the effect of state-mandated sex education on teenage sexual behaviors and health, and anti-bullying laws on school safety and youth violence.

My paper on sex education is the first to simultaneously examine the effect of three types of US state-mandated school-based sex education on teenage sexual behaviors and health. Using data from the Youth Risk Behavioral Surveys, National Vital Statistics, and the CDC's Wonder statistics on sexually transmitted diseases, difference-in-difference results show that abstinence-based sex education mandates increase the probability of recent sexual intercourse and the probability of having multiple sexual partners. There is suggestive evidence that comprehensive sex education significantly increases the probability of condom use at last sex, and marginally decreases birth control pill use at last sex. Unspecified sex education appears to marginally increase the probability of recent sexual intercourse. Regarding teenage gonorrhea and birth rates, the results show no significant effect of any type of sex education on teenage gonorrhea rates, and after controlling for pre-treatment trends, no significant effect on the teenage birth rate. This paper has been resubmitted to the *Journal of Policy Analysis and Management.*

My coauthored work on anti-bullying laws with Joseph Sabia is the first study to comprehensively examine the effect of state anti-bullying laws (ABLs) on school safety and youth violence. Using existing data from the Youth Risk Behavior Surveys and the Uniform Crime Reports, and newly-collected data on school shootings, we find little evidence that the typical state ABL is effective in improving school safety and student well-being. However, this null finding masks substantial policy heterogeneity. State mandates that require school districts to implement strong, comprehensive anti-bullying policies are associated with a 7 to 13% reduction in school violence and an 8 to 12% reduction in

bullying. In addition, our results show that strong anti-bullying policy mandates are associated with a reduction in minor teen school shooting deaths and violent crime arrests, suggesting potentially important spillover effects. This paper was published in the *Journal of Population Economics.*

My next project related to student health will examine the effect of social and emotional learning (SEL) mandates on students' mental health and academic achievement. Social and emotional learning teaches critical social competencies necessary for life and academic success, including social and self-awareness, self-management, and responsible decision-making skills. Currently, all states have at least some integration of SEL in their curriculum, but the enforcement and quality of the curriculum varies across states and grade levels. I plan to use quasi-experimental methods, and data on mental health outcomes from the middle school and high school Youth Risk Behavior Surveys, and data on academic achievement outcomes from the National Assessment of Educational Progress to examine the effect of SEL mandates on student mental health and achievement.

Research on Economic Self-Sufficiency

The last area of my research focuses on how policy can affect key economic indicators of self-sufficiency. Specifically, I have work that studies how an introduction of paid parental leave affects maternal labor market outcomes in the short-run. Using a reform in Australia, the Paid Parental Leave Scheme (PPL), that gave the primary caregiver of a child born or adopted on or after January 1, 2011 $672.70 a week for a maximum of 18 weeks, this paper develops theoretical predictions of the effect of paid parental leave on maternal labor market outcomes, and tests these predictions using a regression discontinuity design and confidential data from the Australian Pregnancy and Employment Transitions Survey. The theoretical results imply that after the introduction of PPL, hours of work in the pre-birth period should decrease for mothers who will qualify for PPL, and increase for mothers who are attempting to qualify for PPL. Post-birth, the theoretical results imply that more mothers are out of work and on leave than would have been in the absence of PPL. The empirical results suggest that the PPL had no significant effect on the average number of hours worked pre-birth, the average age of the child when the mother returned to work, or the average number of hours worked post-birth. This paper is currently under review.

I also have coauthored work with David Neumark and Brian Asquith that estimates the longer-run effects of minimum wages, the Earned Income Tax Credit, and welfare on key economic indicators of economic self-sufficiency in disadvantaged neighborhoods. We use tract-level aggregate data from the Neighborhood Change Database and find that the longer-run effects of the EITC are to increase employment and to reduce poverty and public assistance. We also find some evidence that higher welfare benefits had longer-run adverse effects, and quite robust evidence that tighter welfare time limits reduce poverty and public assistance in the longer-run. The evidence on the long-run effects of the minimum wage on poverty and public assistance is not robust, with some evidence pointing to reductions, and some to increases. This paper is currently under review. Our next project will use Census microdata to unpack the effects of these anti-poverty policies on subgroups, such as single mothers, to better understand the estimated effects on family-level outcomes, such as poverty.

References

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