

My project exploited a spatial fixed-effects model to examine the effects of hate crimes in counties on educational outcomes in those county's K-12 schools. Hate crimes are an increasingly relevant policy issue, as they surged between 2015-2017 following declines across the previous two decades. The research literature attributes this surge to President Trump's rise in American politics (Edwards and Rushin 2018), but little research has been conducted on the consequences of hate crimes for educational outcomes. In my project, I find initial, but somewhat mixed, evidence suggesting that hate crimes may worsen standardized test performance. Specifically, I find that the number of hate crimes in a county is associated with a decline in the percentage of a county's students who score proficiently on a state annual standardized assessment. This relationship was strongest in rural counties and during President Trump's time in office. This suggests that the growth of hate crimes in the U.S. may have consequences in K-12 education, and that educators may need to find ways to break the link between hate crimes and education, especially in rural settings, or on a more fundamental level, stem the proliferation of hate crimes during a potential second term under President Trump.

Over the course of the project, I learned to wrangle all sorts of sometimes troublesome data from a variety of sources and at different levels of granularity. For example, because I sought to understand the effects of hate crimes at the county level, I had to aggregate education assessment data at the school level up to the county level – meaning I learned a lot about the geospatial identification of school agencies. I manipulated and merged data from the FBI, USDA, Department of Education, and several other sources in R. I learned that working across data sources is possible, and can allow you to create datasets that hadn't previously existed, which is extremely powerful in observation analysis in the social sciences.

I also learned important lessons about the value of thinking carefully about data and modeling approaches. Over the course of my project, peculiar findings emerged, requiring me to investigate my data and models in ways I had not anticipated. One unusual result among my findings was that, in contrast to the negative relationship between hate crime prevalence and academic achievement that I found using a time fixed-effects model, I found a positive and significant relationship when using a county and time fixed effects model— oddly suggesting that more hate crimes was associated with better educational outcomes. It took a lot of digging to understand this puzzling finding. I worked with my professors to develop theories of what might be driving these flipped estimates, and estimated different models and created visualizations excluding certain variables, and interrogated the model assumptions to investigate the source of these counterintuitive findings. Eventually, I realized that my educational data might be the problem, as what is considered “proficient” performance on an exam varies across states based on policy. However, this answer came only after weeks of persistent questioning, resolve to look down every potential path, and collaborative thinking with my peers and professors.

The QSS one-term project allowed me to dive deep into a research question I had chosen given my academic interests, but to do so in a focused, one-term experience. Although my research question and project evolved over the course of the term, I was encouraged to be persistent and I am proud of the end product. The QSS major has stood out to me in how experiential and application-oriented it is. QSS 82 epitomized this, as I think I learned most - about how to conduct empirical research in the social sciences and how to leverage data to understand the

world - in my one term doing research that put me in the driver's seat and made me ask and answer the questions along every step of the research process.

I encourage future QSS majors considering the thesis or the one-term project to see both as platforms for intellectual curiosity and passion. I wanted to write a thesis, but knew that I'd have a busy fall looking for a job, so I chose the project. But the one-term project can still be a place for great academic work, and I felt the term extremely rewarding as a culminating research experience. Because of how self-driven the class is, with even class time often feeling like office hours, I encourage students to start early to find a topic that interests them, take initiative in asking questions and seeking answers themselves, and be persistent – as this project relies on students to drive it forward across a quick ten-week term.