

Exercise - Research Questions

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Instructions

In this exercise, you will be assigned an excerpt from a journal article (also added to the class Zotero). You will have 10 minutes to read the excerpt. While reading the excerpt, clearly identify 1) the policy (direct or implied) being examined, 2) the main research question of the article, and 3) the data used to answer the research question.

Environmental Policy Paper 1

“More than 6.4 million children attend public school within 250 meters of a major roadway (Kingsley et al. 2014), and nearly one in five schools that opened in the 2014–2015 school year were built near a busy road (Hopkins 2017). Proximity to highways may make the land cheaper, but school districts and parents are often unaware of the health risks of highway pollution. Understanding the impact of traffic pollution in schools is critically relevant for social policy. Influences on academic achievement are largely absent from U.S. Environmental Protection Agency (EPA) estimates of the social costs of pollution, perhaps because relatively little research examines how pollution exposure over primary and secondary school influences human capital accumulation.

We build on earlier work by estimating the impact of attending a school with higher ambient pollution levels on the academic and behavioral outcomes of public school students. We use a novel identification strategy that leverages variation in pollution exposure caused by movement through the Florida school system as students transition from elementary to middle school or middle school to high school. We compare achievement in students moving between schools near highways, where one school has had greater levels of pollution because it is downwind of a highway, in models with zip code, grade, year, and student fixed effects.

Recent evidence demonstrates that even mild health shocks during gestation and early life can substantially affect long-term human capital outcomes (Almond, Edlund, and Palme 2009; Bharadwaj et al. 2017; Black et al. 2019; Currie, Greenstone, and Moretti 2011; Persico, Figlio, and Roth 2020; Sanders 2012), but we know much less about how pollution exposure between early life and adulthood affects human capital formation and child development. A few studies document how acute, short-term exposure to air pollution on testing days affects test score performance. Marcotte (2017) used variation in air quality on different testing days and found that children who took tests on worse days for pollen and fine airborne particulate matter had worse test outcomes. Similarly, Roth (2016) found that

pollution on testing days affected college students' performance in the United Kingdom, and Ebenstein, Lavy, and Roth (2016) found that pollution affected performance on high school exit exams in Israel. However, our study is the first to examine year-to-year exposure to pollution.

To implement our natural experiment, we use a unique administrative data set on the universe of public school students born in Florida from 1992–2002 (Persico 2021). We follow students over time, observing rich information on their behavioral, demographic, and academic characteristics. We find that attending school where prevailing winds place it downwind of a nearby highway more than 60 percent of the time is associated with 3.98 percent of a standard deviation lower test scores, a 4.09 percentage point increase in behavioral incidents, and a 0.53 percentage point increase in the rate of absences over the school year, compared to attending a school upwind of a highway the same distance away. Given the size and diversity of the state of Florida, we can also examine these impacts by race, socioeconomic status, and gender.” (Heissel, Persico, and Simon 2022)

International Sustainability

“Arguably, climate change is the most important global environmental problem of our times. Its policy dimensions are explored by a large and insightful theoretical literature. Due to the public goods nature of CO₂ emissions, it is individually rational for countries to free ride on others' emission reductions. International environmental agreements (IEAs), such as the Kyoto Protocol, exist to solve this dilemma.

In the Kyoto Protocol (Kyoto), 37 industrialized nations and the European Union (EU) have agreed to cap their levels of greenhouse gas (GHG) emissions to an average of 94.8 percent of their 1990 emissions by the period 2008 to 2012. Yet since 1997, emissions have continued to rise in many countries despite their emission caps. In 2010—the latest year with GHG data available from the United Nations Framework Convention on Climate Change (UNFCCC)—many countries were still far from achieving their promised GHG emission reductions. It appears as if the Kyoto Protocol has been ineffective.

However, our main argument is that failure to meet a promised target does not imply that Kyoto has been completely unsuccessful in bringing down emissions relative to the counterfactual situation of “No Kyoto” (i.e., a counterfactual world where no Kyoto Protocol exists). One needs to apply program evaluation techniques to this large-scale policy intervention. Therefore, we ask whether there is empirical evidence that the Kyoto Protocol induced emission savings or not. Can an international climate treaty without a strong enforcement mechanism help mitigate climate change?

To this end, we explore the Kyoto Protocol as an international climate policy quasi-natural experiment, and ex-post evaluate its effect on emissions. The most important econometric problem is that selection into Kyoto is most likely not random. The public economics literature argues that GDP per capita, initial emissions, development status, and political freedom are important determinants of IEA membership, Kyoto including. This complicates correct statistical inference as random emission shocks are likely to correlate with Kyoto

commitments. It is straightforward to control for unobserved time-invariant country-specific correlation by making use of the panel dimension of the data, but time-specific technology shocks or changes in environmental preferences could still cause biased estimates. Additionally, emission projections could drive commitment (reverse causation), which requires an instrumental variables (IV) strategy. Therefore, we explore determinants of Kyoto membership and contribute an instrument that could potentially be used in many applications.

In our IV strategy, we use countries' membership in the International Criminal Court (ICC) based in The Hague, Netherlands, as an instrument for Kyoto commitment. Using fixed effects (FEs) estimation, we find robust evidence that Kyoto commitment reduces CO₂ emissions by some 10 percent on average. To corroborate this surprisingly high effect, we investigate possible channels through which Kyoto may have affected CO₂ emissions. We identify effects on countries' energy and electricity mix, fuel prices, and energy and electricity use. We believe that these results are potentially important for negotiations about future climate deals. They imply that even a highly imperfect international climate deal may be better than no deal at all." ([Aichele and Felbermayr 2013](#))

Labor Unions Paper

"The Janus v. AFSCME (2018) decision has fundamentally changed the institutional context for U.S. teachers' unions by ruling that public sector unions cannot collect "agency fees" or "fair share fees" from non-members to compensate the union for the collective bargaining done on their behalf. In effect, this means that all public sector workers, including teachers, now must operate in a "Right to Work" (RTW) framework. This RTW legal framework and other policies hindering unionization are not new to teachers' unions. Fig. 1 traces the number of the three major types of restrictive labor policies for teachers' unions over time: policies prohibiting agency fees, collective bargaining, and strikes.

As is shown, over the past three decades states have experienced a resurgence in RTW policies for teachers' unions. Most states prohibiting agency fees for teachers' unions enacted those policies around the timing of the Taft-Hartley Act of 1947, and then only two states prohibited agency fees between 1965 and 1990. However, beginning with policy changes for teachers' unions in Texas and Indiana in 1993 and 1995 respectively, the frequency of RTW policies has increased substantially. Eight states have adopted new prohibitions on agency fees for teachers' unions in the years from 1990 until the writing of this article. The increase has been especially prominent after the passage of Act 10 in Wisconsin in 2011. The Janus v. AFSCME (2018) decision then nationalized this trend and fundamentally changed labor policy in states without RTW laws by declaring agency fees in the public sector unconstitutional.

Despite the conceivably dramatic changes to the American labor movement, little is known about the consequences of policies hindering teacher unionization (Baron, 2018; Eren & Ozbeklik, 2016; Freeman & Han, 2012; Han, 2016; Han & Maloney, 2019; Hertel-Fernandez, 2018; Marianno & Strunk, 2018a). Much of the empirical literature on the effects of teachers' unions has focused on policies facilitating teacher unionization, specifically

collective bargaining laws (e.g., Hoxby, 1996; Lovenheim, 2009; Anzia and Moe 2015; Cowen & Strunk, 2015; Frandsen, 2016; Lovenheim & Will'en, 2019; Paglayan, 2019). Within this body of literature, two theories have dominated: rent seeking and teacher voice, which largely mirror the “monopoly face” and “collective voice/institutional response face” of unionism that Freeman and Medoff (1984) examined in their seminal text, *What Do Unions Do?*. As explained in the section that follows, these theories are complex and overlapping; however, they are often pitted against each other in a simplified, normative question about whether teachers’ unions are the heroes or the villains of the American education system (Hannaway & Rotherham, 2006; La’Tara, Lora, Li & Wilson Jerry, 2017).

[...]

To fill this gap, I leverage the variation in the timing of Right to Work policies across states to bring new, empirical evidence on their impact and contribute to ongoing theoretical debates about the teacher voice and rent seeking activities of teachers’ unions. I find that prohibitions on agency fees for teachers’ unions lead to declines in teachers’ union power, but contrary to what many union critics have argued, I find that these efforts did not result in political opportunities for education reforms nor did they result in increases in student outcomes. If anything, RTW policies have decreased student achievement, with upper bounds of estimated 95% confidence intervals ruling out a positive effect of larger than 0.015 SD. Although my evidence is somewhat more consistent with the teacher voice framework, I argue that it is likely that teachers’ unions sometimes narrowly defend the interests of teachers and at other times act as productive information sharers.” (Lyon 2021)

Immigration Policy Paper

“Since 9/11, the United States has expanded the number of programs aimed at curbing the number of undocumented immigrants by discouraging their entry and, more importantly, facilitating their apprehension and deportation. Altogether, the various programs were responsible for 1.8 million deportations between 2009 and 2013 (Vaughan, 2013)—most of them fathers and heads of households with U.S.-born children (Capps et al., 2016).¹ Despite the increased spending on immigration enforcement and the growing number of removals, many of them non-criminal in nature, the implications of tougher immigration enforcement on immigrant families are yet to be well understood. This is especially true with the changing enforcement priorities under President Trump’s administration, which have resulted in the swift removal of many immigrants who qualified for temporary relief during the prior Administration.

In this study, we aim to assess how the escalation of immigration enforcement taking place at the local and state levels since the early 2000s has impacted the structure of families to which many of the deported fathers of U.S.-born children belonged. To that end, we focus on Hispanic U.S.-born children. In contrast to their non-citizen counterparts, U.S.-born Hispanic children are citizens and, therefore, have the right to stay in the country. The conditions in which these U.S. citizens are raised will play a decisive role on their health,

education, development, future employment outcomes, and their ability to exhibit good citizenship traits later in life. They will also play a role in the political landscape in future elections.

To achieve our aim, we focus on the incidence of two types of living arrangements. First, we assess the role of intensified enforcement on the prevalence of Hispanic U.S.-born children living without their parents. Because parental deportations are known to result in children being left behind with relatives or friends who are not at risk of removal (Capps et al., 2007), gaining a better understanding of the extent to which the current piecemeal approach to immigration enforcement is impacting the likelihood of parentless children seems vital. Secondly, given that many of those deported are married fathers whose spouses remain in the United States (Capps et al., 2016), we subsequently explore how intensified enforcement may have impacted the incidence of children living with mothers who report having an absentee spouse.

Understanding the consequences of intensified immigration enforcement on the structure of families to which many of the deported fathers of U.S.-born children belonged is important for a number of reasons. First, an estimated 8 percent of U.S.-born children have an undocumented parent—twice as many as in 2002 (see Appendix Figure A1).³ In due course, these children will become eligible voters and have a say about the nation's politics and immigration policy.⁴ Secondly, immigration enforcement has intensified under the current administration.⁵ Between January 22 and April 29, 2017, Immigration and Customs Enforcement (ICE) conducted around 10,800 “non-criminal arrests,” compared to just 4,200 in 2016—an increase of more than 150 percent (U.S. Immigration and Customs Enforcement, 2017a). Additionally, removal priorities have been expanded and enforcement operations targeting individuals without criminal records are now being implemented (Pierce & Selee, 2017). Lastly, understanding how intensified immigration enforcement is affecting the family environment in which an estimated 4.5 million American children grow up is vital given what we know about the importance of the family context early in life on numerous outcomes later on. An established literature on parental incarceration has found that the absence of a parent can strain important protective factors, such as parental involvement, and create risk factors, such as financial hardship (Murray, Farrington, & Sekol, 2012). Children growing up with one parent or without parents are more likely to drop out of school, experience teenage pregnancies, and have lower earnings in the future (see, for example, Adda, Björklund, & Holmlund, 2011; McLanahan, 2004). Thus, gaining a better understanding of the impacts of intensified immigration enforcement on the families in which they grow up is well warranted.

Using a unique data set that combines data from the 2005 through 2015 American Community Surveys (ACS) and detailed information on the intensification of immigration enforcement merged at the Metropolitan Statistical Area (MSA) level, we study the impact of immigration enforcement on the structure of families to which many of the deported fathers of U.S.-born children belonged.⁷ Specifically, exploiting the temporal and geographic variation of interior immigration policies, we find that the average increase in immigration enforcement during the 2005 to 2015 period has contributed to raising the likelihood that Hispanic U.S.-born children might live without their parents in households headed by naturalized relatives or friends unthreatened by deportation by 19 percent.

Likewise, the same increase in immigration enforcement appears to have raised these children's propensity to live with likely undocumented mothers with absent spouses by 20 percent—a reasonable finding given that most children with a likely undocumented father have undocumented mothers.⁸ We are also able to confirm that the impacts emanate from police-based immigration enforcement policies directly associated to apprehensions and deportations of undocumented migrants, as opposed to employment verification mandates that also have the potential to affect household structure through financial constraints. Finally, the findings prove robust to a number of identification and falsification checks.” (Amuedo-Dorantes and Arenas-Arroyo 2019)

Environmental Policy Paper 2

In the United States, approximately 10.4 million transit bus passenger trips were taken on an average weekday in 2011 (American Public Transportation Association, 2012). Buses reduce externalities generated from private vehicles, like congestion or air pollution, and increase mobility and reduce commuting costs for individuals who lack access to other forms of transportation. Unlike most private vehicles in the United States, which use gas, transit buses use diesel fuel, which contains higher amounts of toxic substances (e.g., nitrogen oxides (NO_x) and particulate matter (PM)) (Gentner et al., 2012). The U.S. Environmental Protection Agency (EPA) considers diesel exhaust a likely human carcinogen and, in 1988, the EPA started regulating emissions (EPA, 2011) (Table 1). Despite improvements in emission standards, a study in 1995 found that New York City Transit (NYCT) buses contributed to 15 percent of total PM vehicle emissions in the borough of Manhattan, suggesting they remain an important pollution source for urban residents (Lowell et al., 2003).

The purpose of this study is to investigate the effects of transit bus emission standards on infant health using a natural experiment. There is little rigorous work examining the impacts of transit bus pollution or emission standards on health, even though local governments spend up to millions of dollars ensuring buses meet or exceed these standards. This study builds upon previous work examining the health impacts of U.S. EPA pollution and transportation policies, which mostly focus on private vehicles (e.g., Chay & Greenstone, 2003; Davis, 2008; Friedman et al., 2001; Gallego, Montero, & Salas, 2013; Gibson & Carnovale, 2015; Invernizzi et al., 2011; Wolff, 2014). Measuring these impacts is important in densely populated cities like NYC, home to the largest public transit system in the United States and where nearly three-quarters of the population lives within a few hundred feet of a bus route. This proximity to routes could be harmful to human health since previous work shows roadway emissions are concentrated at the source (e.g., Kinney et al., 2011; Wilhelm & Ritz, 2003). As a result, emission standards for transit buses in cities could have major public health implications. Of particular importance are impacts on infant health, which can affect socioeconomic status and health in the long run (e.g., Black, Devereux, & Salvanes, 2007; Sanders, 2012).

However, evaluating these impacts is challenging due to methodological issues, including scarce bus pollution data and endogeneity problems common in observational studies examining health and air quality. Any study failing to account for possibly confounding

variables could overestimate the health impacts of air pollution. For example, women who live near pollution sources may be systematically different from mothers who reside further away in ways that are unobserved and cannot be controlled for. Alternatively, if avoidance behavior is a concern and unaccounted for, then results could underestimate the effects of pollution on health.

To overcome these issues, I report reduced-form estimates from a natural experiment where I use bus vintage (i.e., the model year of the bus) as a proxy for emissions to examine impacts on infant health. I exploit the variation in vintage resulting from older buses retiring and being replaced with newer buses that are forced to adhere to more stringent EPA emission standards.

[...]

I collect a unique dataset on routes and vintages for each shift for the NYCT bus fleet from 1990 to 2009 through the Freedom of Information Law. I merge this information with the universe of births in NYC using restricted birth certificate data, which include maternal residence at the census block level, birth month and year, and detailed maternal characteristics. I focus on three outcomes considered important predictors of infant health: birth weight, gestational age, and the Apgar 5 score.” (Ngo 2017)

Health Policy

“Over two-thirds of former prisoners recidivate within three years of release (Alper, Durose, & Markman, 2018). Most individuals cycling in and out of incarceration have high rates of chronic medical conditions, severe mental health disorders, and substance use issues (Bronson & Berzofsky, 2017). Despite the need for timely and continuous access to care, many ex-offenders do not receive the medical treatment they need while incarcerated or upon release, and return to prison with existing behavioral health issues (Mallik-Kane & Visser, 2008; Wilper et al., 2009). Evidence suggests that access to high quality in-prison healthcare and treatment programs during incarceration can improve health outcomes and reduce recidivism rates (Hjalmarsson & Lindquist, 2020). In the absence of such treatment programs or with low admission rates during incarceration, it may be critical to provide health insurance coverage to inmates upon release that includes services for mental health and substance use disorders (SUDs) to curb recidivism rates. In this paper, we investigate the effect of health insurance coverage on access to addiction treatment and the likelihood of returning to prison among former inmates.

In the crime literature, the phrase “specific deterrence” is often used to describe the impact of punishment on the future behavior of convicts, whereas general deterrence effects refer to the impact of punishment on the general population’s incentives to commit crime prior to experiencing punishment. As noted in the literature, there are many reasons to expect these effects to differ from each other, since a person’s imprisonment experience, as well as the presence of a criminal record, can cause a person to view the prospect of punishment differently than he did prior to being convicted. Focusing on recidivism is especially

important because it allows us to isolate the specific deterrence effects of access to health insurance from its potential general deterrence effects.

Studies focusing on crime rates are incapable of separating out specific deterrence effects, because changes in these rates are driven by a combination of both general and specific deterrence effects. Therefore, absent further analysis, one cannot infer whether a given reduction in crime is caused by recidivists committing fewer crimes or whether the policy is more effective on one-time offenders. This distinction matters for evaluating the strengths of different policies, e.g., one that targets individuals being released from prisons versus another geared towards reducing crime among the general population. Isolating the specific deterrence effects of increased access to health insurance allows us to identify a strong candidate for cost-effective crime reduction policies, namely prison-exit policies that states can adopt to combat recidivism.

In the present study, we provide the first evidence on the causal effect of public health insurance on crime-specific recidivism using individual-level administrative data from the National Corrections Reporting Program (NCRP). Specifically, we exploit a policy change in a majority of states that expanded public coverage to both include services for mental health and SUD and to cover low-income adults in 2014, which is known as the Affordable Care Act (ACA) Medicaid expansion. In addition, we develop a simple Beckerian law enforcement model (Becker, 1968) and derive the potential impact of health insurance coverage on recidivism. We explore, both theoretically and empirically, possible channels through which health insurance coverage could affect recidivism. Our empirical analysis suggests that increased access to health insurance reduces recidivism, and our theory suggests that this reduction may be driven by the improved mental health conditions of ex-offenders.” (Aslim et al., n.d.)

Unemployment Services

“The Adult and Dislocated Worker programs are among the largest employment and training initiatives in the United States. Funded by the U.S. Department of Labor (DOL), the programs aim to help job seekers find meaningful employment by providing labor market information and resources for job search (core services), assistance from employment counselors (intensive services), and funding for training. Together, the programs currently reach about 6.5 million people annually at a combined cost of around \$2 billion (DOL, 2016a, 2016b). Job seekers access program services at American Job Centers located throughout the nation.

Researchers have previously conducted evaluations of intensive services provided by the Adult and Dislocated Worker programs using convenience samples of sites and nonexperimental comparison group designs (Heinrich, Mueser, & Troske, 2008; Heinrich, Mueser, Troske, Jeon, & Kahvecioglu, 2013). This study provides more rigorous evidence of the effects of intensive services using a nationally representative, experimental evaluation launched in 2008 by the Employment and Training Administration within DOL. The study was conducted in 28 randomly selected local areas across 19 states, with the randomization of nearly all job seekers eligible for program-funded intensive services to

groups with or without access to intensive services. Study results therefore provide impact and benefit-cost estimates with both internal and external validity. To estimate program effects in the three-year follow-up period, the study used outcome data from two rounds of surveys and administrative earnings records from the National Directory of New Hires (NDNH).

We find evidence that program-funded intensive services increased earnings (the confirmatory outcome for the study for the full sample). Depending on the data source used, throughout the three-year period, individuals who could access intensive services earned about \$3,000 or about \$7,000 more than those not able to use the services—a 7 or 20 percent earnings gain. Comparing these effects to costs indicates the services produce positive net benefits for job seekers, taxpayers, and society. Exploratory analysis results show that participants eligible for the Adult and Dislocated Worker programs exhibited similar patterns of impacts, and results were similar for other subgroups based on gender, race/ethnicity, age, and employment status in the year before baseline. But effects were larger for more educated job seekers (compared with less educated job seekers) and in areas with higher rates of unemployment. In addition, there is some evidence of stronger effects of access to intensive services for job seekers in local areas that (1) primarily offered intensive services to individuals interested in pursuing training and (2) screened for the need for intensive services as soon as an individual arrived at an American Job Center.” (McConnell et al. 2021)

Neighborhoods and Labor Markets

“The relevance of social networks and local interactions for economic outcomes has been increasingly recognized by economists in a variety of contexts.¹ An important strand of this literature has focused on the detection and measurement of social interactions that operate at the level of the residential neighborhood.² The proper identification of such neighborhood effects is complicated, however, by the nonrandom sorting of households into neighborhoods and the likely presence of unobserved individual and neighborhood attributes.³ The resulting correlation in unobservables among neighbors can lead to serious bias in the estimation of social effects in the absence of a research design capable of distinguishing social interactions from these alternative explanations.

In this paper, we propose a new empirical strategy for identifying neighborhood effects that is based on isolating block-level variation in the characteristics of neighbors within narrowly defined neighborhood reference groups.⁴ In particular, using Census data that detail the city block on which each individual in the Boston metropolitan area resides, we compare outcomes for neighbors who reside on the same versus nearby blocks. The key identifying assumption underlying this design (which is testable on observable attributes) is that there is no block-level correlation in unobserved attributes among block residents, after taking into account the broader neighborhood reference group.

We use this approach to study the impact of neighborhood referrals on labor market outcomes. Rather than focusing on more general forms of neighborhood effects, we exploit the fact that our restricted Census data set characterizes the precise location of both an

individual's place of residence and place of work to study the propensity of neighbors to work together. Specifically, we examine the propensity of a pair of individuals to work in the same location, comparing such propensities for pairs of individuals who reside on the same versus nearby blocks. We take the propensity to work in the same location as an indication that one member of the pair provided a referral (or more generally information) to the other member about jobs available in her place of work.

Our results indicate the existence of significant social interactions at the block level; on the basis of our most conservative estimates, residing on the same versus nearby blocks increases the probability of working together by over 33 percent. As a consequence, individuals are about 6.9 percentage points more likely to work with at least one person from their block of residence than they would be in the absence of referrals. This result is robust across various specifications intended to address the possibility of sorting into specific blocks within neighborhoods and reverse causation (i.e., the idea that referrals may flow in the opposite direction, from friends and acquaintances in the workplace to residential opportunities)." (Bayer, Ross, and Topa 2008)

Inequality

"To what extent are children's economic opportunities shaped by the neighborhoods in which they grow up? Despite extensive research, the answer to this question remains debated. Observational studies have documented significant variation across neighborhoods in economic outcomes (e.g., Wilson 1987; Jencks and Mayer 1990; Massey and Denton 1993; Sampson, Morenoff, and Gannon-Rowley 2002; Sharkey and Faber 2014). However, experimental studies of families that move have traditionally found little evidence that neighborhoods affect economic outcomes (e.g., Katz, Kling, and Liebman 2001; Oreopoulos 2003; Ludwig et al. 2013).

Using deidentified tax records covering the U.S. population, we present new quasi-experimental evidence on the effects of neighborhoods on intergenerational mobility that reconcile the conflicting findings of prior work and shed light on the mechanisms through which neighborhoods affect children's outcomes. Our analysis consists of two articles. In this article, we measure the degree to which the differences in intergenerational mobility across areas in observational data are driven by causal effects of place. In the second article (Chetty and Hendren 2018a), we build on the research design developed here to construct estimates of the causal effect of growing up in each county in the United States on children's long-term outcomes and characterize the features of areas that produce good outcomes.

Our analysis is motivated by our previous work showing that children's expected incomes conditional on their parents' incomes vary substantially with the area (commuting zone or county) in which they grow up (Chetty et al. 2014).¹ This geographic variation in intergenerational mobility could be driven by two very different sources. One possibility is that neighborhoods have causal effects on economic mobility: that is, moving a given child to a different neighborhood would change his or her life outcomes. Another possibility is

that the observed geographic variation is due to systematic differences in the types of people living in each area, such as differences in demographics or wealth.

[...]

In our baseline analysis, we focus on families with children born between 1980 and 1988 who moved once across commuting zones (CZs) between 1997 and 2010. We find that on average, spending an additional year in a CZ where the mean income rank of children of permanent residents is 1 percentile higher (at a given level of parental income) increases a child's income rank in adulthood by approximately 0.04 percentiles. That is, the incomes of children who move converge to the incomes of permanent residents in the destination at a rate of 4% per year of childhood exposure. Symmetrically, moving to an area where permanent residents have worse incomes reduces a child's expected income by 4% per year. When analyzing children who move more than once during childhood, we find that children's incomes vary in proportion to the amount of time they spend in an area rather than the specific ages during which they live in that area, as would be the case in a model of "critical age effects" (e.g., Lynch and Smith 2005)." ([Chetty and Hendren 2018](#))

Policing

"Fatal shootings of civilians by police officers in the past several years have drawn the attention of the news media, protesters, and investigators from all levels of government. Public outcry from individuals and organizations, including the Black Lives Matter movement, has called for major changes in police agencies that result in reductions in these deaths, especially those of black citizens. But which police agency policies are associated with higher incidence of fatal police-involved shootings? What changes could public officials make to reduce these fatalities? These questions have received little in the way of systematic research by scholars. Given the continual loss of civilian lives in these incidents and the recent unrest that has followed them in cities from Cleveland to Minneapolis, Baltimore to Ferguson, these questions warrant attention from scholars, public leaders, and American society in general.

We suggest that certain policy choices by local officials may reduce the rates of these deaths, and we test our hypotheses on a large sample of U.S. cities and counties. We find that one policy—the requirement that police officers file a report when they point their gun at someone but do not fire—is associated with systematically lower rates of gun deaths of civilians.

Our analysis relies on a unique data set compiled by a nonprofit organization that has attempted to catalog every instance of police-involved gun death since 2000. These are cases in which a police officer fired at a civilian, resulting in death. This database project, called Fatal Encounters, is crowdsourced and fact-checked by the nonprofit. Fatal Encounters and several less organized databases like it have sprung up in recent years as a citizen solution to the lack of reliable government data. The federal government does not mandate collection of these data in a public database. The Federal Bureau of Investigation (FBI) does collect information on police-involved deaths of civilians, but these data are

systematically incomplete because of voluntary self-reporting by state and local agencies (Burghart 2014; Davis and Lowery 2015). We merge the Fatal Encounters data with agency-level policy variables gathered by the U.S. Bureau of Justice to examine whether particular policies or department features are associated with higher or lower rates of gun deaths by police officers. Understanding which agency variables are associated with reduced incidence may provide police agencies with options to reduce their rates of police-involved deaths and help direct policy change by local and state legislative bodies. Additionally, it will provide a foundation for future academic research on an extremely important, although neglected, topic.

Existing scholarly research suggests that the use of force by police is affected by factors at multiple levels, including the individual, agency, and community. For example, racial diversity within communities (Jacobs and O'Brien 1998) and violent crime rates (Smith 2003) have been found to affect the frequency of fatal police-involved shootings. City-level policies such as the presence of a citizen review board have also been associated with police brutality complaints (Smith and Holmes 2003). Other factors contributing to the use of force more generally include the racial or ethnic minority status of the citizen(s) involved, education level of the police officer, income of the police officer, and training efforts by the police agency. Our work here focuses on agency policies and characteristics that are associated with relatively low or high rates of gun deaths by police, although we control for important community characteristics as well. Recent deaths of civilians by police have drawn public attention to strained relations between government and citizens, particularly citizens of color. We seek to illuminate potential policy options that may help reduce the rates of these deaths—a normatively positive outcome from the perspective of leaders, police, and citizens.” (Jennings and Rubado 2017)

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