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Research Statement

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My research spans several different fields, including law and economics, economics of education, and crime. One common theme of my work is exploiting policy variation as natural experiments to establish causality. My particular interest in the topic was understanding the effect of gun policies and marijuana policies on public health outcomes, such as crime rates, workplace fatalities, and traffic fatalities. Below, I will discuss my current research and future research plans.

CURRENT RESEARCH

(i) “Do Stand-Your-Ground Laws Increase or Decrease Traffic Fatalities?”

(Job Market Paper)

This research studies the impact of stand-your-ground (SYG) laws on traffic fatality. Historically, one has a duty to retreat before applying lethal force in self-defense. SYG laws remove the retreat requirement for self-defense in one’s vehicle or any place one is legally present. The laws could potentially change driving behaviors and traffic fatalities by increasing gun prevalence in the traffic fleet and altering the expected cost of aggressive driving actions. This is the first paper to examine the relationship between SYG laws and traffic fatalities. Using state-level traffic fatality data and difference-in-differences analysis, this study finds that the legalizations raise total traffic fatalities and aggressive-driving-related fatalities. In addition, the research incorporates novel data and methods to test the mechanism. Specifically, the research uses the unique gun ownership data from Rand Cooperation to approximate the vehicular gun prevalence. I find that the implementation of SYG laws is associated with a 3% increase in total traffic fatalities. The legalization raises the aggressive driving fatalities by 12% in the first year of implementation. Unlike the prior literature using small-sample survey data, this study purposes a novel method to estimate road rage crime with large administrative data from National Incident-Based Reporting System (NIBRS). The analysis of mechanism suggests the SYG laws are associated with increases in both gun ownership and road rage crimes. The evidence shows broader impacts of SYG laws on public health than initially considered. Traffic fatalities are an extremely pertinent but largely ignored public health outcome for gun policy literature. This paper shows that the negative externalities of SYG laws extend beyond violent crime and suicide.

(ii) “Campus Concealed Carry Laws and Higher Education Outcomes”

This paper investigates how policies allowing students to carry concealed guns on campus will affect the college environment. Specifically, this study examines the impact of campus concealed carry (CCC) laws on the full spectrum of higher education outcomes involving campus crime, number of applications, college enrollment, alumni donations, instructional staff employment, and police employment. Using an event study design, the research finds CCC laws are associated with increases in robbery, police employment, and the student retention rate. Moreover, the finding suggests that the policies decrease alumni giving, but these laws are unlikely to reduce college applications and enrollment or increase faculty job attrition. In addition to the significant findings, the study highlights extensive original data collection work that provides a comprehensive documentation of the CCC laws. Especially, this research obtains the exact effective dates and implementation information from 62 universities by searching the news and law databases, emailing the related state or university officials, or directly submitting public information requests to the university. In terms of the contribution, this paper addresses an important topic of university safety and wellbeing and joins emerging literature examining the effects of gun-free zones.

(iii) “Medical Marijuana Laws and Abortion Rate.”

This research examines the impact of medical marijuana laws (MMLs) on the abortion rate. The laws alter incentives in important ways. On the one hand, medical marijuana laws could let pregnant women who suffer from extremely severe morning sickness get marijuana for treatment and not resort to abortion. On the other hand, MMLs may increase risky sexual activities and induce unwanted pregnancy. Using a difference-in-differences approach, the study finds MMLs are negatively associated with the abortion rate. This result could be partially driven by the therapeutic effect of marijuana for treating severe nausea during pregnancy. To address the concern that marijuana may be harmful to the fetus, this research analyzes the impact of legalizations on the rate of miscarriages and average birth weight and finds that the estimates are statistically indifferent from zero. The current literature on MMLs mainly focuses on the general population or youths’ public health outcomes but draws little attention to pregnant women’s wellbeing. This study fills this gap and provides empirical evidence for the negative effect of MMLs on abortion.

FUTURE RESEARCH

For my future work, I intend to conduct additional studies of gun laws and marijuana laws. Namely, for gun law research, I am interested in the impact of stand-your-ground (SYG) laws with workplace provisions on workplace-related injuries and fatalities. Unlike my job market paper, which define SYG laws as “laws that extend castle doctrine to one’s vehicle or anyplace one has a legal right to be,” this study focuses on the laws that extend castle doctrine to one’s workplace. I hypothesize SYG laws with workplace provision could have a negative impact on the related health outcomes. In terms of marijuana laws, I am currently working on the effects of MMLs on youth crime and university crime. As of now, there is still no consensus in the literature regarding the effect of MMLs on youth marijuana use. The current work extends the analysis of marijuana use to examining how MMLs affect youth crime and university crime. The preliminary results show MMLs may decrease the drug crime among the youths.