Consent Searches: Evaluating the Usefulness of a Common and Highly Discretionary Police Practice

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Abstract

We analyze the consequences of using driver consent as a basis for initializing a traffic stop-and-search compared to those searches based on probable cause. We find that consent searches do worse on every relevant dimension that we can measure. Consent searches are less likely to result in contraband than are probable cause searches. Moreover, police agencies with a relatively higher reliance on consent searches find similar amounts of contraband and make a similar number of arrests as agencies doing much less searching but with a greater reliance on probable cause. These patterns are amplified along racial lines, and there is no discernible relationship between the use of consent searches and crime. We also provide causal evidence that corroborate these observational findings by examining the consequences of a Texas Highway Patrol policy, which suddenly increased the consent search rate in two South Texas counties. We show the contraband recovery rate discontinuously decreases when the consent search rate discontinuously increases.

Introduction

A surge of activism in response to highly publicized police abuses has generated widespread calls for policing reform in the United States. Proposals range from circumspect adjustments to police training to far-reaching reforms that would abolish the police altogether. As diverse as these options may seem, they are motivated by a common belief, supported by empirical and anecdotal evidence, that interactions between police officers and citizens are potentially hazardous and prone to violent escalations (Jacobs and O'Brien, 1998; Oberfield, 2012; Petrocelli et al., 2003). Of course, this is dangerous for officers and citizens alike. A successful reform agenda must therefore either change the protocols by which officers engage in contact with citizens to make it safer, or make that contact less frequent (or both). At the same time, Americans across the ideological and racial spectrum continue to be concerned about crime, confounding attempts at meaningful reform (Parket and Hurst, 2021).

We enter into this milieu by evaluating one area ripe for immediate reform: discretionary policing practices, specifically, the decision to stop and search citizens in the course of traffic or pedestrian stops. Police work includes a wide range of activities. Certain types of policing may be important either as preventative measures, or as appropriate societal reactions to crime. But other activities may be tangential to crime control, counter-productive, or otherwise irrelevant. In the debate about how to generate better policing outcomes, distinguishing one type of police activity from the other is paramount. To that end, we investigate the use of consent searches relative to their constitutionally constrained counterpart, probable cause searches. Consent searches, we discover, are a particularly stark example of a widespread policing activity that is not associated with increased public safety, even as the extant literature documents their deep societal cost, especially for communities of color.

Consent searches take place when an officer makes a traffic or pedestrian stop and, lacking evidence that would generate probable cause, simply asks for the civilian's permission to search their person or vehicle. In theory, the motorist has a constitutional right to privacy and can refuse the search, but an officer has no obligation to share this information and the power dynamics of a stop are such that citizens may find it difficult to exercise their rights. For these reasons, advocates are critical of consent searches, believing they serve as a de facto work around to the

4th Amendment (Burke, 2016). Yet, it was precisely this aspect that saw them rise to prominence during the tough-on-crime era of the 1990s, when they came to be regarded as an essential tool in pro-active policing that sought to maximize police-citizen encounters.

Existing scholarship finds consent searches are more likely than other types of searches to be implemented in a racially disparate way (Shoub, 2021). Moreover, by leveraging changes in police protocol that created dramatic reductions in the use of consent searches in a few North Carolina municipalities, researchers have shown they are less likely to recover contraband than other types of searches and that their frequent use does not appear to depress violent crime (Epp and Erhardt, 2021; Baumgartner et al., 2018). Studies on terry-stops in New York City (another type of high-discretion police search) have found similar results (Mummolo, 2018; Rosenfeld and Fornango, 2017).

We build on this research with the largest study of consent searches data availability currently allows, drawing from 900,662 observations of police searches conducted by 25 agencies in five states. We find: (1) consent searches are common. In fact, for most of the agencies in our sample they are the most frequently conducted search; (2) compared to probable cause searches, they are on average 30% less likely to successfully locate contraband; (3) Police agencies that rely heavily on consent searches do more searching overall than agencies that use fewer consent searches, but, crucially do not find more contraband or make more arrests; (4) There is no relationship between the use of consent searches and violent crime rates; and (5) Black civilians are more likely to be subject to a consent search, and searches of Black civilians are less efficient than are searches of their white counterparts.

While this analysis is broad, it does not allow us to rule out endogenous driver behavior. For example, drivers might conceal contraband in response to police tactics that emphasize consent searches. We therefore complement the descriptive findings with a design-based approach leveraging a Texas policy change that suddenly increased highway patrol traffic stops in addition to reliance on consent searches in two South Texas counties: Hidalgo and Starr. Using a regression discontinuity-in-time design in addition to daily stop data from the Texas highway patrol, we offer plausibly causal evidence that heightened consent search reliance corresponds to a sudden decrease in the contraband recovery rate without commensurate crime reductions.

During the 1990s, police agencies across the country developed new habits around a policing style that sought to manage crime through pro-active attempts to locate criminals through stops and searches. Chief among them was the widespread use of consent searches, which gave officers an avenue to investigate motorists based on only vague suspicions of wrongdoings. That these suspicions often turn out to be incorrect when compared to probable cause searches is not surprising. What we document is that these searches are so inefficient that their contribution to public safety (insofar as we can measure the concept) appears to be negligible. Yet consent searches continue to be a common element of police work, heavily engaged in by agencies across the country. If the goal is to reduce the potential for harmful contact between officers and citizens without undermining efforts at crime abatement, then scaling back or eliminating consent searches appears to be low-hanging fruit for workable police reform.

Background

Consent Searches in Modern Policing

Violent crime rates rose steadily from the 1960s to the early 1990s (Enns, 2016). In response, and with a public that was generally supportive of harsher penalties for crime, politicians from the left and right remade the criminal justice system (Murakawa, 2014). Police work was retooled around *broken windows theories of crime*, where everyday interactions with officers became an opportunity to identify and intervene in drug related and potentially violent activity (Epp, Maynard-Moody, et al., 2014).

The logic underlying policing strategies that spring from broken windows is that law enforcement can deter crime through a visible and active presence; and can preempt crime by intervening in low level, minor infractions before they escalate to more serious offenses (Michener, 2013; Corman and Mocan, 2005). Proactive practices like hot-spot policing rely on data to direct law enforcement activities, where Feeley and Simon (1992) characterize the contemporary approach to policing, and criminal justice writ large, when they write: "It pursues systemic rationality and efficiency. It seeks to sort and classify, to separate the less from the more dangerous, and to deploy control strategies rationally. The tools for this enterprise are 'indicators,' prediction tables,

population projections, and the like," and they go on to note the human implications, writing, "in these methods, individualized diagnosis and response is displaced by aggregate classification systems for purposes of surveillance, confinement, and control," (pg. 452). Scholars elsewhere write that the wide-spread adoption of these kinds of practices, "represent a general shift from a culture of investigating crime to investigating individuals who are believed prone to commit crime" (Rios et al., 2020, pg. 58).

Consent searches are a key example of the kind of strategy that develops from broken windows. Law enforcement leverage seemingly innocuous infractions, like the proto-typical driving with a broken tail light or in a car with tinted windows, to then escalate the stop to a search in order to recover contraband. Moreover, the development of consent searches can be characterized as a constitutional accommodation of preemptive policing as a strategy. As part of the shift in policing and in pursuit of the war on drugs, police departments, together with the U.S. Drug Enforcement Agency, developed criminal profiles and used them to inform decisions about who should be investigated for potential criminal wrongdoing. Yet, to adequately investigate an individual for criminal behavior officers need legal authority to conduct a search. Traditionally, police searches must be conducted on the basis of probable cause – a phrase that comes directly from the 4th Amendment, and constrains police interactions with civilians by requiring some threshold of evidence for intervention. Starting with *Terry v. Ohio* (1968) the Supreme Court hollowed out that constitutional constraint to accommodate the frequent police-initiated contacts called for by a broken windows style of policing. With the 1968 decision, the Court lowered the threshold of evidence necessary to search individuals from probable cause to reasonable suspicion (Baumgartner et al., 2018). Further, with *Schneckloth v. Bustamonte* (1973), officers may conduct searches without probable cause and without making individuals aware of their rights if they otherwise obtain consent. Finally, in *Whren v. United States* (1996) the Court upheld targeting specific types of drivers for traffic stops, reasoning that the selective enforcement of traffic laws is an inevitable part of police work (Alexander, 2012).

Together, these rulings make it possible for law enforcement to stop and search virtually any car or pedestrian so long as they obtain consent. During the 1990s, police training evolved to take advantage of this legal leeway, emphasizing that a successful patrol was an active one

during which an officer would make many stops and then strategically manipulate drivers into acquiescing to a search (Baumgartner et al., 2018). Routine interactions with civilians and the relative ease with which consent searches could be conducted thus formed a cornerstone of the contemporary provision of public safety.

The Costs and Benefits of Preemptive Policing Practices

Little is known about the efficacy of consent searches, particularly relative to probable cause searches, with respect to the violent crime they are designed to thwart. In 2012, officers from Fayetteville, North Carolina dramatically scaled back their use of consent searches without this leading to a corresponding increase in crime (Epp and Erhardt, 2021). Researchers have also given some effort to evaluating the consequences of related practices like stop, question and frisk (SQF), and other kinds of order maintenance strategies for public safety, but findings are decidedly mixed. While early studies suggested that an active police presence was associated with declining rates of robbery, more recent work suggests this relationship is attenuated by contextual factors (Sampson and Cohen, 1988; Wilson and Boland, 1978; Cohen et al., 2003; Kane and Cronin, 2013).

New York City, faced with rising violent crime in the 1970s and 1980s, embraced broken windows policing strategies, and has thus been the site of a good deal of scholarly attention. While some research links broken windows policing to declining violent crime in the 1990s (e.g. Kelling and Sousa, 2001), other scholarship finds that such strategies modestly impacted non-violent and property crime, but had little impact on violent crime (Corman and Mocan, 2005; Kane, 2006; Rosenfeld, Fornango, and Rengifo, 2007). Scholars likewise highlight that economic conditions rose and violent crime diminished not only in New York, but in cities across the country (Eck and Maguire, 2000; Karmen, 2000; Harcourt and Ludwig, 2006). Focusing in on SQF, the pedestrian iteration of consent searches, yields equally confused results, where some have linked SQF to declining crime (Rosenfeld and Fornango, 2017; Weisburd et al., 2016; Wooditch and Weisburd, 2016), and others find no such relationship (Ferrandino, 2018).

Moreover, experimental evidence suggests that, to the extent broken windows policing effectively deters crime, this is achieved through problem-oriented strategies specific to the

needs of a given neighborhood (Braga, Weisburd, et al., 1999; Braga and Bond, 2008). Hot spot policing strategies, where law enforcement are deployed to high crime areas (again in New York City), were associated with declining crime, but researchers pinpoint the effectiveness of probable cause searches and the ineffectiveness of SQF at recovering contraband (Rosenfeld and Fornango, 2017; Shoub, 2021).

Researchers also highlight that consent searches are deployed in a racially discriminatory manner (Rosenfeld and Fornango, 2017; Baumgartner et al., 2018; Epp, Maynard-Moody, et al., 2014). The data-driven and preemptive turn in modern policing means communities are saturated with police presence, but not all communities and individuals are equally likely to be subjected to consent searches (Harcourt, 2007; Fagan and Geller, 2015). Instead, communities and individuals that fit profiles perceptibly indicative of a higher propensity to commit crime are disproportionately subject to surveillance, and such indicators are bound up with race, ethnicity and class (Tonry, 2011; Alexander, 2011; Gelman et al., 2007; Gottschalk, 2008; Ridgeway, 2007; Sampson and Loeffler, 2010; Stoudt et al., 2011; Travis et al., 2014). Consequently, researchers have found that Black Americans are 2.7 times more likely to be subjected to an investigatory stop than are their white counterparts, and individuals driving low-value vehicles (the most obvious marker of class) are 70 percent more likely to be subjected to such a stop than drivers of high value vehicles (Epp, Maynard-Moody, et al., 2014). Yet, even as Latinx and Black Americans are subject to invasive searches at higher rates than are their white counterparts, such searches are more effective at recovering contraband among white civilians (Rosenfeld and Fornango, 2017; Baumgartner et al., 2018).

Even as the public safety benefits of intrusive policing strategies are unclear, the costs of these practices are many. Preemptive policing heightens the risk of contact with the criminal legal system for individuals living in communities inundated with law enforcement, in turn increasing the risk that such encounters will turn violent, that individuals involved will be arrested even if not convicted, and that such contact will mark individuals for further criminal legal involvement (Starr, 2014; Muñiz, 2015; Murakawa and Beckett, 2010). These negative consequences spill over to impact the children, family and surrounding community of those targeted for contact (Lee, Porter, et al., 2014; White, 2018; Lee, McCormick, et al., 2015; Anoll

and Israel-Trummel, 2019; Burch, 2013; Walker, 2020).

Excessive and disproportionate policing practices likewise incur a democratic cost. Such practices actively constitute civic belonging and govern access to substantive citizenship (Loader, 2006). Repeated, involuntary and seemingly unfounded interactions with officers, however innocuous or congenial the encounter, erodes the legitimacy of police, which scholars broadly accept as a key problem facing law enforcement (Epp, Maynard-Moody, et al., 2014; Justice and Meares, 2014; Meares et al., 2015). Excessive policing undermines civic trust and political efficacy, leading individuals to approach other kinds of institutions with skepticism and to withdraw from political life (Brayne, 2014; Lerman and Weaver, 2014a; Lerman and Weaver, 2014b; Burch, 2011; Weaver et al., 2020).

Expectations

Tactically, the widespread use of consent searches spring directly from broken windows theories of crime. To examine the way consent searches are used, we introduce the following hypotheses, and, where the literature does not suggest clear expectations, pose the following research questions:

> *H1: Consent searches are less effective at finding contraband than are probable cause searches.*

A justification for consent searches is that they are easy for officers to deploy, allowing a flexible avenue to investigate potential wrongdoings even when there is not clear evidence of criminal activity. As the standards of evidence for using consent searches are lower, our expectation is that the average consent search is less likely than the average probable cause search to recover contraband.

Related to this hypothesis, Hypothesis 1a is that consent searches will be especially inefficient when performed on Black motorists. Previous research suggests that Black civilians are subject to discretionary searches at higher rates than are white ones. We also know that discretionary searches of Black civilians less frequently yields contraband than do searches of white civilians, suggesting that the factors officers use to determine reasonable suspicion are not

very good at identifying criminal behavior, and are racially biased (Rosenfeld and Fornango, 2017; Baumgartner et al., 2018).

H1a: Relative to probable cause searches, consent searches will be less effective at recovering contraband from Black civilians than from white civilians.

The use of consent searches developed from the logic that frequent police contact with civilians can ameliorate violent crime, thus enhancing public safety. Our final hypothesis is that departments that rely more heavily on consent searches will also conduct more total discretionary searches. That is, we expect a hypothetical department where officers make only consent searches would be conducting substantially more searches than a department where officers only use probable cause. Our second hypothesis is as follows:

H2: Police departments with a greater reliance on consent searches relative to probable cause will conduct more total discretionary searches.

Hypotheses 1, 1a, and 2 describe the basic mechanics of consent searches, which are thought to be part of a blunt, high-contact form of policing that disproportionately targets Blacks drivers for scrutiny. As there is strong evidence that routine and unnecessary stops and searches have negative externalities for the people and neighborhoods subject to them, understanding their contributions to public safety is important so that political and community leaders can make informed decisions. It may be that, even as they are relatively inefficient at identifying contraband, departments that heavily rely on consent searches are able to deter crime by arresting more criminals and confiscating more contraband. On the other hand, it is possible that conducting fewer but higher quality searches could produce similar results in terms of contraband recovery, arrests, and crime control. We explore these possibilities in a series of research questions:

RQ1: Do departments that rely more heavily on consent searches make more total arrests?

RQ2: Do departments that rely more heavily on consent searches find more contraband?

RQ3: Is a greater reliance on consent searches relative to probable cause associated with less crime?

Ultimately, higher reliance on consent searches is indicative of greater contact with civilians. The social costs of invasive policing practices are well documented, and increasingly, so are the political costs. These costs are not trivial, particularly given that they are disproportionately born by race-class subjugated communities.

Study 1: Cross-Agency Observational Approach

Data and Design

Study 1 draws on Stanford Open Policing Project data (SOPP).[1] SOPP aims to assemble traffic stop data from every police agency with public records. Altogether, over 200 million records are available from dozens of agencies. However, many of these records are not suitable for our study, as we require knowing, 1) whether a search took place pursuant to a stop, 2) what type of search it was, and 3) whether contraband was recovered. These parameters are met for twenty-five agencies, eighteen in NC.[2] Outside NC, we have data for the police agencies serving San Diego and Oakland in California, Austin and San Antonio in Texas, and the State Highway Patrols for Texas, Wisconsin, and Colorado. Clearly, this is not a random sample of police agencies, but it does include agencies from different regions, left- and right-leaning states, and demographically diverse municipalities. Moreover, it is comprehensive in that we make use of all of the publicly available traffic stop data that is relevant to our research question.

Table 1 provides descriptive information for all agencies under study, including the time period where we have data, the total number of discretionary stop-and-searches, and the percent of searches that were consent. Discretionary searches are those carried out either with the driver's consent or with probable cause. They are discretionary in that the decision to initiate a search stems from an officer's judgment during a stop. This makes them interesting as a window

[1] See: `https://openpolicing.stanford.edu/data/`.

[2] Data is available for every police department in NC but we limit our study to cities with at least 50,000 residents as of the 2010 Census. Police agencies for many small municipalities do not conduct enough searches to make reliable statistical estimates on a monthly basis.

Table 1: Stop information for all agencies included in the analysis

Department	State	Years	Total Searches	Total Consent	% Consent
Asheville	NC	2002 - 2015	6,039	4,349	0.72
Austin	TX	2006 - 2016	16,433	3,113	0.19
Burlington	NC	2002 - 2015	3,607	2,057	0.57
Cary	NC	2002 - 2015	2,257	1,383	0.61
Chapel Hill	NC	2002 - 2015	1,470	697	0.47
Charlotte-Mecklenburg	NC	2002 - 2015	121,596	89,760	0.74
Colorado State Patrol	CO	2010 - 2017	8,289	3,285	0.40
Concord	NC	2002 - 2015	3,453	2,660	0.77
Durham	NC	2002 - 2015	26,620	18,388	0.69
Fayetteville	NC	2002 - 2015	36,824	21,134	0.57
Gastonia	NC	2002 - 2015	3,632	2,599	0.72
Greensboro	NC	2002 - 2015	41,506	31,682	0.76
Greenville	NC	2002 - 2012	2,343	1,995	0.85
High Point	NC	2002 - 2015	7,941	5,035	0.63
Jacksonville	NC	2002 - 2015	5,085	3,546	0.70
NC State Patrol	NC	2000 - 2015	13,385	6,730	0.50
Oakland	CA	2016 - 2017	5,443	336	0.06
Raleigh	NC	2002 - 2015	36,598	20,490	0.56
Rocky Mount	NC	2002 - 2015	3,112	2,089	0.67
San Antonio	TX	2012 - 2018	4,933	3,766	0.76
Sandiego	CA	2014 - 2017	5,125	2,813	0.55
Texas State Patrol	TX	2006 - 2009	176,041	128,290	0.73
Wilmington	NC	2002 - 2015	4,904	3,677	0.75
Winston-Salem	NC	2002 - 2015	9,216	4,752	0.52
Wisconsin State Patrol	WI	2010 - 2016	9,545	2,635	0.28

into police decision-making. Non-discretionary searches are those called for by the police protocols governing a particular situation. For example, when arresting a drunk driver, officers are meant to conduct a "protective frisk" to make sure the person being taken into custody is not carrying weapons. Likewise, officers sometimes have to exercise search warrants.

Figure 1 displays the percentage of total discretionary searches that are either consent or probable cause for each agency. This makes clear that in the effort to locate contraband, consent searches are a major element of modern policing. For every agency except Oakland and Austin, consent searches make up at least 25% of discretionary searches. For 20/25 agencies, consent searches are more than half of the total.

To evaluate the hypothesis that consent searches will be less likely to recover contraband than probable cause searches (H1), we employ separate logistic regressions predicting the likelihood of finding contraband during a discretionary search for each of the twenty-five departments. We

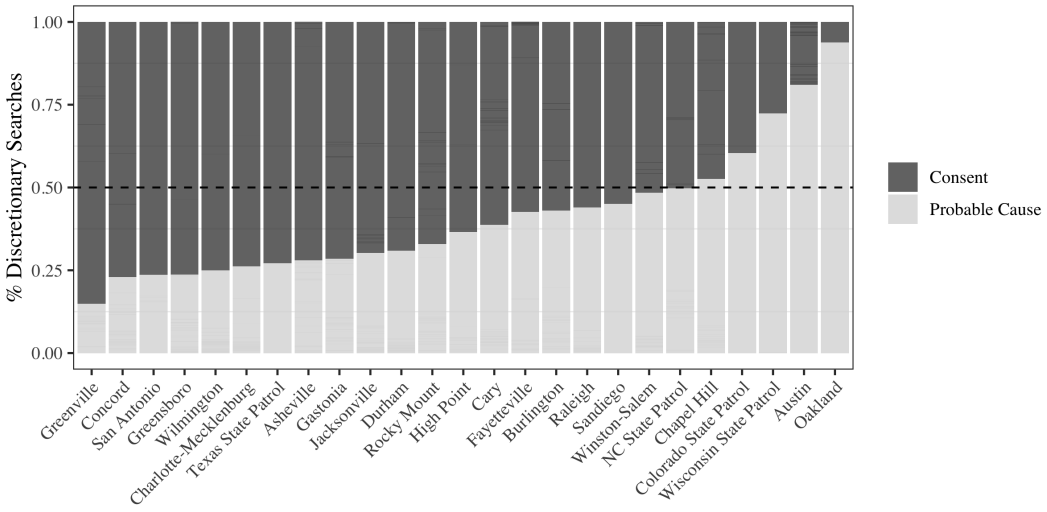

Figure 1: Reliance on consent searches relative to probable cause searches across departments.

also provide a random effects meta-analytic estimate that offers a single, weighted average of the estimates for all departments.[3] Because our data are observational, we control for other relevant factors that may be related either to the likelihood of recovering contraband or to the decision to conduct a search. Our ability to control for these factors is constrained by the data that each department makes available, however, and varies by department. For every department, we control for the age, gender, and race of the driver stopped. For departments and state patrols in California, North Carolina, Texas, and Wisconsin, we control for the day of the week a stop was conducted. In California and North Carolina, we are able to control for the various reasons officers stopped a driver. Reasons include suspected parole violations, intoxicated driving, and speeding. The Wisconsin State Highway Patrol publicly reports the age and make of the vehicles they stop. We include both of these variables as controls for our analysis of this department. To test Hypothesis 1a, we re-estimate these models separately for white and Black motorists using logistic regressions for each police department.

To test whether departments that rely heavily on consent searches make more searches overall (H2), we collapse the dataset to the agency-month level, summing the total number of monthly discretionary searches to use as the dependent variable in a pooled Poisson regression model

[3]Implemented via the `meta` package in $\mathbb{R}$ using the Hartung-Knapp method.

with fixed effects for agency-months. We use to same approach to answer our research questions, estimating separate Poisson models that use the raw monthly count of arrests, contraband hits, and instances of violent crime as dependent variables.

Results

H1 posits greater reliance on consent relative to probable cause searches will be associated with a lower contraband recovery rate. We evaluate this hypothesis for the 25 agencies we collected data on. To render the logistic regression estimates legible, we derive the difference in the predicted probability of contraband recovery via consent searches minus the predicted probability of contraband recovery via probable cause searches.

Figure 2 shows that the difference in likelihood of recovering contraband between probable cause and consent searches across all departments is stark, even when controlling for other relevant factors. In all but three departments, officers more likely to find contraband during a probable cause than a consent search. This result is statistically significant for these twenty-two departments. The magnitude of the likelihood varies by department. For most, officers are between 20 to 40 percentage points (pp) more likely to find contraband in a probable cause search than a consent search. That likelihood goes up to 50 pp for the Colorado State Patrol. The meta-analytic estimate suggests, on average, consent searches are 27 pp less likely to recover contraband than probable cause searches. There are three departments that depart from this pattern. There is no statistically meaningful difference between reliance on probable cause and consent searches in San Diego and Austin. Only in Gastonia did reliance on consent searches increase the likelihood of recovering contraband.

In sum, in terms of contraband recovery, across 22 jurisdictions that vary by geography, political affiliation, and demographic diversity, consent searches are worse at recovering contraband. This finding holds even after adjusting for several potentially relevant factors, and it holds true in departments for which we employed a full set of controls, and for departments for which we were only able to control for factors such as driver race, gender, and age.

H1a concerns the disparate impact of policing on civilians of color, and especially, Black civilians. We examine the efficiency of consent searches when the civilian stopped is white

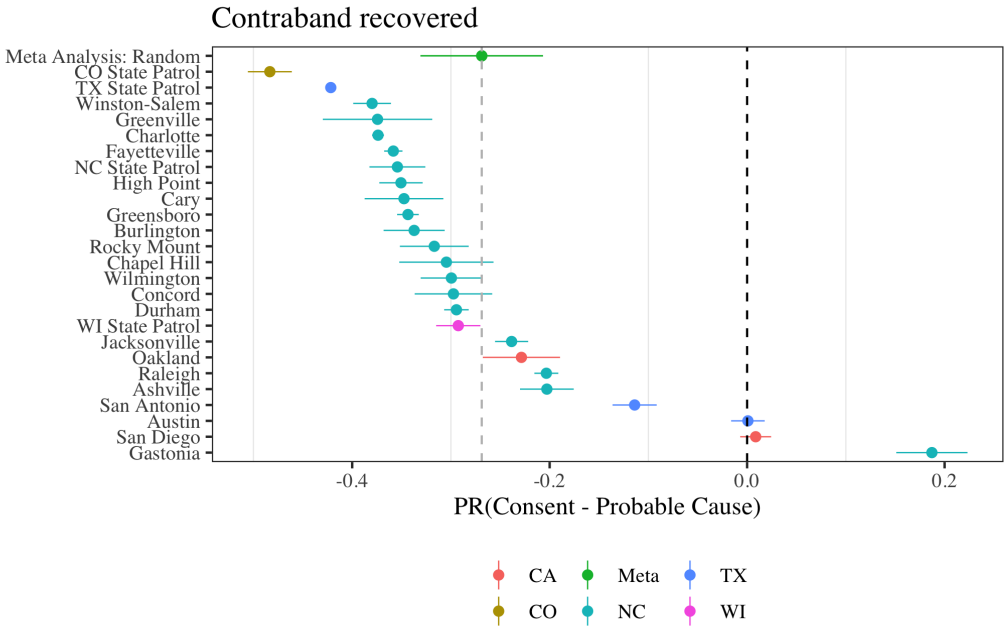

Figure 2: The difference in the probability of finding contraband between probable cause and consent searches across agencies in the United States.

and when the civilian stopped is Black. Figure 3 displays the effectiveness of consent searches relative to probable cause searches in yielding contraband, revealing that consent searches are especially inefficient when the civilian being searched is Black relative to when the civilian is white. The meta-analytic estimates suggest the effect of relying on consent searches relative to probable cause searches is twice the size when Black civilians are being searched than when white civilians are being searched. That is, probable cause searches are 17 pp more likely to recover contraband among Black civilians than are consent searches, while they are only 8 pp more likely to do so when whites are being searched.

Consistent with our hypotheses, consent searches are much less likely to locate contraband than searches made with probable cause and this is especially true for Black motorists. Yet, consent searches were never advertised as efficient. Their purported benefits are in their flexibility, allowing officers to stop and investigate more drivers than if probable cause was required in each case. Thus, our final hypothesis (H2) posits that a greater reliance on consent searches will be associated with more searches overall.

Results are displayed in Table 2. Recall, these analyses are conducted at the department-

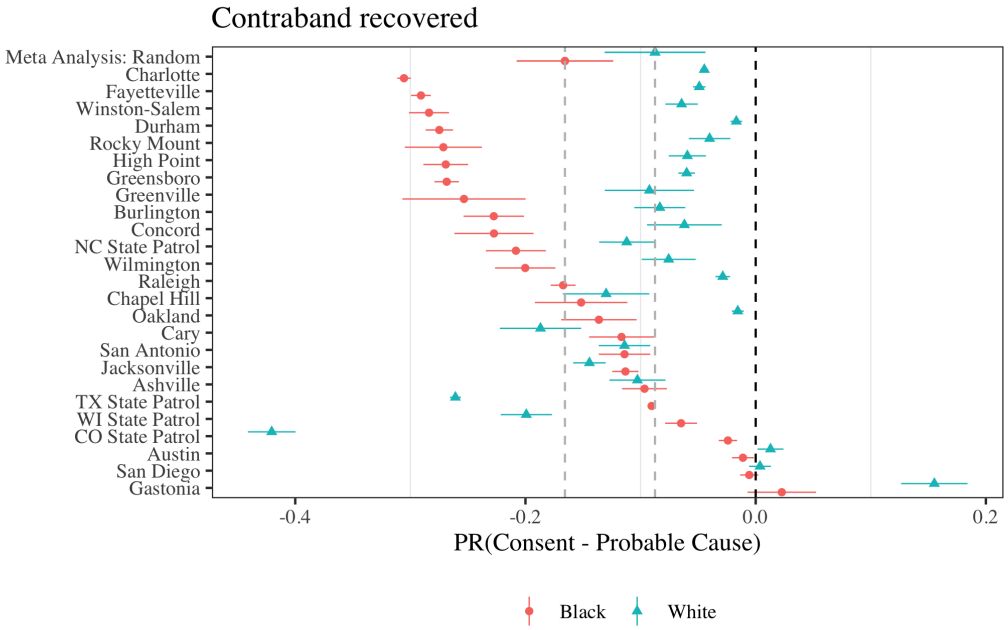

Figure 3: The difference in the probability of finding contraband between consent and probable searches across cities in the United States, by race of civilian searched.

month level using Poisson models. Column one provides support for H2: for every one pp increase in the proportion of discretionary searches that are based on driver consent, the average police department conducts almost 16 more searches per month (although, this relationship only approaches significance with a p-value of 0.05009). In substantive terms this effect is large. The Oakland Police Department, which uses consent searches in only 5% of discretionary searches, is predicted to carry out 1,248 fewer searches per month than the Greenville, NC Police Department, which uses consent searches in 83% of discretionary searches.

As expected, consent searches are less likely to result in contraband, are racially disparate, and are part of a high-contact policing strategy. What, if any, are their benefits to public safety? Do departments that make proportionally more consent searches also make more arrests, find more contraband, or have lower levels of violent crime? Answers to these research questions are found in columns two to four of Table 2. In each case, the coefficient for percent consent is not significant, and thus the answer appears to be *no*. Departments that are more reliant on consent searches conduct more searches, but do not make more arrests, do not find more contraband, and do not experience less crime than departments relying more heavily on probable cause to

conduct searches.

Table 2: The impact of reliance on consent searches on policing outcomes

	Searches (H2)	Arrests (RQ1)	Contraband (RQ2)	Violent Crime (RQ3)
Percent Consent	15.876	−2.153	−2.725	6.697
	(8.100)	(1.818)	(2.627)	(4.920)
Agency-Year Fixed Effects	Yes	Yes	Yes	
Observations	2,815	2,815	2,815	2,815
R^2	0.001	0.001	0.0004	0.001
Adjusted R^2	−0.095	−0.096	−0.096	−0.096
F Statistic (df = 1; 2566)	3.842	1.402	1.076	1.853

*p<0.05; **p<0.01; ***p<0.001

Searching is a prerequisite for finding contraband (and often for making an arrest for a non-driving criminal violation) so by searching more departments might naturally be expected to be doing more of these things as well. That this is not the case highlights the downsides of a high-contact policing strategy based on only vague suspicions of wrongdoing, at least insofar as it comes at the expense of legally constrained, evidenced-based police work. However, these analyses are descriptive. Police departments may not easily be able to substitute searches based on consent for fewer searches based on probable cause. With these concerns in mind, we turn to our second study.

Study 2: Operation Strong Safety

Study 1's advantage is that it allows us to assess consent search patterns across *several* agencies. The downside is that the estimates we present may be subject to bias via endogenous driver behavior. For example, consent searches may be justified based on an officer's expertise to sense driver wrongdoing. Yet, drivers typically subject to consent searches may adjust driving habits by diligently hiding or driving without contraband. These endogenous behaviors may generate a difference in contraband recovery probability between consent and probable cause searches that is not the result of inherent inefficiencies in consent searches, but instead reflects the deterrent effect of consent searches and related preemptive practices. We address this possibility through a design-based approach in Study 2. Our approach leverages daily-level traffic stop data from the

Texas Department of Public Safety (DPS) Highway Patrol to evaluate the plausibly exogenous effect of *Operation Strong Safety* (OSS) on the contraband recovery rate. OSS was a policy that suddenly increased the consent search rate in two predominantly Mexican-American border counties, allowing us to estimate the immediate effect of shifting toward using consent searches at a point in time where drivers may have had limited ability to adjust to the shift in police tactics. Study 2 complements Study 1 by providing internal validity on the consequences of privileging consent searches in policing tactics, while Study 1 provides external validity by testing our hypotheses in multiple departments.

Context

OSS was jointly implemented by the Texas Governor and DPS on June 23rd, 2014. OSS redirected highway patrol resources to Hidalgo and Starr county from the rest of Texas for the stated goal of combatting human smuggling and drug trafficking along the border during the 2014 Central American child migrant crisis (DPS, 2015a).[4] OSS specifically increased patrol activity near Highway 83, which cuts through several border towns throughout Hidalgo and Starr (e.g. McAllen, Pharr, Mission) (DPS, 2015b). Importantly, the policy was announced only two days prior to its implementation, minimizing anticipatory effects on the part of drivers and the highway patrol (Aguilar, 2014). Although the DPS rejects the notion OSS was focused on stopping unauthorized immigration, journalistic accounts suggest DPS officers were also directed to engage in indiscriminate traffic stops to identify and detain undocumented migrants (Rosenthal, 2015; Bosque, 2018).

Government officials raised concerns OSS was increasing the number and rate of unnecessary traffic stops throughout Hidalgo and Starr (Aguilar, 2014). Charis Kubrin, a UC-Irvine criminologist who analyzed DPS data, suggested the high numbers of traffic stops indicates the DPS might be profiling Mexican-Americans in border communities, indicating "I see a parallel in the New York stop-and-frisk policy, which was ruled unconstitutional and a complete failure" (Schladen, 2016). Indeed, OSS led to a dramatic increase in traffic stops throughout Hidalgo and Starr. Post-OSS, the number of daily traffic stops increased by 343, 135% of the

[4]Notably, the DPS was not ready to fully implement the policy. To meet operational demand in Hidalgo/Starr, the DPS significantly reduced patrols and troopers in other parts of Texas (Nelsen, 2016).

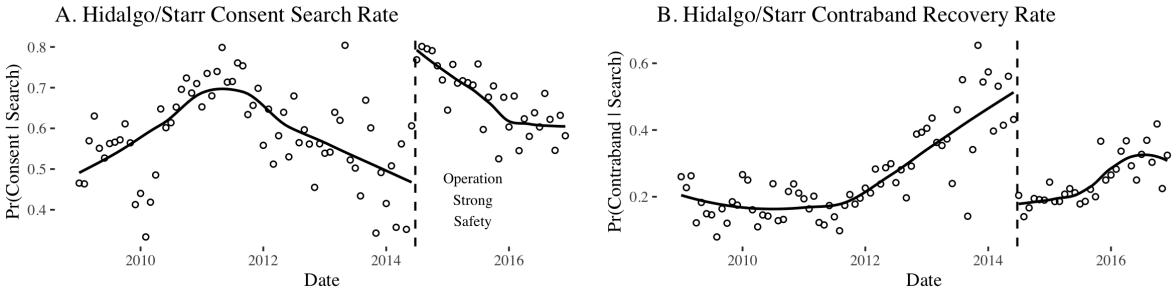

Figure 4: Consent search rate (y-axis, Panel A) and contraband recovery rate (y-axis, Panel B) over time (x-axis, both panels) in Hidalgo and Starr counties. Each dot is a monthly average of the search and contraband recovery rate. The dashed vertical line is the moment OSS is implemented (2014-06-23). The solid black line is a loess fit on each side of the time OSS is implemented.

pre-treatment mean (254), without a commensurate shift throughout the rest of Texas (Figure B3). This is equivalent to an increase from three to seven stops *per day* per 10,000 Hidalgo/Starr residents. The number of DPS troopers present in Hidalgo/Starr on a given day increased from 42 to 158 post-OSS (Figure B4). Consistent with journalistic accounts, there is evidence the precipitous increase in stops was unwarranted. The warning rate discontinuously increased post-OSS, suggesting traffic stops imposed by OSS were based on weak legal justifications (Aguilar, 2014; Hausman and Kronick, 2019) (Figure B5).

OSS also encouraged a shift toward using consent searches. The number of daily searches discontinuously increased by eight in Hidalgo/Starr post-OSS, 160% of the pre-OSS daily search average (five) (Figure B7). At the same time, OSS imposed policing tactics that *privileged the use of consent searches throughout Hidalgo and Starr.* Figure 4, Panel A displays the monthly consent search rate between January 2009-December 2016.[5] Pre-OSS, the average consent search rate hovers around 50%. Immediately after, the consent search rate discontinuously increases by 30 pp to 80%. Figure 4, Panel B displays the monthly weapon, drug, and money contraband recovery rate for Hidalgo and Starr. Consistent with Study 1, as DPS suddenly shifts to a strategy increasingly reliant on consent searches, the contraband recovery rate discontinuously decreases from 40 to 15 percentage points. Descriptively, this offers support for our main hypothesis. We now turn to an evaluation of OSS using a regression discontinuity-in-time (RDiT) approach and daily DPS stop data.

[5]Search data is missing for 2017.

Data and Design

To test our hypotheses, we use SOPP data on traffic stop-and-searches from the Texas DPS highway patrol in Hidalgo and Starr counties from January 1, 2009-December 31, 2016 ($N = 16,203$).[6] We hone in on Hidalgo and Starr given these two counties were the OSS area of operations (Figure B1). We assess the effect of OSS on two outcomes. The first indicates whether a stop-and-search was reported as a consent search. The second indicates whether a stop-and-search led to contraband recovery. The consent search outcome helps establish that OSS led to a greater reliance on consent searches. The contraband recovery outcome helps us test H1. Unfortunately, we cannot test H1a with the DPS Hidalgo and Starr stop-and-search data given that 93% of stop-and-searches throughout Hidalgo and Starr were of Latinos/Hispanics, and there is limited data to make a daily-level comparison with whites on policing outcomes.

To assess the effect of OSS on the probability that a stop-and-search is a consent search and produces contraband, we use an RDiT approach which derives the discontinuous effect of OSS on consent and contraband recovery rates on the day OSS was implemented:

$$Y_i = \alpha + \tau OSS_i + f_j(d_i) + \varepsilon_i \tag{1}$$

For Equation (1), Y_i is an indicator of whether stop-and-search i was either a consent search or resulted in contraband recovery. α is the intercept. OSS_i is an indicator for whether stop i occurs post-OSS (June 23rd, 2014). $f_j(d_i)$ are functions modeling the running variable, days from OSS implementation (d_i), at different polynomial degrees, j. j is from degree = $0 \ldots 3$. For brevity, we only present findings in the main text where degree, j, is equal to 1. ε_i are heteroskedastic robust errors. Our expectation is that OSS will increase the consent search rate (τ = positive) while simultaneously decreasing the contraband recovery rate (τ = negative). We display two sets of RDiT estimates in the main text. The first uses all stop-and-search data, adjusting for year, month, and day-of-week fixed effects to account for outcome seasonality in addition to a lagged dependent variable (Hausman and Rapson, 2018). The second set of estimates uses data from narrow bandwidths before and after OSS implementation (10-100 days)

[6]The SOPP data corrects deliberate miscoding of Latino ethnicity by the DPS using ethnicity probability estimates conditional on last names from 2000 Census data (KXAN, 2015).

(Imbens and Lemieux, 2008). Our approach is similar to Mummolo (2018), who leverages daily stop-and-frisk variation in New York to assess the effects of shifts in police tactics.

Results

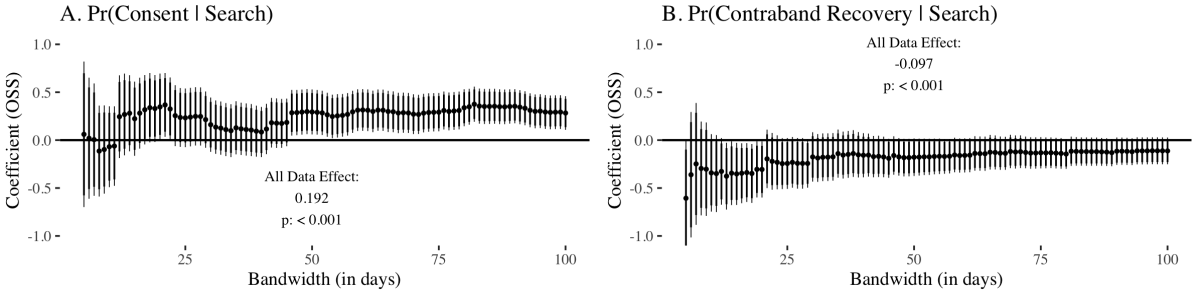

Figure 5: Effect of OSS on consent search (Panel A) and contraband recovery rate (Panels B) throughout Hidalgo and Starr counties using stop-and-search data at small bandwidths near the discontinuity. Annotations denote discontinuous effect of OSS on relevant outcomes using the full stop-and-search of data adjusting for year, month, and day-of-week fixed effects in addition to a lagged dependent variable. The running variable (days to OSS) polynomial degree for all estimates is equal to 1. 95% CIs displayed using robust SEs

Figure 5 characterizes the effect of OSS on consent searches (Panel A) and contraband recovery (Panel B) throughout Hidalgo and Starr. OSS suddenly increases the consent search rate by 19 pp in Hidalgo and Starr ($p < 0.001$), 30% of the pre-treatment mean, 63%. Findings using the full dataset are corroborated when using data at narrow temporal bandwidths that are less likely to be driven by seasonal trends and model-dependent assumptions (see Panel A). Commensurately, OSS suddenly decreases the contraband recovery rate throughout Hidalgo and Starr by 10 percentage points ($p < 0.001$), 50% of the pre-treatment mean, 19%. These results demonstrate sudden shifts in policing tactics that privilege consent searches decrease police efficiency via the recovery of contraband. Likewise, OSS did not substantially increase the raw amount of contraband recovery. OSS only increased raw contraband recovery by one per day in Hidalgo/Starr. Yet, the surge in DPS officers in Hidalgo/Starr came at the expense of patrols elsewhere, leading to a daily decrease of eight raw contrabands throughout the rest of Texas, a net decline in raw contraband recovery of seven (Table B32).

To further assess our research questions around the public safety benefits of consent searches,

we assess whether OSS reduced crime in Hidalgo/Starr FBI Uniform Crime Report data[7] on total, violent, and property crime rates each year between 2000-2017 in Hidalgo/Starr and the rest of Texas.[8] Descriptively, total and property crime rates appear to be decreasing in Hidalgo/Starr *prior to OSS* (Figure B16, Panels A, B), suggesting OSS did not uniquely precipitate crime reductions. Additionally, although OSS appears to have forestalled an increasing trend in violent crime rates, violent crime rates were also generally decreasing prior to OSS and it appears that Hidalgo/Starr's violent crime rates did not decrease as precipitously as they did in the rest of Texas between 2013-2014 (Figure B16, Panel C), the moment of OSS's implementation.

We formally test the effect of OSS on the crime rate categories in Hidalgo/Starr relative to a re-weighted set of other Texas counties using a generalized synthetic control approach developed by Xu (2017) to ensure relatively parallel pre-treatment outcome trends. The OSS average treatment effect over the treated (ATT) is statistically null for total, violent, and property crime rates. However, the sign of the effect is negative and noisy ($p = 0.14$, $p = 0.13$, and $p = 0.24$ for total, property, and violent crimes respectively, see Table B35). The event study estimates provide more statistical context for understanding these negative, yet statistically insignificant effects. Consistent with the descriptive patterns, total and property crime rates appear to be on a decreasing trend in the pre-treatment period starting in 2012 (Figure B17, Panels A-B). Thus, the negative post-OSS trend may be unrelated to OSS. Moreover, the effect of OSS on violent crime rates appears to only appear in 2016 and 2017, two years after OSS's implementation (Figure B17, Panels C). Thus, either OSS had a long-term negative effect on violent crime or long-term unobserved differential trends are driving the long-term effect. Given OSS amassed significant policing resources suddenly and within a short period of time (Figures B3 and B4), it is unclear why there are not large short-term effects post-OSS in 2014 and 2015. It therefore may not be sensible to attribute these long term negative trends to OSS, especially since policing intensity decreased substantially in July 2015 after the DPS became embroiled in scandal associated with Sandra Bland's murder (Figures B3 and B4). Overall, we conclude the evidence on the effect of OSS on crime is mixed and suggests negative crime shifts are either driven by preexisting trends

[7] UCR Data are often incomplete at the departmental-level, but Texas state law requires all departments report crime.

[8] Rates are number of crimes divided by the county population for a given year multiplied by 10,000.

or long-term effects susceptible to unobserved differential time trends unrelated to OSS.

Robustness Checks

The findings are robust. One may be concerned the contraband recovery decrease is due to a *bundled treatment*. That is, OSS did not simply increase the consent search rate, but shifted other policing activities, namely, the intensity of policing. These other shifts may have affected contraband recovery rates. While OSS is admittedly a bundled treatment, we contend it is still an externally valid case to assess tactical shifts toward consent search reliance. *Tactical policing shifts do not occur in a vacuum.* Departments often do not, or cannot, shift highly specific tactical dimensions, but rather employ a bundle of tactics that are interrelated (Baumgartner et al., 2018; Shoub, 2021). For instance, increasing consent search reliance may be bound up with generally weaker evidentiary standards for initializing a stop, resulting in higher levels of stops and searches. Indeed, Study 1 demonstrates the consent search rate is positively associated with higher search levels (Table 2, Column 1), suggesting consent search shifts go hand-in-hand with shifts in other policing activity dimensions. Therefore, evaluating tactical shifts toward consent search reliance *requires* an evaluation of multifaceted policing shifts.

Moreover, we provide evidence the bundled treatment may not mean the consent search rate increase post-OSS is not an operative mechanism explaining the contraband rate decrease. If the consent search rate increase post-OSS is not an operative explanation for the contraband rate decrease, then either the daily consent search rate should not be associated with the daily contraband rate net of adjusting for the intensity of policing (i.e. number of stops, number of searches, and number of officers) in Hidalgo/Starr, or daily policing intensity metrics should be consistently associated with the contraband rate. We demonstrate the intensity of stops and searches is not consistently associated with the contraband recovery rate at the daily-level in Hidalgo/Starr between 2009-2016, pre-OSS, and post-OSS with the exception of stops pre-OSS (Table B37, Columns 1-3). Moreover, the number of daily-level officers is also not consistently associated with contraband recovery rates in Hidalgo/Starr pre-OSS and post-OSS (Table B37, Columns 4-6). In fact, inconsistent with bundled treatment concerns, the daily officer count is positively associated with the contraband recovery rate in the full sample. Most importantly,

the consent search rate is associated with contraband recovery rates regardless of adjusting for policing intensity. These findings suggest OSS, as a bundled treatment that not only shifted the consent search rate but the intensity of policing, decreased the contraband recovery rate in large part due to the increase in the consent search rate and not policing intensity.

We also further rule out endogenous driver behavior by demonstrating OSS did not suddenly shift traffic crashes. If our effects are driven by drivers still able to become more cautious in hiding contraband within the short-run despite OSS's unanticipated implementation, then we might expect drivers to also drive more carefully and avoid traffic crashes in the short-run in response to increased police presence. We estimate the effect of OSS on the daily number of traffic crashes using data from the Texas Crash Records Information System in Hidalgo and Starr during 2014. The majority of RDiT specifications demonstrate OSS had a statistically null effect on crashes (Table B38, Figure B20), increasing confidence our estimates are due to an inefficient shift toward consent searches instead of driver behavior.

Additionally, OSS does not have a corresponding sudden effect on consent search or contraband recovery rates in Texas counties outside Hidalgo and Starr (Tables B33, B34, Figures B9, B10), suggesting our findings are not driven by secular trends in criminality or driving behavior across Texas. Related to the bundled treatment problem, we rule out whether our findings are driven by an influx of inexperienced officers who typically patrol outside Hidalgo and Starr post-OSS instead of tactical policing shifts. We subset our stop-and-search data to officers who initiated 90% of their stops inside Hidalgo/Starr pre-OSS. Even for officers experienced in policing Hidalgo/Starr, OSS discontinuously increases the consent search rate while depressing the contraband recovery rate (Table B36). Our conclusions do not change using different model specifications, running variable degrees, and bandwidths (Tables B33, B34, Figures B9, B10). Our results are the same when we use the Calonico et al. (2015) optimal bandwidth selection approach (Figure B8). We demonstrate the findings are not due to statistical chance by showing the OSS effect is often larger than placebo effects based on pre-treatment discontinuities (Figures B11, B12, B13, B14). We also use a "donut-hole" approach to rule out anticipatory effects by re-estimating the OSS effect excluding observations near the discontinuity most likely subject to anticipatory effects. Our conclusions do not change (Figure B15).

Conclusion

This article presents the results of the broadest study yet conducted on the efficiency of consent searches at locating contraband and the consequences of reliance on consent searches for public safety. Consent searches are a tactic springing from broken windows theories of crime, which have remade modern policing. The wholesale turn in contemporary policing is predicated on the idea that increased presence of police in communities, increased contact with citizens, the pursuit of low level infractions, and a focus on disorder are effective means of deterring, preempting, and deescalating crime. Practices that develop from this philosophy increase involuntary interactions with civilians, and leads law enforcement to saturate certain communities thought to be particularly vulnerable to criminal activity.

At the same time, little is known about the extent to which heavy reliance on consent searches successfully enhances public safety, particularly relative to probable cause searches. The evidence that does exist suggests that consent searches do a particularly poor job at recovering contraband and deterring crime. This evidence, however, is limited in scope, focusing on stop-and-frisk in New York City and policies that curtailed consent searches in two North Carolina municipalities, even as these practices are widely employed by law enforcement. The efficacy of consent searches is an important question – the social costs associated with these tactics are quite high, increasing the likelihood of contact with police, which likewise increases the likelihood that such contact will become violent; increasing the likelihood of subsequent contact with the criminal legal system; and degrading trust in the political system and engagement with the state. These costs, moreover, are disproportionately born by marginalized people.

In order to evaluate the efficacy of consent searches relative to probable cause searches, we conducted two related analyses. Looking observationally across 25 police agencies, we find that probable cause searches are more efficient at recovering contraband, that heavy reliance on consent searches amounts to more searches (i.e. more police-citizen contacts), but not to more contraband recovery overall, more arrests, or less crime. The findings derived from the observational analysis are remarkable insofar as they consistently hold across nearly all agencies under study. They are broadly generalizable. The size of the effect is likewise quite large, where probable cause searches increase the likelihood of recovering contraband by between 25 and

50 percent. However, they are threatened by omitted variable bias, and are only correlational – we cannot say that reliance on consent searches causes a decrease in the efficiency of law enforcement activities. To address this shortcoming, we leverage a policy change in Texas in 2014, which temporarily flooded two counties along the Mexican border with highway patrol in order to deter human smuggling at the height of the child migrant crisis. This sudden and dramatic policy change affords us the opportunity to take a design-based approach to our questions of interest. The results of a regression discontinuity analysis affirm the findings from the observational data: the policy change led to an increase in officer output and reliance on consent searches, a decrease in the overall rate in contraband recovery, limited impact on raw contraband recovered and limited impact on crime.

Together, the observational and design-based approaches offer strong support for the claim that reliance on consent searches does not contribute to public safety, unnecessarily puts civilians and officers at risk, and has the downstream effect of further marginalizing already marginalized people. At the center of this inquiry are concerns over the impact of policing on American democracy. Democracy requires that law enforcement act in ways that uphold civil and human rights. Constitutional constraints embedded in the fourth amendment and imposed on probable cause searches are designed to ensure this balance, and to protect citizens from unnecessary intrusion from the enforcement arm of the state. Consent searches upset that balance, and with no practical yield. The implications for policy makers are clear – eliminating the use of consent searches promises to save law enforcement precious resources and citizens' democratic dignity.

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Appendices

Contents

A Regression Tables Comparing Consent to Probable Cause Searches

A.1 California

Table A1: Likelihood of recovering contraband: consent relative to probable cause searches in California

	Oakland	San Diego
Consent search	-1.866^{***}	0.115
	(0.301)	(0.107)
Driver race: Black	-0.646^{**}	-0.325^{*}
	(0.242)	(0.144)
Driver race: Hispanic	-0.240	-0.417^{**}
	(0.254)	(0.131)
Driver race: Other	-0.556	-0.183
	(0.316)	(0.194)
Male	0.060	-0.029
	(0.158)	(0.142)
Age	0.028^{***}	-0.017^{***}
	(0.005)	(0.005)
Purpose of stop: Moving violation	-0.346	
	(0.288)	
Purpose of stop: Probable cause	0.388	
	(1.018)	
Purpose of stop: Probation/Parole	-0.426	
	(0.339)	
Purpose of stop: Radio Call/Citizen Contact		-0.362^{**}
		(0.115)
Purpose of stop: Reasonable Suspicion		0.427
		(0.264)
Purpose of stop: Other	-0.823^{**}	0.694^{***}
	(0.277)	(0.197)
Day of week: Monday	0.151	0.183
	(0.197)	(0.213)
Day of week: Tuesday	-0.151	0.246
	(0.176)	(0.213)
Day of week: Wednesday	-0.145	0.338
	(0.180)	(0.205)
Day of week: Thursday	-0.557^{**}	0.190
	(0.186)	(0.207)
Day of week: Friday	-0.068	-0.084
	(0.185)	(0.215)
Day of week: Saturday	-0.028	0.197
	(0.194)	(0.208)
Constant	-0.403	-1.725^{***}
	(0.422)	(0.277)
Observations	2,330	4,933
Log Likelihood	$-1,285.618$	$-1,384.639$
Akaike Inf. Crit.	2,605.236	2,801.279
Note:	*p<0.05; **p<0.01; ***p<0.001	

Table A2: Likelihood of arrest: consent relative to probable cause searches in California

	Oakland	San Diego
Consent search	-2.056^{*}	0.811^{***}
	(0.876)	(0.245)
Driver race: Black	-0.667	-0.362
	(0.405)	(0.315)
Driver race: Hispanic	-1.222^{**}	0.288
	(0.431)	(0.273)
Driver race: Other	-1.268^{*}	-0.210
	(0.571)	(0.424)
Male	-0.297	0.063
	(0.289)	(0.302)
Age	0.041^{***}	0.034^{***}
	(0.008)	(0.010)
Purpose of stop: Moving violation	-0.476	
	(0.512)	
Purpose of stop: Probable cause	-1.257	
	(1.620)	
Purpose of stop: Probation/Parole	-0.654	
	(0.596)	
Purpose of stop: Radio Call/Citizen Contact		-0.213
		(0.246)
Purpose of stop: Reasonable Suspicion		-0.854
		(0.608)
Purpose of stop: Other	-1.476^{**}	0.142
	(0.496)	(0.398)
Day of week: Monday	0.774^{*}	0.213
	(0.355)	(0.463)
Day of week: Tuesday	-0.241	0.306
	(0.324)	(0.459)
Day of week: Wednesday	-0.091	-0.014
	(0.334)	(0.450)
Day of week: Thursday	-0.047	0.736
	(0.352)	(0.442)
Day of week: Friday	0.148	-0.176
	(0.335)	(0.490)
Day of week: Saturday	0.181	0.494
	(0.350)	(0.442)
Constant	0.611	-2.374^{***}
	(0.754)	(0.583)
Observations	638	409
Log Likelihood	-370.185	-240.422
Akaike Inf. Crit.	774.370	512.843
Note:	*p<0.05; **p<0.01; ***p<0.001	

Table A3: Likelihood of recovering contraband, by civilian race: consent relative to probable cause searches in California

	White	Black	White	Black
	Oakland		San Diego	
Consent search	−15.097	−1.574***	0.138	−0.299
	(757.961)	(0.331)	(0.178)	(0.214)
Male	−0.406	−0.144	−0.249	0.036
	(0.466)	(0.178)	(0.222)	(0.281)
Age	0.023	0.042***	0.003	−0.006
	(0.014)	(0.005)	(0.007)	(0.009)
Purpose of stop: Moving violation	16.031	−0.765*		
	(1,190.863)	(0.303)		
Purpose of stop: Probable cause	0.150	0.625		
	(4,102.752)	(1.023)		
Purpose of stop: Probation/Parole	15.143	−0.730*		
	(1,190.864)	(0.363)		
Purpose of stop: Radio Call/Citizen Contact			−0.356	−0.160
			(0.196)	(0.222)
Purpose of stop: Reasonable Suspicion			1.104**	−0.288
			(0.340)	(0.730)
Purpose of stop: Other	14.804	−1.130***	1.088***	0.303
	(1,190.863)	(0.290)	(0.278)	(0.442)
Day of week: Monday	−0.037	−0.073	−0.223	0.529
	(0.683)	(0.224)	(0.378)	(0.467)
Day of week: Tuesday	−1.291	−0.223	0.088	0.238
	(0.844)	(0.200)	(0.356)	(0.497)
Day of week: Wednesday	0.199	−0.345	0.170	0.903*
	(0.582)	(0.209)	(0.339)	(0.439)
Day of week: Thursday	−0.203	−0.829***	0.146	0.327
	(0.646)	(0.224)	(0.336)	(0.473)
Day of week: Friday	0.409	−0.321	−0.007	0.557
	(0.582)	(0.214)	(0.344)	(0.453)
Day of week: Saturday	−0.813	−0.102	0.339	0.218
	(0.847)	(0.220)	(0.331)	(0.487)
Constant	−19.529	−1.312***	−3.591***	−4.020***
	(1,190.864)	(0.383)	(0.416)	(0.549)
Observations	2,330	2,330	4,933	4,933
Log Likelihood	−161.251	−989.084	−622.252	−460.037
Akaike Inf. Crit.	350.501	2,006.169	1,270.505	946.073

Note: *p<0.05; **p<0.01; ***p<0.001

Table A4: Likelihood of arrest, by civilian race: consent relative to probable cause searches in California

	White	Black	White	Black
	Oakland		San Diego	
Consent search	−14.907	−2.452*	1.137**	−0.306
	(1,730.221)	(1.149)	(0.390)	(0.467)
Male	−0.149	−0.560	0.171	−0.818
	(0.651)	(0.290)	(0.430)	(0.485)
Age	0.025	0.054***	0.021	0.043*
	(0.017)	(0.008)	(0.013)	(0.017)
Purpose of stop: Moving violation	15.852	−1.051*		
	(1,218.544)	(0.508)		
Purpose of stop: Probable cause	−0.353	−1.127		
	(4,705.375)	(1.673)		
Purpose of stop: Probation/Parole	15.497	−1.428*		
	(1,218.544)	(0.597)		
Purpose of stop: Radio Call/Citizen Contact			−0.494	0.378
			(0.375)	(0.469)
Purpose of stop: Reasonable Suspicion			−0.282	0.025
			(0.798)	(1.109)
Purpose of stop: Other	15.140	−1.937***	0.582	0.580
	(1,218.544)	(0.498)	(0.471)	(0.707)
Day of week: Monday	−0.021	0.121	0.502	0.315
	(0.841)	(0.360)	(0.906)	(0.905)
Day of week: Tuesday	−0.739	−0.510	1.085	0.197
	(0.931)	(0.351)	(0.844)	(0.906)
Day of week: Wednesday	0.204	−0.158	0.971	−0.035
	(0.789)	(0.352)	(0.830)	(0.906)
Day of week: Thursday	0.716	−0.276	1.761*	−0.346
	(0.763)	(0.379)	(0.802)	(0.958)
Day of week: Friday	0.285	−0.056	0.821	0.844
	(0.789)	(0.353)	(0.878)	(0.857)
Day of week: Saturday	−0.407	0.066	1.520	−0.482
	(0.938)	(0.364)	(0.805)	(1.028)
Constant	−19.371	−0.296	−4.540***	−3.683***
	(1,218.544)	(0.647)	(0.955)	(1.008)
Observations	638	638	411	411
Log Likelihood	−93.205	−333.619	−139.272	−87.678
Akaike Inf. Crit.	214.409	695.238	304.543	201.355

Note: *p<0.05; **p<0.01; ***p<0.001

A.2 Colorado

Table A5: The likelihood of contraband recovery and arrest: consent relative to probable cause searches in Colorado

	Contraband	Arrest
Consent search	-2.255^{***}	-0.396^{***}
	(0.059)	(0.093)
Driver race: Black	-0.809^{***}	-0.150
	(0.110)	(0.155)
Driver race: Hispanic	-0.592^{***}	0.524^{***}
	(0.066)	(0.085)
Driver race: Other	-0.195	-0.017
	(0.157)	(0.202)
Male	-0.142	-0.030
	(0.075)	(0.086)
Age	-0.024^{***}	0.026^{***}
	(0.003)	(0.003)
Constant	2.530^{***}	-1.157^{***}
	(0.107)	(0.123)
Observations	7,378	3,816
Log Likelihood	$-3,720.870$	$-2,502.580$
Akaike Inf. Crit.	7,455.741	5,019.159
Note:	*p<0.05; **p<0.01; ***p<0.001	

Table A6: The likelihood of contraband recovery and arrest: consent relative to probable cause searches in Colorado

	White	Black	White	Black
	Contraband		Arrest	
Consent search	-1.929^{***}	-0.841^{***}	-0.679^{***}	-0.216
	(0.059)	(0.157)	(0.106)	(0.334)
Male	-0.187^{**}	0.434^{*}	0.007	0.593
	(0.067)	(0.192)	(0.091)	(0.378)
Age	-0.011^{***}	0.011	0.022^{***}	0.026^{*}
	(0.003)	(0.006)	(0.003)	(0.010)
Constant	0.883^{***}	-3.787^{***}	-1.753^{***}	-5.397^{***}
	(0.092)	(0.244)	(0.126)	(0.469)
Observations	7,378	7,378	4,592	4,592
Log Likelihood	$-4,353.904$	$-1,069.686$	$-2,406.833$	-353.694
Akaike Inf. Crit.	8,715.808	2,147.372	4,821.666	715.389
Note:			*p<0.05; **p<0.01; ***p<0.001	

A.3 Texas

Table A7: Likelihood of recovering contraband: consent relative to probable cause searches in Texas

	Texas State Patrol	San Antonio	Austin
Consent search	-1.967^{***}	-1.316^{***}	0.004
	(0.012)	(0.109)	(0.046)
Driver race: Black	-0.191^{***}	-0.348^{*}	0.108^{*}
	(0.016)	(0.166)	(0.046)
Driver race: Hispanic	-0.735^{***}	-0.248^{*}	0.137^{**}
	(0.014)	(0.120)	(0.043)
Driver race: Other	-0.466^{***}	0.584	-0.691^{***}
	(0.038)	(0.331)	(0.171)
Male	-0.130^{***}	-0.473^{***}	0.193^{***}
	(0.016)	(0.137)	(0.050)
Day of week: Monday	-0.152^{***}	0.206	0.101
	(0.024)	(0.212)	(0.074)
Day of week: Tuesday	-0.154^{***}	0.216	0.117
	(0.023)	(0.213)	(0.072)
Day of week: Wednesday	-0.152^{***}	-0.086	0.047
	(0.023)	(0.231)	(0.073)
Day of week: Thursday	-0.137^{***}	0.221	0.003
	(0.022)	(0.211)	(0.073)
Day of week: Friday	0.048^{*}	0.151	-0.016
	(0.020)	(0.213)	(0.076)
Day of week: Saturday	0.105^{***}	0.334	-0.018
	(0.020)	(0.211)	(0.076)
Constant	0.856^{***}	-1.235^{***}	-1.348^{***}
	(0.022)	(0.214)	(0.076)
Observations	176,041	4,927	16,424
Log Likelihood	$-90{,}429.120$	$-1{,}261.024$	$-9{,}275.329$
Akaike Inf. Crit.	180,882.200	2,546.049	18,574.660
Note:			*p<0.05; **p<0.01; ***p<0.001

Table A8: Likelihood of arrest: consent relative to probable cause searches in Texas

	San Antonio
Consent search	−0.212
	(0.215)
Driver race: Black	−0.085
	(0.324)
Driver race: Hispanic	−0.224
	(0.232)
Driver race: Other	0.440
	(0.649)
Male	−0.378
	(0.266)
Day of week: Monday	−0.395
	(0.409)
Day of week: Tuesday	−0.414
	(0.412)
Day of week: Wednesday	−0.199
	(0.452)
Day of week: Thursday	0.288
	(0.419)
Day of week: Friday	0.035
	(0.420)
Day of week: Saturday	−0.095
	(0.409)
Constant	0.900*
	(0.418)
Observations	382
Log Likelihood	−256.428
Akaike Inf. Crit.	536.856
Note:	*p<0.05; **p<0.01; ***p<0.001

Table A9: Likelihood of recoving contraband, by civilian race: consent relative to probable cause searches in Texas

	White	Black	White	Black	White	Black
	Texas State Patrol		San Antonio		Austin	
Consent search	-1.561^{***}	-1.469^{***}	-1.285^{***}	-1.184^{***}	0.161^{*}	-0.180^{*}
	(0.013)	(0.022)	(0.167)	(0.270)	(0.069)	(0.083)
Male	-0.361^{***}	0.042	-0.538^{**}	-0.110	0.076	0.126
	(0.017)	(0.030)	(0.202)	(0.368)	(0.077)	(0.086)
Day of week: Monday	-0.118^{***}	0.051	0.437	0.293	0.250^{*}	0.121
	(0.027)	(0.045)	(0.368)	(0.531)	(0.120)	(0.122)
Day of week: Tuesday	-0.125^{***}	0.095^{*}	0.557	0.313	0.203	-0.030
	(0.026)	(0.042)	(0.363)	(0.531)	(0.118)	(0.121)
Day of week: Wednesday	-0.139^{***}	0.132^{**}	0.400	0.150	0.251^{*}	-0.093
	(0.025)	(0.041)	(0.379)	(0.560)	(0.118)	(0.124)
Day of week: Thursday	-0.107^{***}	0.041	0.463	0.622	0.187	-0.155
	(0.025)	(0.041)	(0.365)	(0.498)	(0.118)	(0.124)
Day of week: Friday	0.073^{**}	0.080^{*}	0.787^{*}	-0.344	0.140	0.006
	(0.022)	(0.038)	(0.348)	(0.609)	(0.124)	(0.126)
Day of week: Saturday	0.053^{*}	0.110^{**}	0.683	0.099	0.103	-0.090
	(0.022)	(0.036)	(0.358)	(0.560)	(0.124)	(0.128)
Constant	-0.183^{***}	-2.093^{***}	-2.703^{***}	-3.817^{***}	-2.661^{***}	-2.631^{***}
	(0.023)	(0.038)	(0.344)	(0.535)	(0.117)	(0.121)
Observations	176,041	176,041	4,927	4,927	16,424	16,424
Log Likelihood	$-75,944.830$	$-35,235.360$	-639.646	-295.004	$-4,726.424$	$-4,138.297$
Akaike Inf. Crit.	151,907.700	70,488.720	1,297.291	608.007	9,470.848	8,294.593

Note: *p<0.05; **p<0.01; ***p<0.001

A.4 Wisconsin

Table A10: Likelihood of arrest, by civilian race: consent relative to probable cause searches in Texas

	White	Black
	San Antonio	
Consent search	−0.229	−0.286
	(0.251)	(0.383)
Male	−0.223	−0.135
	(0.302)	(0.459)
Day of week: Monday	0.445	0.652
	(0.590)	(0.863)
Day of week: Tuesday	0.820	0.698
	(0.572)	(0.864)
Day of week: Wednesday	1.220*	0.865
	(0.590)	(0.898)
Day of week: Thursday	1.219*	1.328
	(0.556)	(0.814)
Day of week: Friday	1.253*	0.118
	(0.556)	(0.938)
Day of week: Saturday	0.787	0.331
	(0.565)	(0.890)
Constant	−1.768**	−2.803***
	(0.539)	(0.821)
Observations	382	382
Log Likelihood	−203.226	−107.199
Akaike Inf. Crit.	424.452	232.399
Note:	*p<0.05; **p<0.01; ***p<0.001	

Table A11: The likelihood of contraband recovery and arrest: consent relative to probable cause searches in Wisconsin

	Contraband	Arrest
Consent search	-1.311^{***}	-0.489^{***}
	(0.051)	(0.069)
Driver race: Black	-0.614^{***}	-0.280^{***}
	(0.060)	(0.073)
Driver race: Hispanic	-0.405^{***}	0.071
	(0.095)	(0.120)
Driver race: Other	-0.154	-0.035
	(0.111)	(0.132)
Male	0.147^{*}	0.063
	(0.059)	(0.069)
Day of week: Monday	-0.019	-0.100
	(0.095)	(0.112)
Day of week: Tuesday	0.099	-0.034
	(0.093)	(0.109)
Day of week: Wednesday	-0.015	-0.232^{*}
	(0.091)	(0.106)
Day of week: Thursday	0.012	-0.175
	(0.089)	(0.104)
Day of week: Friday	0.107	-0.147
	(0.086)	(0.099)
Day of week: Saturday	-0.079	-0.052
	(0.081)	(0.097)
Age of vehicle	0.002	-0.012^{*}
	(0.004)	(0.005)
Vehicle make (Luxury)	-0.184^{*}	0.009
	(0.093)	(0.116)
Constant	-1.855	24.743^{**}
	(8.006)	(9.581)
Observations	8,693	5,929
Log Likelihood	$-5,055.031$	$-3,674.442$
Akaike Inf. Crit.	10,138.060	7,376.884
Note:	*p<0.05; **p<0.01; ***p<0.001	

Table A12: The likelihood of contraband recovery and arrest, by civilian race: consent relative to probable cause searches in Wisconsin

	White	Black	White	Black
	Contraband		Arrest	
	(1)	(2)	(3)	(4)
Consent search	-0.842^{***}	-0.682^{***}	-0.325^{***}	-0.313^{**}
	(0.051)	(0.085)	(0.067)	(0.114)
Male	0.080	0.017	0.066	-0.093
	(0.054)	(0.079)	(0.065)	(0.097)
Day of week: Monday	-0.063	0.192	-0.194	0.267
	(0.087)	(0.123)	(0.104)	(0.153)
Day of week: Tuesday	0.111	0.0002	0.030	-0.058
	(0.085)	(0.126)	(0.101)	(0.160)
Day of week: Wednesday	0.032	-0.033	-0.154	-0.032
	(0.084)	(0.123)	(0.100)	(0.156)
Day of week: Thursday	0.070	-0.172	-0.076	-0.199
	(0.081)	(0.125)	(0.098)	(0.161)
Day of week: Friday	0.187^{*}	-0.189	-0.015	-0.136
	(0.078)	(0.119)	(0.093)	(0.149)
Day of week: Saturday	-0.096	0.040	-0.135	0.174
	(0.074)	(0.108)	(0.089)	(0.135)
Age of vehicle	-0.040^{***}	0.067^{***}	-0.041^{***}	0.060^{***}
	(0.004)	(0.005)	(0.004)	(0.007)
Vehicle make (Luxury)	-0.697^{***}	0.494^{***}	-0.569^{***}	0.599^{***}
	(0.091)	(0.114)	(0.111)	(0.142)
Constant	79.170^{***}	-135.208^{***}	82.414^{***}	-121.325^{***}
	(7.381)	(10.931)	(8.978)	(13.850)
Observations	8,693	8,693	5,929	5,929
Log Likelihood	$-5,786.749$	$-3,177.615$	$-4,035.814$	$-2,076.416$
Akaike Inf. Crit.	11,595.500	6,377.230	8,093.628	4,174.832

Note: *p<0.05; **p<0.01; ***p<0.001

A.5 North Carolina

Table A13: The likelihood of contraband recovery and arrest: consent relative to probable cause searches in Ashville, North Carolina

	Total	White Contraband	Black	Total	White Arrest	Black
Consent search	−0.912***	−0.595***	−0.979***	−0.246*	−0.099	−0.486**
	(0.061)	(0.068)	(0.089)	(0.105)	(0.121)	(0.158)
Driver race: Black	−0.250***			0.099		
	(0.063)			(0.113)		
Driver race: Hispanic	−0.823***			0.300		
	(0.159)			(0.299)		
Driver race: Other	−0.318			−0.594		
	(0.316)			(0.687)		
Male	0.027	−0.302***	0.517***	0.202	−0.154	0.815***
	(0.069)	(0.074)	(0.121)	(0.127)	(0.139)	(0.237)
Age	−0.004	0.002	−0.010*	0.016***	0.020***	−0.001
	(0.003)	(0.003)	(0.004)	(0.004)	(0.005)	(0.007)
Stop Purpose: Driving while Impaired	−0.279	0.026	−1.213	2.107*	2.381*	−1.275
	(0.553)	(0.564)	(1.190)	(0.950)	(1.145)	(1.268)
Stop Purpose: Investigation	−0.024	−0.215	0.686	0.058	0.302	−0.333
	(0.527)	(0.538)	(1.041)	(0.881)	(1.109)	(1.129)
Stop Purpose: Other vehicle violation	−0.189	−0.606	0.872	0.0003	−0.110	0.018
	(0.534)	(0.549)	(1.047)	(0.894)	(1.129)	(1.143)
Stop Purpose: Movement violation	0.141	−0.073	0.797	−0.134	0.301	−0.904
	(0.527)	(0.538)	(1.041)	(0.881)	(1.109)	(1.134)
Stop Purpose: Seat belt violation	0.273	0.073	0.980	−0.466	−0.343	−0.580
	(0.543)	(0.557)	(1.058)	(0.912)	(1.156)	(1.173)
Stop Purpose: Speed limit violation	0.192	0.018	0.774	−0.565	0.007	−1.245
	(0.532)	(0.544)	(1.047)	(0.893)	(1.121)	(1.165)
Stop Purpose: Stop light/Sign violation	−0.147	−0.323	0.728	−0.184	0.205	−0.603
	(0.535)	(0.548)	(1.050)	(0.898)	(1.127)	(1.159)
Stop Purpose: Vehicle equipment violation	−0.133	−0.310	0.644	−0.396	−0.017	−0.761
	(0.528)	(0.539)	(1.042)	(0.884)	(1.113)	(1.138)
Stop Purpose: Other	−0.223	−0.408	0.674	−0.215	0.351	−0.972
	(0.526)	(0.537)	(1.040)	(0.881)	(1.107)	(1.135)
Day of week: Monday	−0.165	0.088	−0.485*	0.143	0.259	−0.221
	(0.118)	(0.133)	(0.191)	(0.218)	(0.245)	(0.362)
Day of week: Tuesday	0.013	0.054	−0.094	−0.001	−0.116	0.185
	(0.113)	(0.130)	(0.169)	(0.207)	(0.242)	(0.311)
Day of week: Wednesday	−0.006	0.091	−0.066	0.065	−0.003	0.067
	(0.110)	(0.127)	(0.166)	(0.202)	(0.234)	(0.312)
Day of week: Thursday	0.117	0.198	−0.115	0.338	0.248	0.149
	(0.110)	(0.126)	(0.168)	(0.197)	(0.226)	(0.306)
Day of week: Friday	0.130	0.214	−0.042	0.055	0.083	−0.080
	(0.110)	(0.125)	(0.165)	(0.201)	(0.229)	(0.317)
Day of week: Saturday	0.114	0.186	−0.065	0.050	−0.052	0.199
	(0.110)	(0.126)	(0.164)	(0.200)	(0.233)	(0.299)
Constant	0.107	−0.665	−2.308*	−1.313	−2.174	−1.988
	(0.536)	(0.548)	(1.052)	(0.903)	(1.131)	(1.183)
Observations	6,039	6,039	6,039	1,907	1,907	1,907
Log Likelihood	−3,612.272	−3,014.529	−1,845.393	−1,127.956	−904.998	−582.715
Akaike Inf. Crit.	7,268.544	6,067.058	3,728.787	2,299.911	1,847.996	1,203.431

Note: *p<0.05; **p<0.01; ***p<0.001

Table A14: The likelihood of contraband recovery and arrest: consent relative to probable cause searches in Burlington, North Carolina

	Total	White Contraband	Black	Total	White Arrest	Black
Consent search	−1.634***	−0.839***	−1.692***	−0.431**	0.165	−0.732***
	(0.081)	(0.112)	(0.103)	(0.141)	(0.194)	(0.168)
Driver race: Black	−0.079			0.399**		
	(0.086)			(0.138)		
Driver race: Hispanic	−0.580***			−0.007		
	(0.137)			(0.237)		
Driver race: Other	−0.570			0.491		
	(0.463)			(0.800)		
Male	0.180	−0.504***	0.597***	0.224	−0.562**	0.751***
	(0.100)	(0.122)	(0.131)	(0.164)	(0.208)	(0.206)
Age	−0.003	0.004	−0.0003	0.020***	0.023**	0.011
	(0.004)	(0.005)	(0.005)	(0.006)	(0.008)	(0.007)
Stop Purpose: Driving while Impaired	−0.251	0.369	−0.704*	1.690***	1.384*	0.547
	(0.313)	(0.425)	(0.343)	(0.471)	(0.679)	(0.514)
Stop Purpose: Investigation	−0.179	0.269	−0.425	0.943*	0.602	0.438
	(0.276)	(0.384)	(0.291)	(0.406)	(0.641)	(0.457)
Stop Purpose: Other vehicle violation	−0.451	−0.292	−0.417	0.753	0.125	0.452
	(0.325)	(0.484)	(0.354)	(0.502)	(0.817)	(0.572)
Stop Purpose: Movement violation	−0.334	0.208	−0.691*	0.669	0.532	0.028
	(0.287)	(0.398)	(0.310)	(0.428)	(0.668)	(0.490)
Stop Purpose: Seat belt violation	−0.491	−0.311	−0.372	0.785	−0.025	0.785
	(0.315)	(0.467)	(0.337)	(0.478)	(0.808)	(0.526)
Stop Purpose: Speed limit violation	−0.186	0.321	−0.488	0.601	0.675	0.116
	(0.281)	(0.389)	(0.297)	(0.412)	(0.647)	(0.468)
Stop Purpose: Stop light/Sign violation	−0.444	0.286	−0.908**	0.843	0.199	0.617
	(0.306)	(0.419)	(0.342)	(0.459)	(0.734)	(0.511)
Stop Purpose: Vehicle equipment violation	−0.383	0.026	−0.438	0.418	0.113	0.369
	(0.278)	(0.390)	(0.293)	(0.413)	(0.663)	(0.465)
Stop Purpose: Other	−0.406	−0.016	−0.369	0.392	0.077	0.287
	(0.278)	(0.391)	(0.292)	(0.413)	(0.665)	(0.466)
Day of week: Monday	−0.065	−0.170	0.254	−0.049	−0.420	0.345
	(0.152)	(0.216)	(0.179)	(0.245)	(0.374)	(0.269)
Day of week: Tuesday	−0.076	0.043	−0.181	0.007	−0.240	−0.110
	(0.151)	(0.207)	(0.189)	(0.245)	(0.364)	(0.284)
Day of week: Wednesday	−0.009	−0.069	0.244	0.239	0.072	0.372
	(0.145)	(0.202)	(0.172)	(0.229)	(0.313)	(0.254)
Day of week: Thursday	0.009	0.069	0.081	0.071	0.154	0.032
	(0.144)	(0.196)	(0.175)	(0.230)	(0.310)	(0.266)
Day of week: Friday	0.027	0.127	0.082	−0.046	−0.045	−0.021
	(0.140)	(0.190)	(0.171)	(0.224)	(0.312)	(0.257)
Day of week: Saturday	0.143	0.021	0.197	0.058	−0.359	0.256
	(0.139)	(0.192)	(0.167)	(0.219)	(0.318)	(0.245)
Constant	0.400	−1.525***	−0.940**	−1.867***	−2.507***	−2.286***
	(0.304)	(0.411)	(0.327)	(0.455)	(0.675)	(0.511)
Observations	3,607	3,607	3,607	1,139	1,139	1,139
Log Likelihood	−1,983.492	−1,220.973	−1,478.702	−745.413	−426.684	−625.526
Akaike Inf. Crit.	4,010.984	2,479.945	2,995.403	1,534.825	891.368	1,289.053

Note: *p<0.05; **p<0.01; ***p<0.001

Table A15: The likelihood of contraband recovery and arrest: consent relative to probable cause searches in Cary, North Carolina

	Total	White Contraband	Black	Total	White Arrest	Black
Consent search	−1.635***	−1.220***	−1.277***	−0.508**	−0.284	−0.618*
	(0.100)	(0.115)	(0.151)	(0.180)	(0.209)	(0.276)
Driver race: Black	−0.164			0.092		
	(0.112)			(0.186)		
Driver race: Hispanic	−0.753***			0.575		
	(0.169)			(0.304)		
Driver race: Other	−0.033			−0.037		
	(0.277)			(0.455)		
Male	−0.074	−0.428**	0.191	0.026	−0.212	0.170
	(0.134)	(0.144)	(0.204)	(0.221)	(0.243)	(0.320)
Age	−0.007	−0.018*	0.015	0.031**	0.006	0.041***
	(0.006)	(0.007)	(0.008)	(0.010)	(0.011)	(0.012)
Stop Purpose: Driving while Impaired	−0.788	−0.190	−1.215*	2.112***	1.440*	−0.315
	(0.427)	(0.426)	(0.552)	(0.600)	(0.571)	(0.794)
Stop Purpose: Investigation	−0.694	−0.343	−0.302	0.999*	0.090	1.053
	(0.402)	(0.402)	(0.462)	(0.493)	(0.552)	(0.691)
Stop Purpose: Other vehicle violation	−0.945*	−0.520	−1.169*	−0.273	−0.301	−0.214
	(0.432)	(0.443)	(0.590)	(0.587)	(0.666)	(0.885)
Stop Purpose: Movement violation	−0.536	−0.157	−0.526	0.988*	0.523	0.291
	(0.406)	(0.404)	(0.479)	(0.498)	(0.547)	(0.718)
Stop Purpose: Seat belt violation	−0.980*	−0.711	−0.336	0.552	−0.409	1.422
	(0.455)	(0.485)	(0.548)	(0.605)	(0.737)	(0.791)
Stop Purpose: Speed limit violation	−0.737	−0.153	−0.519	−0.283	−0.456	−0.065
	(0.389)	(0.382)	(0.444)	(0.475)	(0.540)	(0.696)
Stop Purpose: Stop light/Sign violation	−1.131*	−0.505	−0.703	−0.040	−1.907	1.040
	(0.445)	(0.458)	(0.556)	(0.612)	(1.129)	(0.788)
Stop Purpose: Vehicle equipment violation	−0.737	−0.315	−0.353	−0.170	−0.354	−0.225
	(0.385)	(0.379)	(0.435)	(0.462)	(0.522)	(0.686)
Stop Purpose: Other	−0.805*	−0.342	−0.362	−0.313	−0.415	−0.543
	(0.391)	(0.388)	(0.444)	(0.481)	(0.548)	(0.731)
Day of week: Monday	−0.118	0.014	−0.224	0.153	0.236	−0.626
	(0.205)	(0.232)	(0.351)	(0.373)	(0.452)	(0.594)
Day of week: Tuesday	−0.237	−0.217	0.417	−0.104	−0.008	−0.109
	(0.199)	(0.232)	(0.297)	(0.371)	(0.444)	(0.523)
Day of week: Wednesday	0.034	−0.008	0.418	0.513	0.607	−0.027
	(0.181)	(0.209)	(0.278)	(0.316)	(0.375)	(0.456)
Day of week: Thursday	0.228	0.328	0.185	0.533	0.704	−0.081
	(0.178)	(0.199)	(0.287)	(0.308)	(0.360)	(0.447)
Day of week: Friday	−0.122	−0.290	0.393	0.500	0.261	0.281
	(0.181)	(0.214)	(0.277)	(0.320)	(0.386)	(0.438)
Day of week: Saturday	0.272	0.240	0.351	0.487	0.543	−0.002
	(0.184)	(0.207)	(0.288)	(0.316)	(0.373)	(0.450)
Constant	1.305**	0.261	−1.905***	−1.739**	−1.530*	−3.135***
	(0.429)	(0.433)	(0.518)	(0.556)	(0.621)	(0.783)
Observations	2,257	2,257	2,257	741	741	741
Log Likelihood	−1,247.181	−1,012.377	−686.515	−438.001	−353.419	−250.764
Akaike Inf. Crit.	2,538.361	2,062.755	1,411.030	920.001	744.838	539.527

Note: *p<0.05; **p<0.01; ***p<0.001

Table A16: The likelihood of contraband recovery and arrest: consent relative to probable cause searches in Chapel Hill, North Carolina

	Total	White	Black	Total	White	Black
		Contraband			Arrest	
Consent search	−1.363***	−0.996***	−1.005***	−0.588**	−0.704*	−0.159
	(0.118)	(0.156)	(0.143)	(0.208)	(0.285)	(0.252)
Driver race: Black	−0.064			−0.222		
	(0.123)			(0.190)		
Driver race: Hispanic	−0.805***			0.441		
	(0.229)			(0.393)		
Driver race: Other	−0.806			−0.718		
	(0.446)			(0.860)		
Male	−0.068	−0.629***	0.308	−0.203	−0.836**	0.439
	(0.161)	(0.180)	(0.197)	(0.242)	(0.274)	(0.336)
Age	−0.002	−0.015	0.010	0.018*	0.015	0.008
	(0.006)	(0.008)	(0.007)	(0.009)	(0.011)	(0.011)
Stop Purpose: Driving while Impaired	0.598	0.350	0.610	−3.236**	−1.157*	−0.973
	(0.313)	(0.373)	(0.405)	(1.050)	(0.505)	(0.514)
Stop Purpose: Investigation	0.486	−0.018	0.619	−3.470**	−2.176**	−0.631
	(0.354)	(0.438)	(0.450)	(1.084)	(0.696)	(0.583)
Stop Purpose: Other vehicle violation	0.593	0.397	0.353	−3.165**	−1.118*	−1.114
	(0.335)	(0.398)	(0.440)	(1.068)	(0.548)	(0.570)
Stop Purpose: Movement violation	0.840	0.712	0.546	−3.864***	−1.397	−2.188
	(0.448)	(0.515)	(0.584)	(1.167)	(0.788)	(1.126)
Stop Purpose: Seat belt violation	0.661*	0.158	0.743	−3.755***	−2.083***	−0.871
	(0.304)	(0.364)	(0.395)	(1.045)	(0.523)	(0.488)
Stop Purpose: Speed limit violation	0.333	0.239	0.417	−4.009***	−1.177	−2.728*
	(0.374)	(0.444)	(0.487)	(1.114)	(0.631)	(1.109)
Stop Purpose: Stop light/Sign violation	0.662*	0.083	0.840*	−3.953***	−1.974***	−1.265*
	(0.314)	(0.380)	(0.404)	(1.055)	(0.542)	(0.529)
Stop Purpose: Vehicle equipment violation	0.498	−0.266	0.921*	−3.750***	−1.913***	−1.014*
	(0.304)	(0.371)	(0.391)	(1.048)	(0.514)	(0.498)
Stop Purpose: Other	−0.521*	0.026	−0.683**	0.264	0.737	−0.341
	(0.222)	(0.275)	(0.257)	(0.338)	(0.417)	(0.432)
Day of week: Monday	−0.355	0.136	−0.620*	0.032	0.512	−0.267
	(0.220)	(0.271)	(0.256)	(0.333)	(0.420)	(0.409)
Day of week: Tuesday	−0.594**	−0.090	−0.656*	−0.138	−0.076	−0.179
	(0.227)	(0.285)	(0.262)	(0.362)	(0.482)	(0.423)
Day of week: Wednesday	−0.493*	−0.237	−0.485*	0.005	0.213	−0.007
	(0.218)	(0.280)	(0.245)	(0.335)	(0.432)	(0.397)
Day of week: Thursday	−0.203	0.134	−0.284	−0.045	0.138	−0.050
	(0.213)	(0.264)	(0.237)	(0.324)	(0.427)	(0.377)
Day of week: Friday	−0.227	−0.021	−0.279	−0.077	0.110	−0.177
	(0.201)	(0.250)	(0.221)	(0.302)	(0.394)	(0.353)
Day of week: Saturday	0.213	−0.369	−1.799***	3.011**	0.264	−0.928
	(0.368)	(0.447)	(0.467)	(1.088)	(0.622)	(0.643)
Observations	1,470	1,470	1,470	592	592	592
Log Likelihood	−896.452	−634.911	−703.186	−363.770	−254.809	−268.739
Akaike Inf. Crit.	1,834.905	1,305.821	1,442.373	769.540	545.618	573.478

Note: *p<0.05; **p<0.01; ***p<0.001

Table A17: The likelihood of contraband recovery and arrest: consent relative to probable cause searches in Charlotte, North Carolina

	Total	White Contraband	Black	Total	White Arrest	Black
Consent search	−1.721***	−0.738***	−1.635***	−0.472***	0.117**	−0.589***
	(0.014)	(0.025)	(0.015)	(0.022)	(0.041)	(0.024)
Driver race: Black	−0.375***			0.196***		
	(0.018)			(0.029)		
Driver race: Hispanic	−0.658***			0.224***		
	(0.031)			(0.052)		
Driver race: Other	−0.387***			−0.126		
	(0.064)			(0.109)		
Male	0.012	−0.681***	0.180***	0.247***	−0.594***	0.461***
	(0.020)	(0.031)	(0.023)	(0.033)	(0.051)	(0.037)
Age	−0.002*	−0.001	0.005***	0.009***	0.014***	0.012***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)
Stop Purpose: Driving while Impaired	−0.608***	−0.115	−0.922***	1.513***	1.051***	0.165
	(0.155)	(0.177)	(0.168)	(0.200)	(0.265)	(0.221)
Stop Purpose: Investigation	−0.440**	−0.878***	0.202	0.331*	−0.446	0.663***
	(0.139)	(0.158)	(0.140)	(0.166)	(0.246)	(0.190)
Stop Purpose: Other vehicle violation	−0.438**	−0.899***	0.269	0.088	−0.655**	0.530**
	(0.141)	(0.161)	(0.141)	(0.168)	(0.252)	(0.193)
Stop Purpose: Movement violation	−0.518***	−0.890***	0.122	0.030	−0.610*	0.372
	(0.141)	(0.162)	(0.142)	(0.169)	(0.253)	(0.194)
Stop Purpose: Seat belt violation	−0.561***	−1.305***	0.309*	0.030	−1.200***	0.679***
	(0.141)	(0.165)	(0.142)	(0.169)	(0.262)	(0.193)
Stop Purpose: Speed limit violation	−0.593***	−0.679***	−0.020	−0.051	−0.453	0.249
	(0.140)	(0.160)	(0.141)	(0.168)	(0.250)	(0.193)
Stop Purpose: Stop light/Sign violation	−0.643***	−1.038***	0.053	−0.069	−0.654*	0.332
	(0.141)	(0.164)	(0.142)	(0.170)	(0.257)	(0.195)
Stop Purpose: Vehicle equipment violation	−0.737***	−1.418***	0.108	0.141	−0.884***	0.684***
	(0.139)	(0.159)	(0.140)	(0.166)	(0.247)	(0.190)
Stop Purpose: Other	−0.790***	−1.459***	0.088	−0.136	−0.964***	0.428*
	(0.139)	(0.158)	(0.139)	(0.165)	(0.245)	(0.190)
Day of week: Monday	−0.096**	−0.097	−0.035	0.058	0.063	0.032
	(0.030)	(0.055)	(0.033)	(0.049)	(0.091)	(0.053)
Day of week: Tuesday	−0.070*	−0.034	0.012	0.030	0.123	0.061
	(0.028)	(0.051)	(0.031)	(0.046)	(0.084)	(0.050)
Day of week: Wednesday	0.012	0.007	0.095**	0.166***	0.161*	0.202***
	(0.027)	(0.049)	(0.030)	(0.044)	(0.081)	(0.047)
Day of week: Thursday	−0.053	−0.088	0.046	0.163***	0.121	0.212***
	(0.027)	(0.050)	(0.030)	(0.044)	(0.082)	(0.048)
Day of week: Friday	0.018	−0.054	0.115***	0.038	−0.112	0.140**
	(0.027)	(0.049)	(0.030)	(0.044)	(0.084)	(0.047)
Day of week: Saturday	0.138***	0.087	0.163***	−0.023	−0.130	0.062
	(0.028)	(0.050)	(0.031)	(0.045)	(0.085)	(0.049)
Constant	1.297***	−0.542**	−0.730***	−0.878***	−1.817***	−1.876***
	(0.143)	(0.166)	(0.143)	(0.173)	(0.259)	(0.197)
Observations	121,596	121,596	121,596	35,356	35,356	35,356
Log Likelihood	−65,157.050	−25,820.470	−56,819.400	−23,471.580	−9,086.014	−21,416.600
Akaike Inf. Crit.	130,358.100	51,678.950	113,676.800	46,987.160	18,210.030	42,871.210

Note: *p<0.05; **p<0.01; ***p<0.001

Table A18: The likelihood of contraband recovery and arrest: consent relative to probable cause searches in Concord, North Carolina

	Total	White	Black	Total	White	Black
		Contraband			Arrest	
Consent search	−1.304***	−0.403***	−1.621***	−0.367**	0.212	−0.878***
	(0.088)	(0.102)	(0.107)	(0.136)	(0.180)	(0.172)
Driver race: Black	−0.055			0.404**		
	(0.083)			(0.142)		
Driver race: Hispanic	−0.884***			0.234		
	(0.145)			(0.277)		
Driver race: Other	0.169			−0.274		
	(0.526)			(0.849)		
Male	−0.095	−0.446***	0.213	0.262	−0.271	0.649**
	(0.095)	(0.105)	(0.136)	(0.165)	(0.198)	(0.238)
Age	−0.010**	−0.015**	0.012*	0.016*	0.013	0.020*
	(0.004)	(0.005)	(0.005)	(0.007)	(0.008)	(0.008)
Stop Purpose: Driving while Impaired	−1.203***	0.030	−2.020***	2.628***	2.779***	0.625
	(0.300)	(0.328)	(0.424)	(0.528)	(0.775)	(0.663)
Stop Purpose: Investigation	−0.675*	−0.102	−0.568	1.583***	1.239	1.128*
	(0.268)	(0.301)	(0.295)	(0.468)	(0.752)	(0.563)
Stop Purpose: Other vehicle violation	−0.894**	−0.458	−0.392	1.412**	1.257	1.069
	(0.300)	(0.350)	(0.336)	(0.518)	(0.806)	(0.623)
Stop Purpose: Movement violation	−0.632*	−0.080	−0.491	1.248**	1.222	0.881
	(0.275)	(0.309)	(0.305)	(0.479)	(0.763)	(0.579)
Stop Purpose: Seat belt violation	−0.431	−0.121	−0.034	1.003	0.530	1.072
	(0.313)	(0.359)	(0.347)	(0.534)	(0.867)	(0.630)
Stop Purpose: Speed limit violation	−0.749**	−0.149	−0.685*	0.991*	0.982	0.420
	(0.277)	(0.311)	(0.310)	(0.486)	(0.774)	(0.600)
Stop Purpose: Stop light/Sign violation	−0.517	−0.169	−0.355	0.823	0.994	0.464
	(0.304)	(0.348)	(0.349)	(0.536)	(0.821)	(0.671)
Stop Purpose: Vehicle equipment violation	−0.864**	−0.390	−0.471	1.137*	1.011	0.828
	(0.266)	(0.300)	(0.290)	(0.468)	(0.754)	(0.564)
Stop Purpose: Other	−0.743**	−0.074	−0.601*	0.919	1.013	0.434
	(0.273)	(0.306)	(0.304)	(0.482)	(0.766)	(0.592)
Day of week: Monday	−0.079	0.009	0.039	−0.184	−0.037	−0.420
	(0.155)	(0.177)	(0.229)	(0.273)	(0.333)	(0.415)
Day of week: Tuesday	−0.162	−0.278	0.246	−0.003	0.018	0.238
	(0.151)	(0.181)	(0.213)	(0.260)	(0.325)	(0.342)
Day of week: Wednesday	0.138	−0.044	0.495*	−0.151	−0.367	0.246
	(0.145)	(0.170)	(0.204)	(0.248)	(0.324)	(0.324)
Day of week: Thursday	0.175	−0.011	0.507*	0.057	−0.297	0.534
	(0.144)	(0.169)	(0.203)	(0.244)	(0.320)	(0.313)
Day of week: Friday	0.013	−0.026	0.204	−0.085	−0.205	0.092
	(0.143)	(0.166)	(0.208)	(0.247)	(0.314)	(0.334)
Day of week: Saturday	0.156	−0.076	0.411*	−0.139	−0.348	0.261
	(0.136)	(0.159)	(0.194)	(0.232)	(0.299)	(0.307)
Constant	1.452***	−0.247	−1.020**	−2.545***	−3.034***	−3.336***
	(0.307)	(0.340)	(0.351)	(0.527)	(0.801)	(0.647)
Observations	3,453	3,453	3,453	1,168	1,168	1,168
Log Likelihood	−2,039.118	−1,587.647	−1,233.668	−692.080	−465.138	−460.644
Akaike Inf. Crit.	4,122.236	3,213.294	2,505.336	1,428.160	968.277	959.287

Note: *p<0.05; **p<0.01; ***p<0.001

Table A19: The likelihood of contraband recovery and arrest: consent relative to probable cause searches in Durham, North Carolina

	Total	White Contraband	Black	Total	White Arrest	Black
Consent search	−1.430***	−0.516***	−1.493***	−0.212***	0.405**	−0.363***
	(0.030)	(0.072)	(0.032)	(0.051)	(0.131)	(0.054)
Driver race: Black	−0.039			0.274***		
	(0.046)			(0.083)		
Driver race: Hispanic	−0.568***			0.417**		
	(0.070)			(0.131)		
Driver race: Other	−0.353			0.660		
	(0.193)			(0.343)		
Male	0.117**	−0.620***	0.176***	0.248**	−0.763***	0.362***
	(0.043)	(0.084)	(0.046)	(0.076)	(0.154)	(0.081)
Age	−0.006***	0.002	−0.002	0.018***	0.023***	0.018***
	(0.002)	(0.004)	(0.002)	(0.003)	(0.006)	(0.003)
Stop Purpose: Driving while Impaired	−0.516**	0.792*	−1.609***	2.794***	2.312***	0.249
	(0.167)	(0.376)	(0.210)	(0.399)	(0.590)	(0.273)
Stop Purpose: Investigation	−0.244*	0.707*	−0.284**	0.379*	1.173*	0.375*
	(0.100)	(0.282)	(0.103)	(0.149)	(0.519)	(0.159)
Stop Purpose: Other vehicle violation	−0.574***	−0.092	−0.449***	−0.028	0.651	0.097
	(0.114)	(0.330)	(0.117)	(0.180)	(0.587)	(0.191)
Stop Purpose: Movement violation	−0.391***	0.508	−0.443***	0.039	1.116*	−0.015
	(0.105)	(0.291)	(0.108)	(0.159)	(0.534)	(0.171)
Stop Purpose: Seat belt violation	−0.361**	0.345	−0.237*	0.509**	0.846	0.607**
	(0.117)	(0.324)	(0.121)	(0.179)	(0.588)	(0.188)
Stop Purpose: Speed limit violation	−0.478***	0.370	−0.492***	−0.334*	0.033	−0.238
	(0.104)	(0.291)	(0.106)	(0.159)	(0.567)	(0.170)
Stop Purpose: Stop light/Sign violation	−0.378***	0.694*	−0.360**	−0.020	0.129	0.193
	(0.114)	(0.303)	(0.118)	(0.175)	(0.621)	(0.185)
Stop Purpose: Vehicle equipment violation	−0.395***	−0.027	−0.270**	−0.019	0.075	0.206
	(0.100)	(0.288)	(0.102)	(0.149)	(0.540)	(0.159)
Stop Purpose: Other	−0.617***	0.181	−0.526***	0.008	0.340	0.151
	(0.100)	(0.284)	(0.102)	(0.150)	(0.533)	(0.160)
Day of week: Monday	−0.043	−0.009	0.023	0.029	−0.118	0.126
	(0.071)	(0.174)	(0.077)	(0.123)	(0.334)	(0.131)
Day of week: Tuesday	0.032	0.168	0.146*	0.017	0.110	0.191
	(0.063)	(0.151)	(0.068)	(0.109)	(0.287)	(0.115)
Day of week: Wednesday	−0.032	0.030	0.106	−0.024	0.107	0.158
	(0.061)	(0.149)	(0.066)	(0.106)	(0.279)	(0.112)
Day of week: Thursday	0.018	−0.059	0.205**	0.054	0.053	0.234*
	(0.061)	(0.150)	(0.065)	(0.105)	(0.279)	(0.111)
Day of week: Friday	0.149*	0.067	0.245***	−0.119	−0.050	0.028
	(0.060)	(0.147)	(0.065)	(0.104)	(0.277)	(0.110)
Day of week: Saturday	0.004	0.186	0.017	0.034	0.326	0.054
	(0.064)	(0.152)	(0.070)	(0.111)	(0.277)	(0.118)
Constant	0.448***	−3.048***	−0.176	−1.552***	−4.287***	−1.831***
	(0.125)	(0.316)	(0.123)	(0.201)	(0.582)	(0.199)
Observations	26,620	26,620	26,620	7,228	7,228	7,228
Log Likelihood	−14,163.240	−3,634.205	−12,836.720	−4,570.340	−1,042.322	−4,297.677
Akaike Inf. Crit.	28,370.490	7,306.409	25,711.440	9,184.680	2,122.643	8,633.355

Note: *p<0.05; **p<0.01; ***p<0.001

Table A20: The likelihood of contraband recovery and arrest: consent relative to probable cause searches in Fayetteville, North Carolina

	Total	White Contraband	Black	Total	White Arrest	Black
Consent search	−1.790***	−0.799***	−1.805***	−0.687***	−0.245*	−0.802***
	(0.026)	(0.044)	(0.029)	(0.054)	(0.103)	(0.061)
Driver race: Black	−0.164***			0.196***		
	(0.030)			(0.056)		
Driver race: Hispanic	−0.302***			−0.132		
	(0.074)			(0.146)		
Driver race: Other	0.167			−0.555**		
	(0.086)			(0.174)		
Male	0.135***	−0.260***	0.248***	0.144*	−0.411***	0.305***
	(0.035)	(0.056)	(0.040)	(0.065)	(0.110)	(0.073)
Age	−0.003*	−0.003	−0.002	0.006**	0.011*	0.004
	(0.001)	(0.002)	(0.001)	(0.002)	(0.004)	(0.003)
Stop Purpose: Driving while Impaired	−0.296	0.110	−0.301	1.932***	0.958	1.532**
	(0.289)	(0.380)	(0.284)	(0.390)	(0.565)	(0.472)
Stop Purpose: Investigation	−0.592*	−0.450	−0.240	−0.022	−0.333	0.476
	(0.265)	(0.350)	(0.257)	(0.350)	(0.542)	(0.448)
Stop Purpose: Other vehicle violation	−0.568*	−0.563	−0.142	0.253	−0.374	0.821
	(0.267)	(0.355)	(0.259)	(0.353)	(0.551)	(0.450)
Stop Purpose: Movement violation	−0.668*	−0.350	−0.347	0.109	−0.341	0.624
	(0.266)	(0.352)	(0.258)	(0.353)	(0.550)	(0.451)
Stop Purpose: Seat belt violation	−0.615*	−0.588	−0.159	−0.153	−0.873	0.507
	(0.266)	(0.353)	(0.258)	(0.354)	(0.562)	(0.451)
Stop Purpose: Speed limit violation	−0.724**	−0.325	−0.442	−0.089	−0.564	0.438
	(0.265)	(0.350)	(0.257)	(0.351)	(0.546)	(0.449)
Stop Purpose: Stop light/Sign violation	−0.711**	−0.657	−0.297	−0.106	−0.842	0.517
	(0.267)	(0.356)	(0.259)	(0.356)	(0.567)	(0.453)
Stop Purpose: Vehicle equipment violation	−0.653*	−0.597	−0.228	−0.020	−0.490	0.491
	(0.264)	(0.348)	(0.255)	(0.348)	(0.538)	(0.446)
Stop Purpose: Other	−0.756**	−0.767*	−0.286	−0.033	−0.709	0.569
	(0.264)	(0.348)	(0.255)	(0.347)	(0.538)	(0.445)
Day of week: Monday	−0.173***	−0.113	−0.133*	−0.174*	0.019	−0.148
	(0.049)	(0.084)	(0.054)	(0.087)	(0.165)	(0.096)
Day of week: Tuesday	−0.212***	−0.029	−0.181***	−0.213*	0.012	−0.200*
	(0.048)	(0.081)	(0.053)	(0.087)	(0.165)	(0.095)
Day of week: Wednesday	−0.049	−0.069	−0.014	−0.115	−0.247	−0.002
	(0.047)	(0.080)	(0.051)	(0.082)	(0.166)	(0.088)
Day of week: Thursday	−0.151**	−0.103	−0.125*	−0.070	−0.302	0.050
	(0.047)	(0.081)	(0.052)	(0.082)	(0.169)	(0.089)
Day of week: Friday	−0.077	−0.115	−0.021	−0.022	−0.262	0.063
	(0.047)	(0.082)	(0.052)	(0.082)	(0.168)	(0.089)
Day of week: Saturday	−0.042	0.019	−0.033	−0.083	0.233	−0.149
	(0.049)	(0.082)	(0.054)	(0.085)	(0.155)	(0.094)
Constant	0.892***	−1.350***	−0.281	−1.165**	−2.224***	−2.023***
	(0.270)	(0.358)	(0.262)	(0.362)	(0.566)	(0.458)
Observations	36,824	36,824	36,824	11,014	11,014	11,014
Log Likelihood	−19,607.960	−8,661.934	−16,966.370	−6,246.482	−2,192.639	−5,517.060
Akaike Inf. Crit.	39,259.930	17,361.870	33,970.750	12,536.960	4,423.278	11,072.120

Note: *p<0.05; **p<0.01; ***p<0.001

Table A21: The likelihood of contraband recovery and arrest: consent relative to probable cause searches in Gastonia, North Carolina

	Total	White Contraband	Black	Total	White Arrest	Black
Consent search	0.763***	0.896***	0.133	−0.572***	−0.082	−0.936***
	(0.077)	(0.097)	(0.090)	(0.147)	(0.200)	(0.201)
Driver race: Black	−0.046			−0.202		
	(0.072)			(0.137)		
Driver race: Hispanic	−0.002			0.282		
	(0.175)			(0.299)		
Driver race: Other	−1.281*			0.373		
	(0.585)			(1.184)		
Male	−0.082	−0.545***	0.440***	0.029	−0.210	0.143
	(0.084)	(0.088)	(0.105)	(0.157)	(0.191)	(0.239)
Age	0.003	0.012**	−0.007	0.006	0.013	0.001
	(0.003)	(0.004)	(0.004)	(0.006)	(0.008)	(0.009)
Stop Purpose: Driving while Impaired	−0.127	−0.006	0.055	−1.170***	−1.203***	−0.169
	(0.184)	(0.204)	(0.237)	(0.272)	(0.306)	(0.458)
Stop Purpose: Investigation	0.078	−0.229	0.437	−1.225***	−1.685***	0.309
	(0.207)	(0.234)	(0.256)	(0.315)	(0.402)	(0.485)
Stop Purpose: Other vehicle violation	−0.111	−0.154	0.098	−1.315***	−1.314***	−0.528
	(0.197)	(0.220)	(0.252)	(0.304)	(0.350)	(0.531)
Stop Purpose: Movement violation	0.057	−0.431	0.696**	−1.664***	−1.891***	−0.245
	(0.211)	(0.244)	(0.254)	(0.353)	(0.446)	(0.537)
Stop Purpose: Seat belt violation	−0.040	−0.092	0.090	−1.438***	−1.084**	−0.849
	(0.209)	(0.235)	(0.265)	(0.335)	(0.368)	(0.613)
Stop Purpose: Speed limit violation	−0.048	−0.261	0.410	−1.670***	−1.903***	−0.366
	(0.214)	(0.243)	(0.264)	(0.364)	(0.466)	(0.565)
Stop Purpose: Stop light/Sign violation	0.089	−0.057	0.334	−2.031***	−2.238***	−0.679
	(0.180)	(0.200)	(0.229)	(0.284)	(0.341)	(0.470)
Stop Purpose: Vehicle equipment violation	0.102	−0.120	0.492*	−1.761***	−1.928***	−0.399
	(0.182)	(0.202)	(0.230)	(0.280)	(0.328)	(0.459)
Stop Purpose: Other	0.080	0.111	0.077	0.406	0.242	0.481
	(0.134)	(0.154)	(0.157)	(0.256)	(0.353)	(0.363)
Day of week: Monday	0.213	0.276	0.063	−0.011	0.137	−0.017
	(0.131)	(0.148)	(0.154)	(0.260)	(0.340)	(0.382)
Day of week: Tuesday	0.097	0.197	0.001	0.287	0.554	0.032
	(0.130)	(0.149)	(0.154)	(0.249)	(0.323)	(0.372)
Day of week: Wednesday	0.126	0.215	0.001	0.175	0.260	0.142
	(0.128)	(0.146)	(0.150)	(0.251)	(0.335)	(0.364)
Day of week: Thursday	0.088	0.165	0.020	0.118	0.296	0.069
	(0.130)	(0.149)	(0.153)	(0.256)	(0.333)	(0.377)
Day of week: Friday	−0.011	0.098	−0.096	0.188	0.357	−0.088
	(0.124)	(0.144)	(0.148)	(0.245)	(0.323)	(0.371)
Day of week: Saturday	−0.550*	−1.643***	−1.772***	−0.077	−1.257**	−1.922***
	(0.223)	(0.248)	(0.278)	(0.363)	(0.432)	(0.567)
Observations	3,632	3,632	3,632	1,902	1,902	1,902
Log Likelihood	−2,448.302	−2,041.380	−1,924.917	−793.302	−534.733	−427.105
Akaike Inf. Crit.	4,938.605	4,118.760	3,885.835	1,628.605	1,105.466	890.210

Note: *p<0.05; **p<0.01; ***p<0.001

Table A22: The likelihood of contraband recovery and arrest: consent relative to probable cause searches in Greensboro, North Carolina

	Total	White Contraband	Black	Total	White Arrest	Black
Consent search	-1.521^{***}	-0.688^{***}	-1.426^{***}	-0.266^{***}	0.084	-0.379^{***}
	(0.025)	(0.038)	(0.026)	(0.039)	(0.066)	(0.043)
Driver race: Black	-0.242^{***}			0.195^{***}		
	(0.026)			(0.044)		
Driver race: Hispanic	-0.690^{***}			0.140		
	(0.060)			(0.109)		
Driver race: Other	-0.172			0.206		
	(0.091)			(0.158)		
Male	-0.084^{**}	-0.592^{***}	0.124^{***}	0.114^{*}	-0.479^{***}	0.337^{***}
	(0.031)	(0.043)	(0.036)	(0.052)	(0.077)	(0.061)
Age	-0.001	0.001	0.002	0.012^{***}	0.010^{***}	0.013^{***}
	(0.001)	(0.002)	(0.001)	(0.002)	(0.003)	(0.002)
Stop Purpose: Driving while Impaired	-0.130	-0.638^{***}	0.774^{***}	-1.285^{***}	-1.430^{***}	0.236
	(0.093)	(0.117)	(0.120)	(0.149)	(0.156)	(0.149)
Stop Purpose: Investigation	-0.084	-0.755^{***}	0.896^{***}	-1.586^{***}	-1.591^{***}	-0.039
	(0.102)	(0.137)	(0.128)	(0.165)	(0.199)	(0.168)
Stop Purpose: Other vehicle violation	-0.035	-0.454^{***}	0.782^{***}	-1.641^{***}	-1.546^{***}	-0.144
	(0.094)	(0.117)	(0.121)	(0.151)	(0.161)	(0.153)
Stop Purpose: Movement violation	0.202^{*}	-0.785^{***}	1.251^{***}	-1.786^{***}	-2.125^{***}	-0.024
	(0.099)	(0.131)	(0.124)	(0.158)	(0.199)	(0.158)
Stop Purpose: Seat belt violation	-0.171	-0.442^{***}	0.617^{***}	-2.003^{***}	-1.639^{***}	-0.583^{***}
	(0.094)	(0.116)	(0.120)	(0.151)	(0.161)	(0.154)
Stop Purpose: Speed limit violation	-0.117	-0.690^{***}	0.811^{***}	-1.870^{***}	-1.792^{***}	-0.360^{*}
	(0.102)	(0.134)	(0.128)	(0.166)	(0.206)	(0.173)
Stop Purpose: Stop light/Sign violation	-0.154	-0.722^{***}	0.822^{***}	-1.657^{***}	-1.597^{***}	-0.066
	(0.093)	(0.117)	(0.120)	(0.150)	(0.159)	(0.151)
Stop Purpose: Vehicle equipment violation	-0.341^{***}	-1.034^{***}	0.723^{***}	-1.756^{***}	-1.723^{***}	-0.131
	(0.092)	(0.117)	(0.119)	(0.149)	(0.157)	(0.150)
Stop Purpose: Other	-0.078	-0.040	-0.030	-0.037	0.275^{*}	-0.105
	(0.042)	(0.069)	(0.047)	(0.073)	(0.125)	(0.082)
Day of week: Monday	-0.040	0.101	-0.055	0.148^{*}	0.073	0.193^{*}
	(0.042)	(0.068)	(0.047)	(0.071)	(0.129)	(0.078)
Day of week: Tuesday	-0.043	0.120	-0.034	0.084	0.311^{*}	0.077
	(0.042)	(0.067)	(0.047)	(0.072)	(0.123)	(0.079)
Day of week: Wednesday	-0.075	0.127	-0.087	0.132	0.289^{*}	0.112
	(0.042)	(0.067)	(0.048)	(0.072)	(0.125)	(0.079)
Day of week: Thursday	0.067	0.193^{**}	0.041	-0.062	0.126	-0.064
	(0.042)	(0.067)	(0.047)	(0.072)	(0.127)	(0.080)
Day of week: Friday	0.106^{*}	0.099	0.120^{*}	0.088	0.266^{*}	0.038
	(0.042)	(0.068)	(0.047)	(0.070)	(0.122)	(0.078)
Day of week: Saturday	0.764^{***}	-0.840^{***}	-1.278^{***}	0.474^{**}	-0.964^{***}	-1.549^{***}
	(0.104)	(0.133)	(0.129)	(0.167)	(0.196)	(0.171)
Observations	41,506	41,506	41,506	12,920	12,920	12,920
Log Likelihood	$-23,534.260$	$-11,734.080$	$-19,777.290$	$-8,051.664$	$-3,635.641$	$-6,910.629$
Akaike Inf. Crit.	47,110.510	23,504.150	39,590.590	16,145.330	7,307.282	13,857.260

Note: *p<0.05; **p<0.01; ***p<0.001

Table A23: The likelihood of contraband recovery and arrest: consent relative to probable cause searches in Greenville, North Carolina

	Total	White Contraband	Black	Total	White Arrest	Black
Consent search	−1.730***	−0.916***	−1.515***	−0.299	−0.264	−0.191
	(0.126)	(0.164)	(0.136)	(0.229)	(0.375)	(0.273)
Driver race: Black	−0.181			0.297		
	(0.109)			(0.243)		
Driver race: Hispanic	−1.057**			0.958		
	(0.325)			(0.667)		
Driver race: Other	−0.164			0.340		
	(0.458)			(0.878)		
Male	0.157	−0.550**	0.598**	0.357	−0.186	0.687
	(0.158)	(0.196)	(0.214)	(0.378)	(0.529)	(0.493)
Age	−0.015**	−0.057***	0.009	0.016	−0.026	0.034**
	(0.006)	(0.011)	(0.006)	(0.012)	(0.023)	(0.013)
Stop Purpose: Driving while Impaired	11.695	11.118	10.146			
	(324.744)	(324.744)	(324.744)			
Stop Purpose: Investigation	11.497	10.289	10.592	0.145	−0.092	0.465
	(324.744)	(324.744)	(324.744)	(0.722)	(0.867)	(1.095)
Stop Purpose: Other vehicle violation	11.750	10.337	10.922	−0.929	−16.916	0.413
	(324.744)	(324.744)	(324.744)	(0.787)	(827.398)	(1.125)
Stop Purpose: Movement violation	11.478	10.354	10.558	−0.523	−0.960	0.224
	(324.744)	(324.744)	(324.744)	(0.788)	(0.999)	(1.158)
Stop Purpose: Seat belt violation	11.412	10.223	10.522	−0.595	−0.765	0.053
	(324.744)	(324.744)	(324.744)	(0.798)	(1.010)	(1.169)
Stop Purpose: Speed limit violation	11.486	10.501	10.338	−0.460	−1.016	0.238
	(324.744)	(324.744)	(324.744)	(0.741)	(0.928)	(1.112)
Stop Purpose: Stop light/Sign violation	11.690	10.350	10.936	−0.329	−2.107	0.874
	(324.744)	(324.744)	(324.744)	(0.777)	(1.284)	(1.123)
Stop Purpose: Vehicle equipment violation	11.406	10.000	10.658	−1.281	−2.829*	−0.139
	(324.744)	(324.744)	(324.744)	(0.768)	(1.291)	(1.118)
Stop Purpose: Other	11.121	9.488	10.531	−0.969	−1.345	−0.327
	(324.744)	(324.744)	(324.744)	(0.742)	(0.929)	(1.116)
Day of week: Monday	−0.096	0.109	−0.333	−0.084	−0.400	−0.053
	(0.205)	(0.279)	(0.254)	(0.448)	(0.738)	(0.536)
Day of week: Tuesday	−0.286	−0.362	−0.173	0.158	0.089	0.230
	(0.199)	(0.294)	(0.231)	(0.421)	(0.642)	(0.504)
Day of week: Wednesday	−0.075	−0.219	−0.013	0.307	−1.171	0.641
	(0.194)	(0.284)	(0.228)	(0.398)	(0.834)	(0.461)
Day of week: Thursday	−0.215	−0.243	−0.225	−0.237	−0.426	−0.194
	(0.191)	(0.274)	(0.226)	(0.422)	(0.671)	(0.516)
Day of week: Friday	0.127	−0.082	0.081	−0.292	−0.364	−0.224
	(0.179)	(0.256)	(0.209)	(0.382)	(0.585)	(0.465)
Day of week: Saturday	0.026	0.031	0.009	−0.130	−0.356	−0.056
	(0.177)	(0.245)	(0.207)	(0.372)	(0.573)	(0.455)
Constant	−10.581	−9.637	−11.830	−1.609	−0.413	−3.663**
	(324.744)	(324.744)	(324.744)	(0.837)	(1.119)	(1.223)
Observations	2,343	2,343	2,343	606	606	606
Log Likelihood	−1,208.373	−676.393	−936.458	−277.198	−118.083	−212.788
Akaike Inf. Crit.	2,460.746	1,390.787	1,910.916	596.395	272.166	461.576

Note: *p<0.05; **p<0.01; ***p<0.001

Table A24: The likelihood of contraband recovery and arrest: consent relative to probable cause searches in Highpoint, North Carolina

	Total	White Contraband	Black	Total	White Arrest	Black
Consent search	−1.587***	−0.527***	−1.744***	−0.460***	0.340**	−0.832***
	(0.053)	(0.070)	(0.064)	(0.084)	(0.105)	(0.098)
Driver race: Black	−0.182**			−0.045		
	(0.056)			(0.087)		
Driver race: Hispanic	−0.681***			0.060		
	(0.117)			(0.201)		
Driver race: Other	−0.099			−0.287		
	(0.194)			(0.300)		
Male	0.066	−0.524***	0.427***	−0.006	−0.634***	0.443***
	(0.067)	(0.080)	(0.087)	(0.105)	(0.122)	(0.127)
Age	0.001	0.010***	−0.002	0.001	0.010*	−0.005
	(0.002)	(0.003)	(0.003)	(0.004)	(0.004)	(0.004)
Stop Purpose: Driving while Impaired	0.034	0.151	−0.489	2.289***	0.912	1.217
	(0.345)	(0.400)	(0.390)	(0.516)	(0.554)	(0.668)
Stop Purpose: Investigation	0.046	−0.127	0.016	0.727	−0.106	1.170
	(0.316)	(0.370)	(0.345)	(0.435)	(0.522)	(0.632)
Stop Purpose: Other vehicle violation	−0.178	−0.918*	0.325	0.631	−1.196*	1.807**
	(0.331)	(0.406)	(0.361)	(0.462)	(0.601)	(0.650)
Stop Purpose: Movement violation	0.156	−0.500	0.464	0.445	−0.599	1.197
	(0.318)	(0.374)	(0.345)	(0.437)	(0.529)	(0.632)
Stop Purpose: Seat belt violation	−0.233	−0.701	0.206	0.810	−0.532	1.670*
	(0.329)	(0.396)	(0.360)	(0.459)	(0.563)	(0.649)
Stop Purpose: Speed limit violation	−0.125	−0.417	0.036	0.231	−0.722	1.004
	(0.320)	(0.376)	(0.349)	(0.441)	(0.539)	(0.637)
Stop Purpose: Stop light/Sign violation	−0.159	−0.482	0.139	0.717	−0.339	1.446*
	(0.328)	(0.390)	(0.359)	(0.456)	(0.551)	(0.648)
Stop Purpose: Vehicle equipment violation	−0.006	−0.403	0.213	0.470	−0.345	1.110
	(0.316)	(0.370)	(0.344)	(0.434)	(0.523)	(0.631)
Stop Purpose: Other	−0.136	−0.530	0.206	0.498	−0.655	1.433*
	(0.316)	(0.371)	(0.344)	(0.435)	(0.526)	(0.630)
Day of week: Monday	−0.055	−0.145	0.097	−0.149	−0.130	0.005
	(0.101)	(0.142)	(0.121)	(0.157)	(0.210)	(0.178)
Day of week: Tuesday	−0.044	0.157	−0.048	−0.287	−0.036	−0.144
	(0.099)	(0.134)	(0.121)	(0.155)	(0.202)	(0.179)
Day of week: Wednesday	0.070	0.170	0.123	−0.142	0.055	0.064
	(0.098)	(0.133)	(0.119)	(0.152)	(0.197)	(0.173)
Day of week: Thursday	−0.014	−0.007	0.150	0.054	−0.078	0.358*
	(0.101)	(0.139)	(0.121)	(0.157)	(0.206)	(0.174)
Day of week: Friday	0.119	0.294*	0.064	−0.184	−0.020	0.004
	(0.098)	(0.130)	(0.119)	(0.151)	(0.196)	(0.171)
Day of week: Saturday	−0.033	0.004	0.071	−0.175	−0.133	0.085
	(0.100)	(0.136)	(0.120)	(0.156)	(0.202)	(0.176)
Constant	0.334	−1.197**	−1.126**	−0.343	−1.037	−2.235***
	(0.329)	(0.387)	(0.362)	(0.458)	(0.547)	(0.653)
Observations	7,941	7,941	7,941	2,676	2,676	2,676
Log Likelihood	−4,543.130	−2,923.647	−3,397.115	−1,799.986	−1,199.708	−1,496.997
Akaike Inf. Crit.	9,130.261	5,885.295	6,832.230	3,643.972	2,437.416	3,031.993

Note: *p<0.05; **p<0.01; ***p<0.001

Table A25: The likelihood of contraband recovery and arrest: consent relative to probable cause searches in Jacksonville, North Carolina

	Total	White Contraband	Black	Total	White Arrest	Black
Consent search	−1.525***	−0.784***	−1.252***	−0.538***	0.050	−0.395***
	(0.066)	(0.079)	(0.075)	(0.112)	(0.100)	(0.096)
Driver race: Black	−0.224***			0.030		
	(0.066)			(0.117)		
Driver race: Hispanic	−0.296*			−0.493*		
	(0.137)			(0.228)		
Driver race: Other	−0.560*			−0.602		
	(0.246)			(0.412)		
Male	0.017	−0.406***	0.337***	0.222	−0.472***	0.559***
	(0.080)	(0.093)	(0.101)	(0.137)	(0.122)	(0.128)
Age	−0.005	−0.008	0.003	0.002	−0.005	0.010
	(0.004)	(0.005)	(0.004)	(0.007)	(0.006)	(0.006)
Stop Purpose: Driving while Impaired	−3.043***	−0.419	−2.025***	1.350	1.220*	−1.107*
	(0.777)	(0.445)	(0.506)	(0.882)	(0.522)	(0.547)
Stop Purpose: Investigation	−2.597***	−0.711	−0.803*	−0.008	−0.017	−0.011
	(0.747)	(0.378)	(0.369)	(0.509)	(0.403)	(0.379)
Stop Purpose: Other vehicle violation	−2.667***	−0.947*	−0.746*	−0.362	−0.331	−0.038
	(0.751)	(0.396)	(0.380)	(0.526)	(0.430)	(0.399)
Stop Purpose: Movement violation	−2.689***	−0.537	−1.195**	0.109	0.417	−0.479
	(0.755)	(0.398)	(0.394)	(0.550)	(0.432)	(0.415)
Stop Purpose: Seat belt violation	−2.954***	−0.911*	−1.030**	−0.161	0.093	−0.047
	(0.757)	(0.412)	(0.397)	(0.563)	(0.455)	(0.429)
Stop Purpose: Speed limit violation	−2.941***	−0.586	−1.571***	−0.557	0.269	−0.864*
	(0.749)	(0.383)	(0.381)	(0.516)	(0.414)	(0.398)
Stop Purpose: Stop light/Sign violation	−2.660***	−0.792*	−0.874*	−0.426	−0.342	−0.133
	(0.754)	(0.401)	(0.388)	(0.534)	(0.441)	(0.409)
Stop Purpose: Vehicle equipment violation	−2.545***	−0.701	−0.744*	−0.425	−0.132	−0.201
	(0.747)	(0.379)	(0.370)	(0.506)	(0.405)	(0.380)
Stop Purpose: Other	−2.821***	−0.824*	−1.024**	−0.234	0.025	−0.218
	(0.748)	(0.383)	(0.374)	(0.514)	(0.411)	(0.387)
Day of week: Monday	−0.064	0.165	−0.034	0.035	0.324	−0.005
	(0.135)	(0.168)	(0.169)	(0.237)	(0.219)	(0.219)
Day of week: Tuesday	−0.003	0.039	0.172	−0.064	−0.071	0.288
	(0.127)	(0.161)	(0.155)	(0.218)	(0.212)	(0.202)
Day of week: Wednesday	0.017	0.070	0.139	0.364	0.202	0.364
	(0.121)	(0.154)	(0.149)	(0.219)	(0.198)	(0.193)
Day of week: Thursday	0.115	0.118	0.184	0.236	0.086	0.266
	(0.121)	(0.153)	(0.148)	(0.213)	(0.197)	(0.191)
Day of week: Friday	0.084	0.116	0.084	0.274	0.193	0.184
	(0.118)	(0.149)	(0.145)	(0.208)	(0.191)	(0.187)
Day of week: Saturday	0.206	0.064	0.348*	0.165	−0.025	0.349
	(0.119)	(0.151)	(0.144)	(0.206)	(0.194)	(0.187)
Constant	3.445***	0.001	−0.193	1.368*	−0.392	−0.933*
	(0.760)	(0.413)	(0.403)	(0.560)	(0.457)	(0.435)
Observations	5,084	5,084	5,084	1,933	1,933	1,933
Log Likelihood	−3,047.427	−2,158.551	−2,311.068	−1,017.151	−1,186.959	−1,257.413
Akaike Inf. Crit.	6,138.854	4,355.102	4,660.135	2,078.302	2,411.918	2,552.827

Note: *p<0.05; **p<0.01; ***p<0.001

Table A26: The likelihood of contraband recovery and arrest: consent relative to probable cause searches in Raleigh, North Carolina

	Total	White Contraband	Black	Total	White Arrest	Black
Consent search	−1.352***	−0.684***	−1.473***	−0.317***	0.151	−0.461***
	(0.042)	(0.076)	(0.049)	(0.082)	(0.138)	(0.091)
Driver race: Black	−0.206***			0.042		
	(0.049)			(0.091)		
Driver race: Hispanic	−0.653***			0.097		
	(0.090)			(0.177)		
Driver race: Other	−0.165			−0.163		
	(0.196)			(0.381)		
Male	0.124*	−0.334***	0.177**	0.416***	−0.370*	0.571***
	(0.054)	(0.091)	(0.063)	(0.108)	(0.165)	(0.125)
Age	−0.008***	−0.011**	−0.001	0.016***	0.009	0.020***
	(0.002)	(0.004)	(0.002)	(0.004)	(0.006)	(0.004)
Stop Purpose: Driving while Impaired	−0.139	0.438	−0.228	2.350*	0.543	12.891
	(0.551)	(1.029)	(0.745)	(1.177)	(1.171)	(265.437)
Stop Purpose: Investigation	1.234*	0.978	1.433	1.182	−0.856	13.037
	(0.548)	(1.025)	(0.738)	(1.164)	(1.167)	(265.437)
Stop Purpose: Other vehicle violation	1.155*	0.451	1.545*	0.513	−1.631	12.575
	(0.548)	(1.027)	(0.738)	(1.165)	(1.174)	(265.437)
Stop Purpose: Movement violation	1.005	0.883	1.232	0.564	−1.322	12.579
	(0.550)	(1.029)	(0.741)	(1.169)	(1.183)	(265.437)
Stop Purpose: Seat belt violation	1.352*	0.938	1.679*	0.022	−3.797*	12.396
	(0.555)	(1.038)	(0.745)	(1.177)	(1.533)	(265.437)
Stop Purpose: Speed limit violation	1.025	0.904	1.251	0.284	−1.159	12.108
	(0.548)	(1.026)	(0.739)	(1.166)	(1.172)	(265.437)
Stop Purpose: Stop light/Sign violation	1.045	0.733	1.284	0.275	−1.362	12.126
	(0.552)	(1.033)	(0.742)	(1.172)	(1.190)	(265.437)
Stop Purpose: Vehicle equipment violation	1.058	0.279	1.493*	0.142	−1.876	12.245
	(0.548)	(1.028)	(0.738)	(1.166)	(1.178)	(265.437)
Stop Purpose: Other	0.906	0.396	1.281	0.247	−1.856	12.289
	(0.547)	(1.025)	(0.737)	(1.164)	(1.172)	(265.437)
Day of week: Monday	0.111	0.203	0.158	0.138	0.358	0.110
	(0.078)	(0.155)	(0.088)	(0.146)	(0.292)	(0.155)
Day of week: Tuesday	0.083	0.403**	0.058	0.071	0.519	0.008
	(0.076)	(0.146)	(0.086)	(0.143)	(0.283)	(0.153)
Day of week: Wednesday	0.134	0.438**	0.114	0.060	0.650*	−0.020
	(0.075)	(0.144)	(0.085)	(0.141)	(0.272)	(0.152)
Day of week: Thursday	0.012	0.197	0.026	0.025	0.778**	−0.243
	(0.075)	(0.148)	(0.085)	(0.142)	(0.267)	(0.156)
Day of week: Friday	0.062	0.364*	0.033	−0.146	0.520	−0.201
	(0.074)	(0.143)	(0.085)	(0.142)	(0.273)	(0.153)
Day of week: Saturday	0.103	0.326*	0.070	0.097	0.668*	−0.088
	(0.073)	(0.141)	(0.083)	(0.137)	(0.264)	(0.148)
Constant	−1.542**	−3.074**	−2.676***	−1.941	−1.649	−14.447
	(0.552)	(1.035)	(0.743)	(1.175)	(1.198)	(265.437)
Observations	18,299	18,299	18,299	3,512	3,512	3,512
Log Likelihood	−8,249.286	−3,208.325	−6,665.404	−2,145.557	−915.979	−1,889.436
Akaike Inf. Crit.	16,542.570	6,454.651	13,368.810	4,335.113	1,869.959	3,816.871

Note: *p<0.05; **p<0.01; ***p<0.001

Table A27: The likelihood of contraband recovery and arrest: consent relative to probable cause searches in Rocky Mountain, North Carolina

	Total	White Contraband	Black	Total	White Arrest	Black
Consent search	−1.614***	−0.825***	−1.578***	−0.883***	0.175	−1.040***
	(0.090)	(0.173)	(0.096)	(0.174)	(0.364)	(0.186)
Driver race: Black	−0.196			0.415		
	(0.116)			(0.223)		
Driver race: Hispanic	−0.955*			0.601		
	(0.394)			(0.811)		
Driver race: Other	0.353			1.142		
	(0.669)			(1.026)		
Male	−0.062	−0.434*	0.041	0.208	−0.975*	0.512*
	(0.119)	(0.208)	(0.129)	(0.223)	(0.389)	(0.242)
Age	−0.003	−0.012	0.001	0.023**	0.014	0.024**
	(0.004)	(0.009)	(0.005)	(0.008)	(0.016)	(0.008)
Stop Purpose: Driving while Impaired	−0.405	1.911	−0.876*	1.364*	16.333	0.125
	(0.371)	(1.093)	(0.377)	(0.587)	(713.089)	(0.564)
Stop Purpose: Investigation	−0.206	1.765	−0.561	0.213	14.706	−0.207
	(0.298)	(1.035)	(0.300)	(0.457)	(713.089)	(0.464)
Stop Purpose: Other vehicle violation	−0.269	1.695	−0.534	−0.592	13.474	−0.786
	(0.317)	(1.057)	(0.322)	(0.524)	(713.090)	(0.534)
Stop Purpose: Movement violation	−0.626*	1.705	−0.997**	0.695	15.346	0.178
	(0.310)	(1.042)	(0.315)	(0.482)	(713.089)	(0.487)
Stop Purpose: Seat belt violation	−0.741*	0.664	−0.820*	0.148	14.492	−0.100
	(0.352)	(1.170)	(0.355)	(0.568)	(713.090)	(0.577)
Stop Purpose: Speed limit violation	−0.547	1.785	−0.881**	−0.293	14.780	−0.722
	(0.300)	(1.033)	(0.303)	(0.473)	(713.089)	(0.484)
Stop Purpose: Stop light/Sign violation	−0.557	1.276	−0.766*	0.366	14.875	−0.020
	(0.308)	(1.055)	(0.311)	(0.480)	(713.089)	(0.488)
Stop Purpose: Vehicle equipment violation	−0.753**	1.182	−0.961**	−0.261	14.436	−0.604
	(0.292)	(1.033)	(0.293)	(0.454)	(713.089)	(0.464)
Stop Purpose: Other	−0.839**	0.998	−1.070***	−0.665	12.616	−0.803
	(0.292)	(1.036)	(0.293)	(0.465)	(713.090)	(0.471)
Day of week: Monday	−0.264	0.245	−0.281	0.096	1.044	−0.085
	(0.169)	(0.337)	(0.180)	(0.307)	(0.654)	(0.321)
Day of week: Tuesday	−0.213	−0.072	−0.157	0.187	0.276	0.206
	(0.164)	(0.354)	(0.174)	(0.297)	(0.744)	(0.306)
Day of week: Wednesday	−0.153	0.033	−0.134	0.813**	0.696	0.760*
	(0.172)	(0.361)	(0.182)	(0.302)	(0.715)	(0.307)
Day of week: Thursday	−0.047	0.392	−0.057	−0.195	−0.184	−0.103
	(0.167)	(0.331)	(0.178)	(0.315)	(0.807)	(0.320)
Day of week: Friday	0.253	0.797**	0.116	0.079	0.973	−0.132
	(0.157)	(0.303)	(0.167)	(0.281)	(0.642)	(0.294)
Day of week: Saturday	−0.072	0.098	−0.012	0.207	0.269	0.285
	(0.156)	(0.325)	(0.164)	(0.278)	(0.706)	(0.284)
Constant	0.874*	−3.486**	0.416	−1.699**	−17.883	−1.465**
	(0.346)	(1.070)	(0.335)	(0.568)	(713.089)	(0.543)
Observations	3,112	3,112	3,112	811	811	811
Log Likelihood	−1,578.691	−568.169	−1,425.684	−464.390	−133.960	−438.593
Akaike Inf. Crit.	3,201.383	1,174.337	2,889.368	972.779	305.919	915.185

Note: *p<0.05; **p<0.01; ***p<0.001

Table A28: The likelihood of contraband recovery and arrest: consent relative to probable cause searches in Wilmington, North Carolina

	Total	White Contraband	Black	Total	White Arrest	Black
Consent search	−1.494***	−0.645***	−1.679***	−0.741***	−0.053	−1.104***
	(0.076)	(0.093)	(0.095)	(0.128)	(0.159)	(0.153)
Driver race: Black	−0.412***			0.428***		
	(0.074)			(0.130)		
Driver race: Hispanic	−0.772***			1.151**		
	(0.233)			(0.433)		
Driver race: Other	−0.536			0.586		
	(0.525)			(0.932)		
Male	0.045	−0.268*	0.221	−0.122	−0.459*	0.246
	(0.091)	(0.108)	(0.128)	(0.162)	(0.193)	(0.199)
Age	−0.005	−0.014**	0.006	0.024***	0.014	0.021**
	(0.004)	(0.005)	(0.005)	(0.006)	(0.008)	(0.007)
Stop Purpose: Driving while Impaired	−1.024	−0.788	−0.153	2.279**	2.948*	−0.387
	(0.661)	(0.606)	(1.210)	(0.876)	(1.155)	(1.315)
Stop Purpose: Investigation	−1.247*	−1.737**	1.204	0.682	0.982	0.897
	(0.617)	(0.562)	(1.059)	(0.753)	(1.088)	(1.092)
Stop Purpose: Other vehicle violation	−1.262*	−1.784**	1.168	0.036	0.665	0.193
	(0.628)	(0.579)	(1.072)	(0.785)	(1.121)	(1.133)
Stop Purpose: Movement violation	−1.285*	−1.768**	1.095	0.412	0.840	0.535
	(0.623)	(0.572)	(1.067)	(0.767)	(1.104)	(1.111)
Stop Purpose: Seat belt violation	−0.979	−1.677**	1.616	0.380	0.505	0.934
	(0.634)	(0.589)	(1.075)	(0.795)	(1.145)	(1.129)
Stop Purpose: Speed limit violation	−1.322*	−1.883***	1.158	−0.131	−0.091	0.421
	(0.622)	(0.571)	(1.065)	(0.767)	(1.121)	(1.108)
Stop Purpose: Stop light/Sign violation	−1.168	−1.791**	1.425	0.664	1.032	0.853
	(0.629)	(0.583)	(1.071)	(0.782)	(1.115)	(1.119)
Stop Purpose: Vehicle equipment violation	−1.328*	−2.097***	1.394	0.374	0.148	1.143
	(0.617)	(0.563)	(1.058)	(0.753)	(1.094)	(1.090)
Stop Purpose: Other	−1.440*	−2.055***	1.163	0.225	0.643	0.525
	(0.617)	(0.562)	(1.058)	(0.754)	(1.090)	(1.095)
Day of week: Monday	−0.082	0.047	−0.036	−0.293	−0.413	0.053
	(0.144)	(0.181)	(0.194)	(0.257)	(0.327)	(0.299)
Day of week: Tuesday	−0.041	−0.035	0.074	−0.314	−0.486	0.115
	(0.138)	(0.178)	(0.182)	(0.242)	(0.313)	(0.277)
Day of week: Wednesday	−0.145	0.095	−0.227	−0.292	−0.314	−0.048
	(0.136)	(0.170)	(0.186)	(0.240)	(0.302)	(0.282)
Day of week: Thursday	−0.127	−0.055	−0.093	−0.138	0.006	−0.131
	(0.137)	(0.175)	(0.183)	(0.238)	(0.290)	(0.283)
Day of week: Friday	0.039	0.117	0.080	−0.146	−0.294	0.233
	(0.136)	(0.172)	(0.181)	(0.238)	(0.297)	(0.274)
Day of week: Saturday	−0.033	0.067	−0.025	−0.542*	−0.036	−0.670*
	(0.137)	(0.173)	(0.184)	(0.244)	(0.292)	(0.305)
Constant	1.572*	0.944	−2.592*	−0.956	−2.045	−2.280*
	(0.636)	(0.595)	(1.080)	(0.798)	(1.136)	(1.138)
Observations	4,904	4,904	4,904	1,185	1,185	1,185
Log Likelihood	−2,487.078	−1,772.978	−1,559.470	−745.902	−516.839	−574.787
Akaike Inf. Crit.	5,018.155	3,583.956	3,156.940	1,535.803	1,071.678	1,187.574

Note: *p<0.05; **p<0.01; ***p<0.001

Table A29: The likelihood of contraband recovery and arrest: consent relative to probable cause searches in Winston-Salem, North Carolina

	Total	White Contraband	Black	Total	White Arrest	Black
Consent search	−1.667***	−0.573***	−1.599***	−0.545***	0.021	−0.830***
	(0.048)	(0.065)	(0.055)	(0.086)	(0.129)	(0.105)
Driver race: Black	−0.301***			0.194*		
	(0.053)			(0.083)		
Driver race: Hispanic	−0.640***			0.419**		
	(0.088)			(0.149)		
Driver race: Other	−0.380			−0.528		
	(0.291)			(0.568)		
Male	0.068	−0.330***	0.119	0.003	−0.308*	0.053
	(0.060)	(0.076)	(0.067)	(0.096)	(0.145)	(0.110)
Age	0.004	0.012***	0.006*	0.017***	0.035***	0.006
	(0.002)	(0.003)	(0.003)	(0.004)	(0.005)	(0.004)
Stop Purpose: Driving while Impaired	0.278	−1.701	11.083	14.473	12.413	11.801
	(1.010)	(1.027)	(162.239)	(229.629)	(378.593)	(229.629)
Stop Purpose: Investigation	0.994	−1.779	12.313	12.286	11.047	11.754
	(1.005)	(1.019)	(162.239)	(229.629)	(378.593)	(229.629)
Stop Purpose: Other vehicle violation	0.691	−1.722	12.065	12.039	11.008	11.505
	(1.005)	(1.019)	(162.239)	(229.629)	(378.593)	(229.629)
Stop Purpose: Movement violation	0.908	−1.610	12.186	11.614	10.630	11.162
	(1.004)	(1.018)	(162.239)	(229.629)	(378.593)	(229.629)
Stop Purpose: Seat belt violation	0.607	−1.684	11.992	11.107	10.269	10.592
	(1.009)	(1.026)	(162.239)	(229.629)	(378.593)	(229.629)
Stop Purpose: Speed limit violation	0.610	−1.740	12.001	11.425	10.347	11.133
	(1.004)	(1.017)	(162.239)	(229.629)	(378.593)	(229.629)
Stop Purpose: Stop light/Sign violation	0.414	−2.152*	12.023	11.196	9.899	11.073
	(1.007)	(1.026)	(162.239)	(229.629)	(378.593)	(229.629)
Stop Purpose: Vehicle equipment violation	0.613	−1.866	12.055	11.254	10.589	10.779
	(1.004)	(1.017)	(162.239)	(229.629)	(378.593)	(229.629)
Stop Purpose: Other	0.644	−2.025*	12.186	11.527	10.189	11.326
	(1.003)	(1.017)	(162.239)	(229.629)	(378.593)	(229.629)
Day of week: Monday	−0.033	−0.270*	0.243*	−0.117	−0.625*	0.246
	(0.095)	(0.129)	(0.106)	(0.160)	(0.274)	(0.184)
Day of week: Tuesday	0.043	−0.139	0.194	0.378**	0.136	0.465**
	(0.089)	(0.117)	(0.100)	(0.142)	(0.216)	(0.167)
Day of week: Wednesday	0.128	−0.109	0.322***	0.204	0.086	0.420**
	(0.085)	(0.111)	(0.096)	(0.136)	(0.206)	(0.160)
Day of week: Thursday	0.056	−0.184	0.288**	0.140	−0.189	0.453**
	(0.086)	(0.113)	(0.096)	(0.138)	(0.217)	(0.161)
Day of week: Friday	0.138	0.068	0.230*	0.052	−0.014	0.253
	(0.085)	(0.108)	(0.096)	(0.138)	(0.209)	(0.163)
Day of week: Saturday	−0.071	−0.547***	0.210*	0.127	−0.339	0.242
	(0.087)	(0.123)	(0.097)	(0.142)	(0.232)	(0.169)
Constant	−0.137	0.262	−12.968	−13.110	−13.760	−13.010
	(1.005)	(1.020)	(162.239)	(229.629)	(378.593)	(229.629)
Observations	9,216	9,216	9,216	3,918	3,918	3,918
Log Likelihood	−5,555.300	−3,508.644	−4,757.739	−2,247.385	−1,069.184	−1,847.326
Akaike Inf. Crit.	11,154.600	7,055.289	9,553.478	4,538.769	2,176.369	3,732.652

Note: *p<0.05; **p<0.01; ***p<0.001

Table A30: The likelihood of contraband recovery and arrest: consent relative to probable cause searches in the Highway Patrol, North Carolina

	Total	White Contraband	Black	Total	White Arrest	Black
Consent search	-1.667^{***}	-0.908^{***}	-1.144^{***}	-0.336^{***}	-0.111	-0.690^{***}
	(0.048)	(0.047)	(0.061)	(0.071)	(0.085)	(0.116)
Driver race: Black	-0.301^{***}			0.122		
	(0.053)			(0.071)		
Driver race: Hispanic	-0.640^{***}			0.022		
	(0.088)			(0.111)		
Driver race: Other	-0.380			-0.027		
	(0.291)			(0.194)		
Male	0.068	-0.269^{***}	0.286^{***}	0.030	-0.311^{**}	0.403^{**}
	(0.060)	(0.059)	(0.084)	(0.091)	(0.102)	(0.150)
Age	0.004	-0.007^{**}	-0.012^{***}	0.015^{***}	0.023^{***}	0.003
	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)	(0.004)
Stop Purpose: Driving while Impaired	0.278	-0.737^{***}	-1.550^{***}	1.343^{***}	1.313^{***}	-0.350
	(1.010)	(0.117)	(0.183)	(0.171)	(0.184)	(0.259)
Stop Purpose: Investigation	0.994	-0.058	-0.325^{*}	0.518^{**}	0.506^{**}	-0.076
	(1.005)	(0.119)	(0.160)	(0.161)	(0.186)	(0.241)
Stop Purpose: Other vehicle violation	0.691	-0.494^{***}	-0.079	-0.216	-0.359	0.045
	(1.005)	(0.124)	(0.155)	(0.173)	(0.215)	(0.252)
Stop Purpose: Movement violation	0.908	-0.576^{***}	0.090	-0.448^{**}	-0.544^{*}	-0.197
	(1.004)	(0.120)	(0.147)	(0.170)	(0.212)	(0.252)
Stop Purpose: Seat belt violation	0.607	0.108	-0.098	-0.323	-0.196	-0.201
	(1.009)	(0.118)	(0.154)	(0.166)	(0.200)	(0.246)
Stop Purpose: Speed limit violation	0.610	-0.363^{***}	0.205	-0.248	-0.372^{*}	0.115
	(1.004)	(0.103)	(0.130)	(0.140)	(0.169)	(0.201)
Stop Purpose: Stop light/Sign violation	0.414	-0.247	-0.504	0.992^{**}	0.856^{**}	0.563
	(1.007)	(0.216)	(0.301)	(0.303)	(0.325)	(0.388)
Stop Purpose: Vehicle equipment violation	0.613	-0.082	-0.108	-0.489^{*}	-0.251	-0.452
	(1.004)	(0.134)	(0.175)	(0.192)	(0.228)	(0.299)
Stop Purpose: Other	0.644	-0.217	0.033	-0.317	-0.158	-0.277
	(1.003)	(0.131)	(0.165)	(0.184)	(0.219)	(0.281)
Day of week: Monday	-0.033	0.154	-0.006	-0.601^{***}	-0.505^{***}	-0.594^{**}
	(0.095)	(0.090)	(0.110)	(0.124)	(0.152)	(0.186)
Day of week: Tuesday	0.043	0.254^{**}	-0.102	-0.869^{***}	-0.623^{***}	-0.638^{***}
	(0.089)	(0.087)	(0.108)	(0.125)	(0.153)	(0.181)
Day of week: Wednesday	0.128	0.185^{*}	0.074	-0.797^{***}	-0.565^{***}	-0.550^{**}
	(0.085)	(0.087)	(0.106)	(0.122)	(0.148)	(0.175)
Day of week: Thursday	0.056	0.196^{*}	-0.022	-0.860^{***}	-0.453^{**}	-0.821^{***}
	(0.086)	(0.087)	(0.108)	(0.125)	(0.146)	(0.191)
Day of week: Friday	0.138	0.245^{**}	-0.017	-0.418^{***}	-0.226	-0.331
	(0.085)	(0.087)	(0.109)	(0.120)	(0.140)	(0.171)
Day of week: Saturday	-0.071	0.108	-0.046	-0.068	0.016	0.024
	(0.087)	(0.084)	(0.105)	(0.115)	(0.131)	(0.156)
Constant	-0.137	-0.325^{*}	-1.334^{***}	-0.597^{**}	-1.575^{***}	-2.006^{***}
	(1.005)	(0.136)	(0.176)	(0.189)	(0.219)	(0.279)
Observations	9,216	13,385	13,385	5,132	5,132	5,132
Log Likelihood	$-5,555.300$	$-6,585.074$	$-4,600.446$	$-2,953.501$	$-2,204.524$	$-1,618.409$
Akaike Inf. Crit.	11,154.600	13,208.150	9,238.892	5,951.003	4,447.049	3,274.818

Note: *p<0.05; **p<0.01; ***p<0.001

B OSS Analysis

B.1 OSS Area of Operations

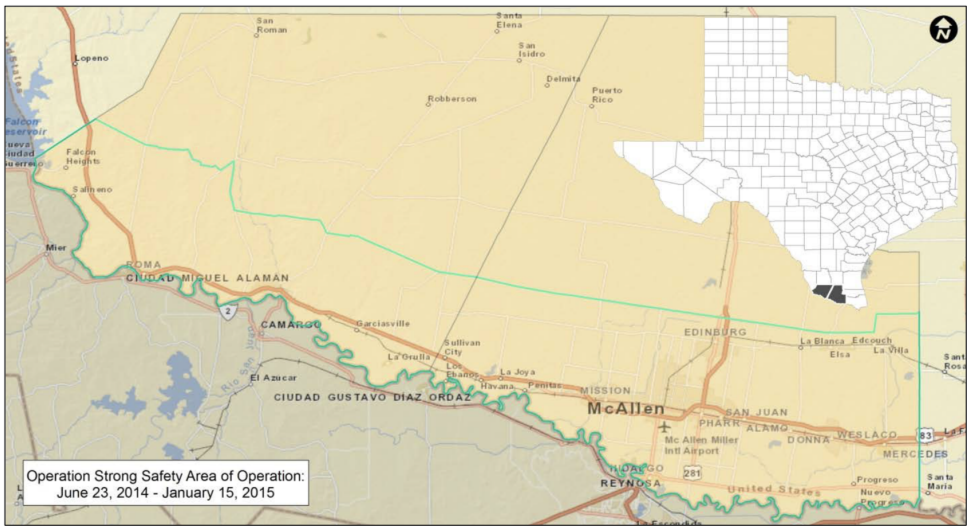

Figure B1: DPS Operation Strong Safety area of operations (Source: Department of Public Safety)

B.2 Spending Over Time

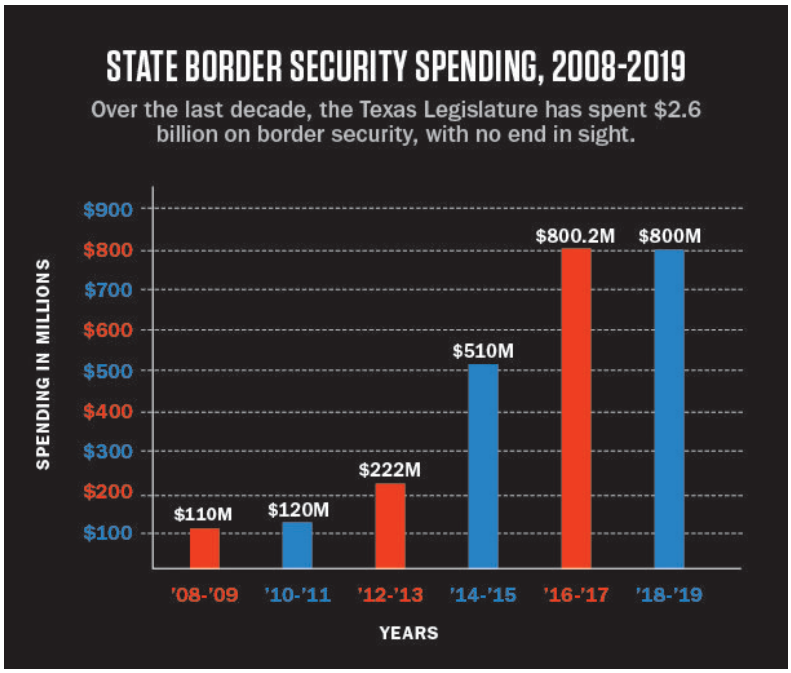

Figure B2: Texas State Legislature spending (in millions, y-axis) on border security over time (x-axis) (2008-2019) (Source: Texas Observer)

B.3 Stops Over Time

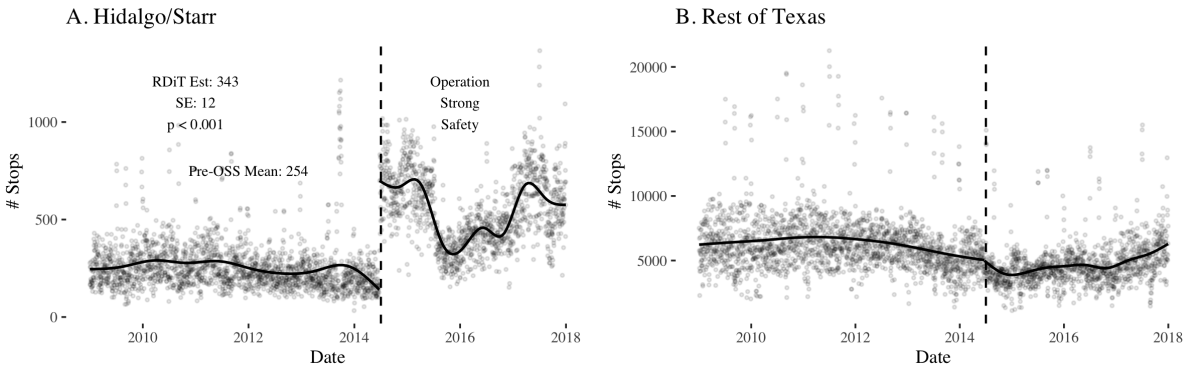

Figure B3: The count of traffic stops (y-axis) over time (x-axis) in Hidalgo/Starr (Panel A) and the rest of Texas (Panel B). Solid black lines are loess fits on each side of the moment Operation Strong Safety (OSS) was implemented. Dashed vertical line is the day OSS was implemented. Annotations denote pre-OSS mean in Hidalgo/Starr county along with a regression discontinuity-in-time estimate characterizing the discontinuous effect of OSS on the count of traffic stops in Hidalgo/Starr (polynomial = 1, uniform kernel).

B.4 Officers Over Time

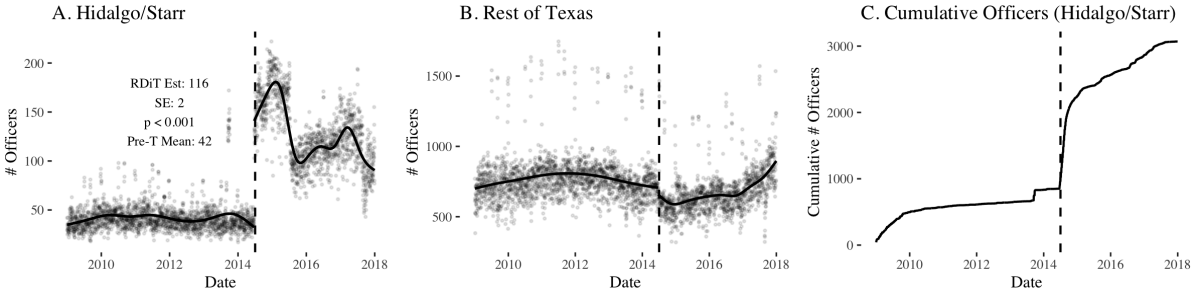

Figure B4: The count of officers (y-axis) over time (x-axis) in Hidalgo/Starr (Panel A) and the rest of Texas (Panel B). Solid black lines are loess fits on each side of the moment Operation Strong Safety (OSS) was implemented. Dashed vertical line is the day OSS was implemented. Annotations denote pre-OSS mean in Hidalgo/Starr county along with a regression discontinuity-in-time estimate characterizing the discontinuous effect of OSS on the number of officers in Hidalgo/Starr (polynomial = 1, uniform kernel). Panel C displays the cumulative number of officers operating in Hidalgo/Starr counties over time.

B.5 Warning Rate Over Time

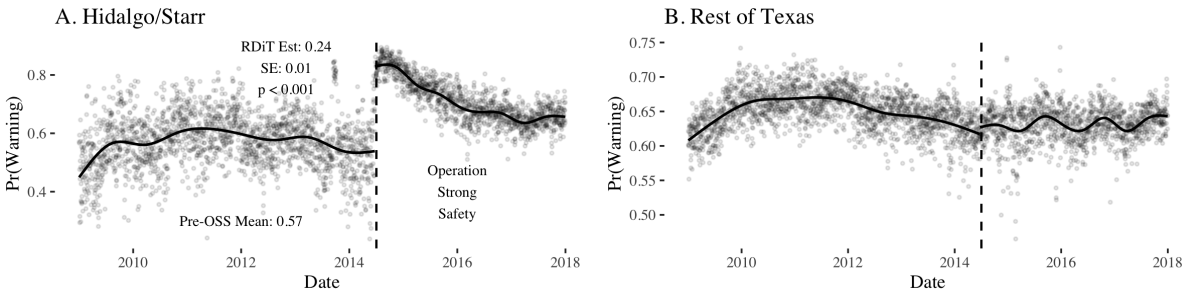

Figure B5: Warning rate (y-axis) over time (x-axis) in Hidalgo/Starr (Panel A) and the rest of Texas (Panel B). Solid black lines are loess fits on each side of the moment Operation Strong Safety (OSS) was implemented. Dashed vertical line is the day OSS was implemented. Annotations denote pre-OSS mean in Hidalgo/Starr county along with a regression discontinuity-in-time estimate characterizing the discontinuous effect of OSS on the traffic stop warning rate in Hidalgo/Starr (polynomial = 1, uniform kernel).

B.6 License Violations Over Time

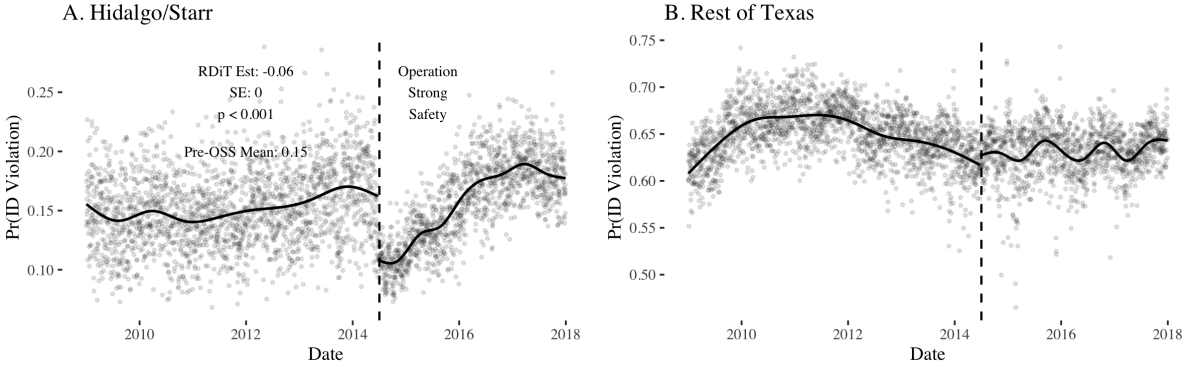

Figure B6: Driver's license violation rate (y-axis) over time (x-axis) in Hidalgo/Starr (Panel A) and the rest of Texas (Panel B). Solid black lines are loess fits on each side of the moment Operation Strong Safety (OSS) was implemented. Dashed vertical line is the day OSS was implemented. Annotations denote pre-OSS mean in Hidalgo/Starr county along with a regression discontinuity-in-time estimate characterizing the discontinuous effect of OSS on the driver's license violation rate in Hidalgo/Starr (polynomial = 1, uniform kernel).

B.7 Searches Over Time

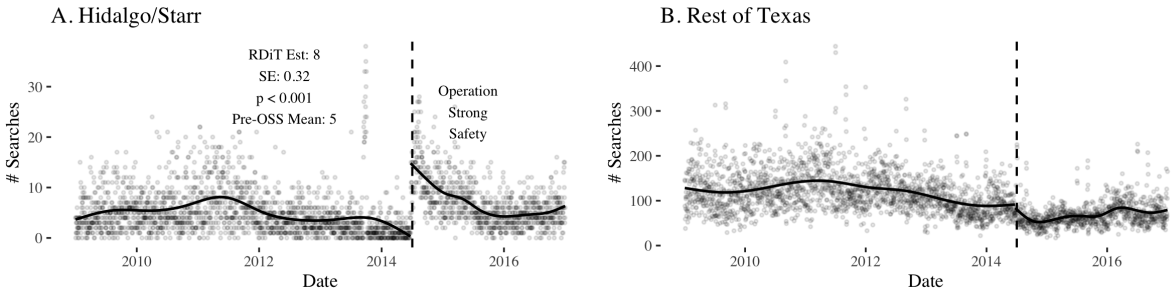

Figure B7: Traffic searches (y-axis) over time (x-axis) in Hidalgo/Starr (Panel A) and the rest of Texas (Panel B). Solid black lines are loess fits on each side of the moment Operation Strong Safety (OSS) was implemented. Dashed vertical line is the day OSS was implemented. Annotations denote pre-OSS mean in Hidalgo/Starr county along with a regression discontinuity-in-time estimate characterizing the discontinuous effect of OSS on the number of searches in Hidalgo/Starr (polynomial = 1, uniform kernel).

B.8 Optimal Bandwidth Estimates

B.8.1 Alternative Specifications Under CCT Optimal Bandwidth Framework

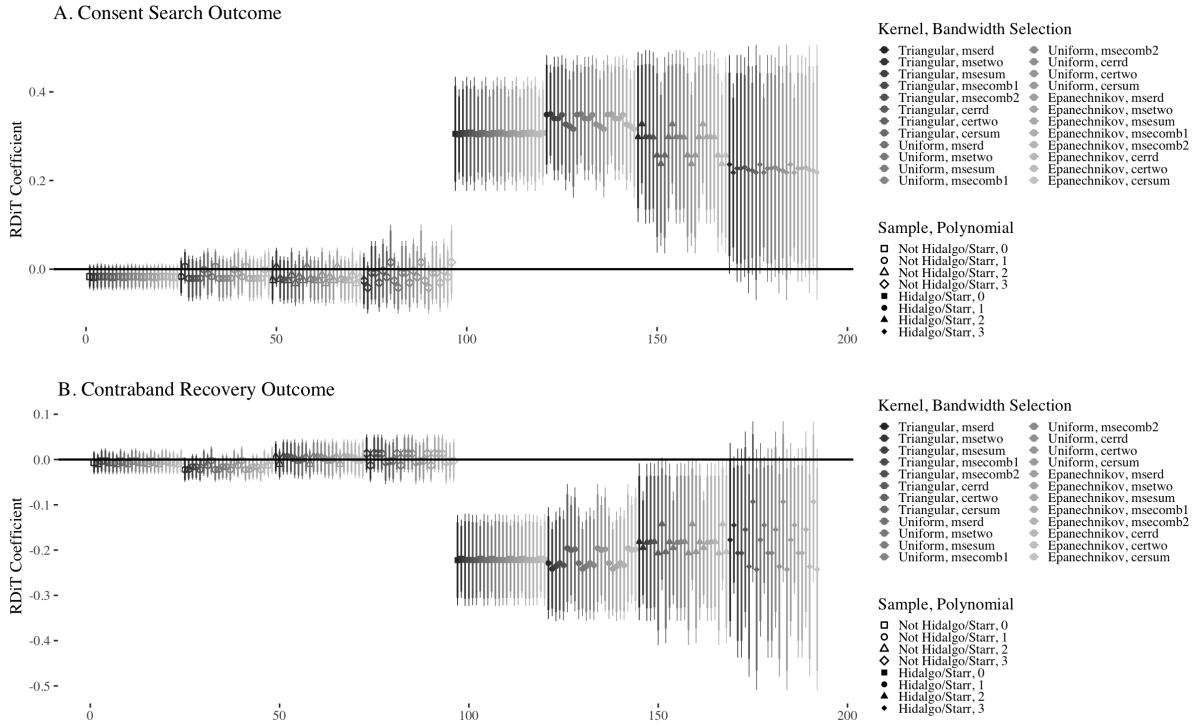

Figure B8: RDiT estimates characterizing effect of OSS on consent searches (Panel A) and contraband recovery rates (Panel B) throughout Hidalgo/Starr (coefficient estimates on the right) and the rest of Texas (coefficient estimates on the left). RDiT estimates displayed include permutations of sample (Hidalgo/Starr, rest of Texas), running variable polynomial (0, 1, 2, and 3), kernel (triangular, uniform, Epanechnikov), and bandwidth selection mechanism (mserd, msetwo, msesum, msecomb1, msecomb2, cerrd, certwo, cersum) implemented via `rdrobust` in $\mathbb{R}$ (see Calonico et al. (2015)). 95% CIs derived using default nearest neighbor (n = 3) robust SEs.

B.9 Full Sample

B.9.1 Search Counts

Table B31: RDiT Effect of OSS on Searches by Geographic Region Using Full Sample

	# Searches							
Panel A: Non-HS	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
OSS	-51.03^{***}	-42.35^{***}	-14.29^{**}	-21.67^{***}	-10.51^{***}	-11.24^{***}	-7.60^{*}	-9.58^{**}
	(1.39)	(2.56)	(4.19)	(3.60)	(2.43)	(2.48)	(3.24)	(2.84)
N	2922	2922	2922	2922	2921	2921	2921	2921
R^2	0.24	0.29	0.33	0.33	0.70	0.70	0.70	0.70
Panel B: HS	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
OSS	2.00^{***}	7.82^{***}	13.57^{***}	12.41^{***}	5.38^{***}	5.62^{***}	7.47^{***}	6.95^{***}
	(0.18)	(0.39)	(0.60)	(0.53)	(0.50)	(0.50)	(0.69)	(0.61)
N	2922	2922	2922	2922	2921	2921	2921	2921
R^2	0.04	0.15	0.22	0.23	0.42	0.42	0.43	0.43
Controls	N	N	N	N	Y	Y	Y	Y
Polynomial	0	1	2	3	0	1	2	3

Note: $^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$. Panel A characterizes the effect of OSS on the number of searches outside of Hidalgo and Starr. Panel B characterizes the same effect but within Hidalgo and Starr counties. Models 1-4 do not include control covariates. Models 5-8 adjust for for day of week, month, and year fixed effects in addition to a lagged dependent variable. Models 1-4 and Models 5-8 use 0, 1st, 2nd and 3rd order polynomials for the running variable respectively. HC2 robust SEs in parentheses.

B.9.2 Contraband Recovery Counts

Table B32: RDiT Effect of OSS on Contraband Recovery Count by Geographic Region Using Full Sample

	# Contraband Recovered							
Panel A: Non-HS	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
OSS	-4.97^{***}	-17.37^{***}	-12.40^{***}	-14.36^{***}	-7.52^{***}	-7.51^{***}	-5.97^{***}	-7.02^{***}
	(0.63)	(1.23)	(2.11)	(1.81)	(1.38)	(1.41)	(1.83)	(1.61)
N	2922	2922	2922	2922	2921	2921	2921	2921
R^2	0.02	0.06	0.07	0.07	0.47	0.47	0.47	0.47
Panel B: HS	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
OSS	0.52^{***}	0.72^{***}	1.65^{***}	1.42^{***}	1.15^{***}	1.19^{***}	1.71^{***}	1.52^{***}
	(0.06)	(0.13)	(0.20)	(0.18)	(0.16)	(0.17)	(0.23)	(0.20)
N	2922	2922	2922	2922	2921	2921	2921	2921
R^2	0.00	0.01	0.02	0.02	0.05	0.05	0.05	0.05
Controls	N	N	N	N	Y	Y	Y	Y
Polynomial	0	1	2	3	0	1	2	3

Note: $^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$. Panel A characterizes the effect of OSS on the number of hits outside of Hidalgo and Starr. Panel B characterizes the same effect but within Hidalgo and Starr counties. Models 1-4 do not include control covariates. Models 5-8 adjust for for day of week, month, and year fixed effects in addition to a lagged dependent variable. Models 1-4 and Models 5-8 use 0, 1st, 2nd and 3rd order polynomials for the running variable respectively. HC2 robust SEs in parentheses.

B.9.3 Consent Searches

Table B33: RDiT Effect of OSS on Consent Search rate by Geographic Region Using Full Sample

	Pr(Consent Search)							
Panel A: Non-HS	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
OSS	-0.15^{***}	-0.02^{***}	0.02^{**}	0.01^{*}	-0.02^{**}	-0.02^{**}	-0.01	-0.01
	(0.00)	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
N	303608	303608	303608	303608	303462	303462	303462	303462
R^2	0.02	0.02	0.03	0.03	0.04	0.04	0.04	0.04
Panel B: HS	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
OSS	0.06^{***}	0.08^{***}	0.27^{***}	0.23^{***}	0.18^{***}	0.19^{***}	0.23^{***}	0.22^{***}
	(0.01)	(0.02)	(0.02)	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)
N	16199	16199	16199	16199	16195	16195	16195	16195
R^2	0.00	0.01	0.02	0.02	0.05	0.05	0.05	0.05
Controls	N	N	N	N	Y	Y	Y	Y
Polynomial	0	1	2	3	0	1	2	3

Note: $^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$. Panel A characterizes the effect of OSS on the probability a search is a consent search for counties outside of Hidalgo and Starr. Panel B characterizes the same effect but within Hidalgo and Starr counties. Models 1-4 do not include control covariates. Models 5-8 adjust for for day of week, month, and year fixed effects in addition to a lagged dependent variable. Models 1-4 and Models 5-8 use 0, 1st, 2nd and 3rd order polynomials for the running variable respectively. HC2 robust SEs in parentheses.

B.9.4 Contraband Recovery Rates

Table B34: RDiT Effect of OSS on Contraband Recovery Rates by Geographic Region Using Full Sample

	Pr(Contraband Recovery)							
Panel A: Non-HS	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
OSS	0.11^{***}	-0.01^{**}	-0.03^{***}	-0.03^{***}	-0.01	-0.00	-0.00	-0.00
	(0.00)	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
N	303637	303637	303637	303637	303491	303491	303491	303491
R^2	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Panel B: HS	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
OSS	0.02^{***}	-0.07^{***}	-0.07^{***}	-0.07^{***}	-0.10^{***}	-0.10^{***}	-0.10^{***}	-0.10^{***}
	(0.00)	(0.01)	(0.02)	(0.01)	(0.02)	(0.02)	(0.02)	(0.02)
N	16203	16203	16203	16203	16199	16199	16199	16199
R^2	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Controls	N	N	N	N	Y	Y	Y	Y
Polynomial	0	1	2	3	0	1	2	3

Note: $^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$. Panel A characterizes the effect of OSS on the probability a search leads to the recovery of contraband outside of Hidalgo and Starr. Panel B characterizes the same effect but within Hidalgo and Starr counties. Models 1-4 do not include control covariates. Models 5-8 adjust for for day of week, month, and year fixed effects in addition to a lagged dependent variable. Models 1-4 and Models 5-8 use 0, 1st, 2nd and 3rd order polynomials for the running variable respectively. HC2 robust SEs in parentheses.

B.10 Truncated Sample

B.10.1 Iterated Estimates, Consent Search Rate

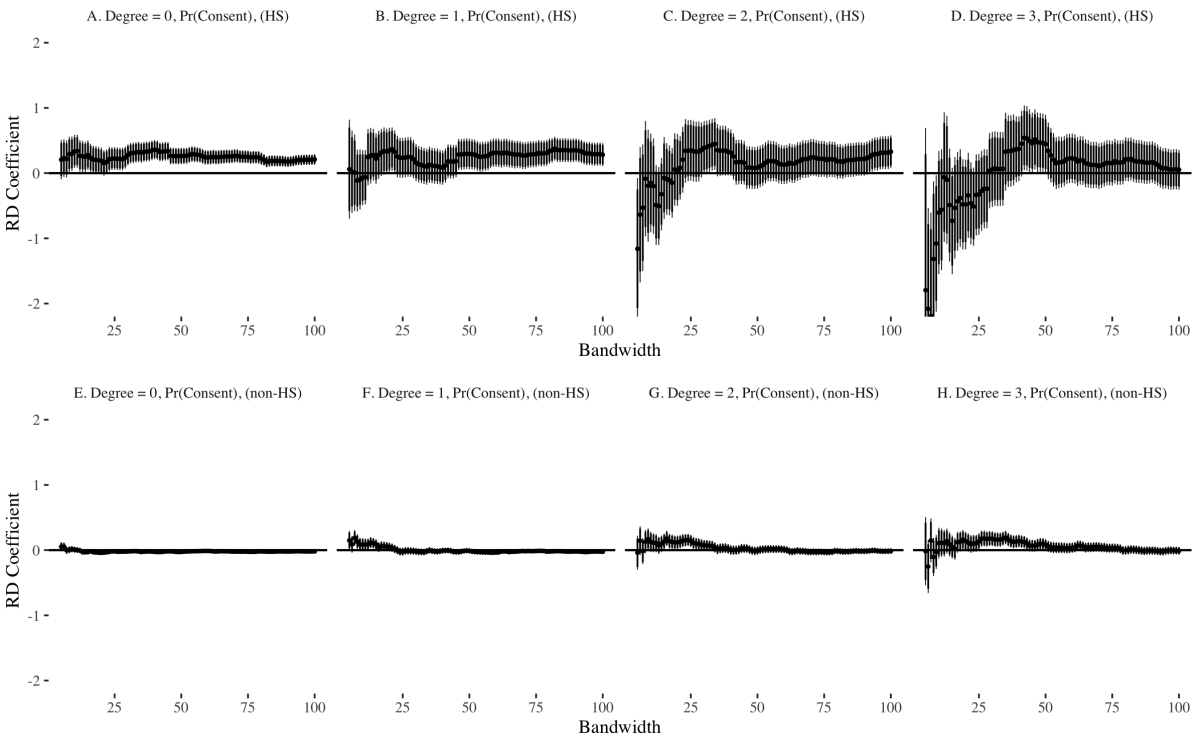

Figure B9: RDiT Effect of OSS on consent search rate using temporal bandwidths near the day OSS was implemented. Panels A-D denote estimates using data from Hidalgo and Starr county. Panels E-H denote estimates using data outside Hidalgo and Starr. 95% CIs displayed using robust standard errors.

B.10.2 Iterated Estimates, Contraband Recovery Rates

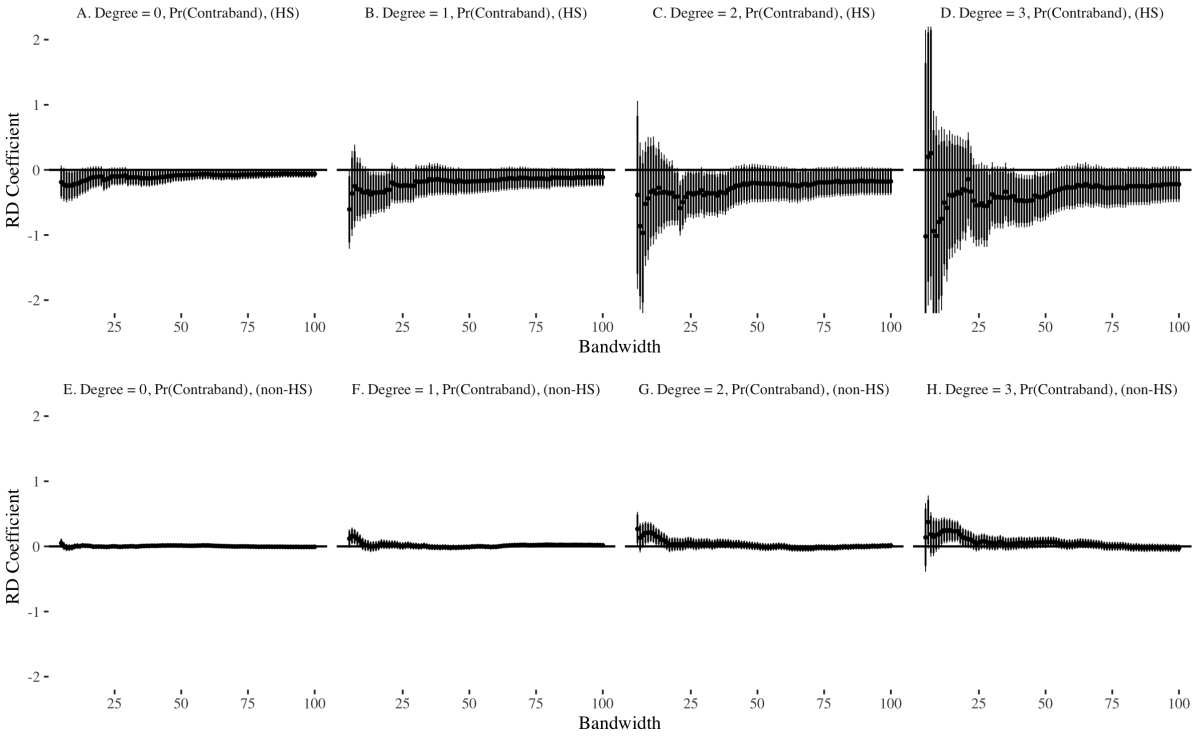

Figure B10: Effect of OSS on contraband recovery rates using temporal bandwidths near the day OSS was implemented. Panels A-D denote estimates using data from Hidalgo and Starr county. Panels E-H denote estimates using data outside Hidalgo and Starr. 95% CIs displayed using robust standard errors.

B.11 Temporal Placebo Tests

B.11.1 Full Data

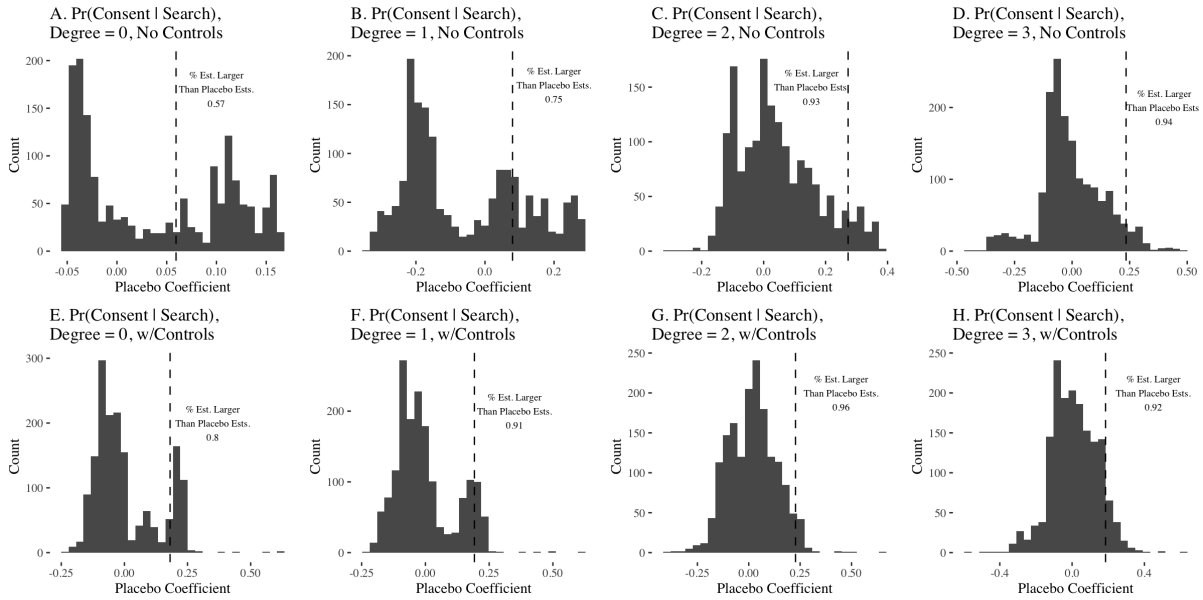

Figure B11: Comparing true effect of OSS on consent searches (dashed vertical line) with temporal placebo effects (x-axis) based on all potential discontinuities prior to OSS (discontinuities are at least 50 days prior to OSS or after the first day of the dataset, January 1, 2009) and using the full traffic stop-and-search data. Panels A-D do not include control covariates. Panels E-H include control covariates. Annotations denote the proportion of placebo estimates the true estimate is larger than.

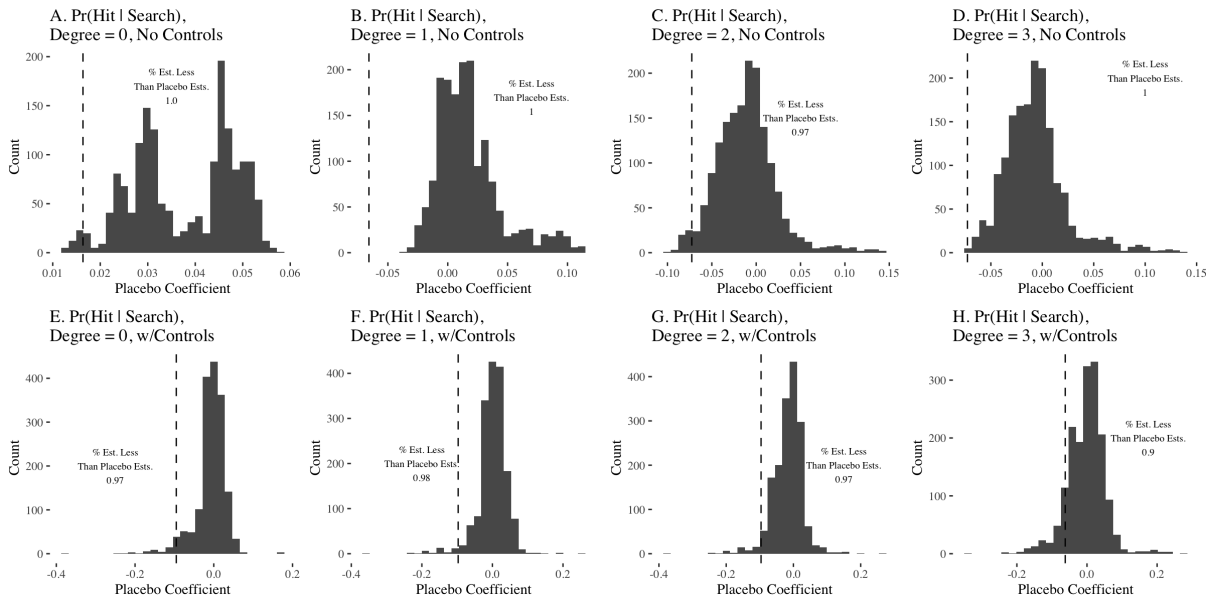

Figure B12: Comparing true effect of OSS on contraband recovery rates (dashed vertical line) with temporal placebo effects (x-axis) based on all potential discontinuities prior to OSS (discontinuities are at least 50 days prior to OSS or after the first day of the dataset, January 1, 2009) and using the full traffic stop-and-search data. Panels A-D do not include control covariates. Panels E-H include control covariates. Annotations denote the proportion of placebo estimates the true estimate is larger than.

B.11.2 50 day bandwidth

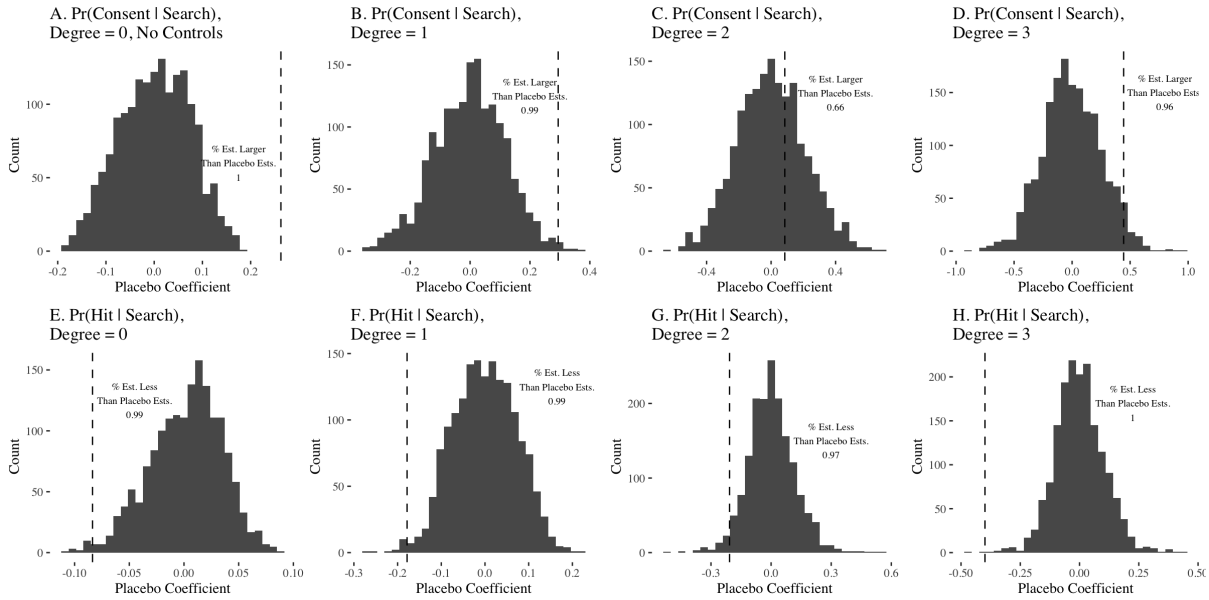

Figure B13: Comparing true effect of OSS on contraband recovery and consent search rates (dashed vertical line) with temporal placebo effects (x-axis) based on all potential discontinuities prior to Operation Strong Safety (discontinuities are at least 50 days prior to OSS or after the first day of the dataset, January 1, 2009) and using the full traffic stop-and-search data (50-day bandwidth). Panels A-D do not include control covariates. Panels E-H include control covariates. Annotations denote the proportion of placebo estimates the true estimate is larger than.

B.11.3 25 day bandwidth

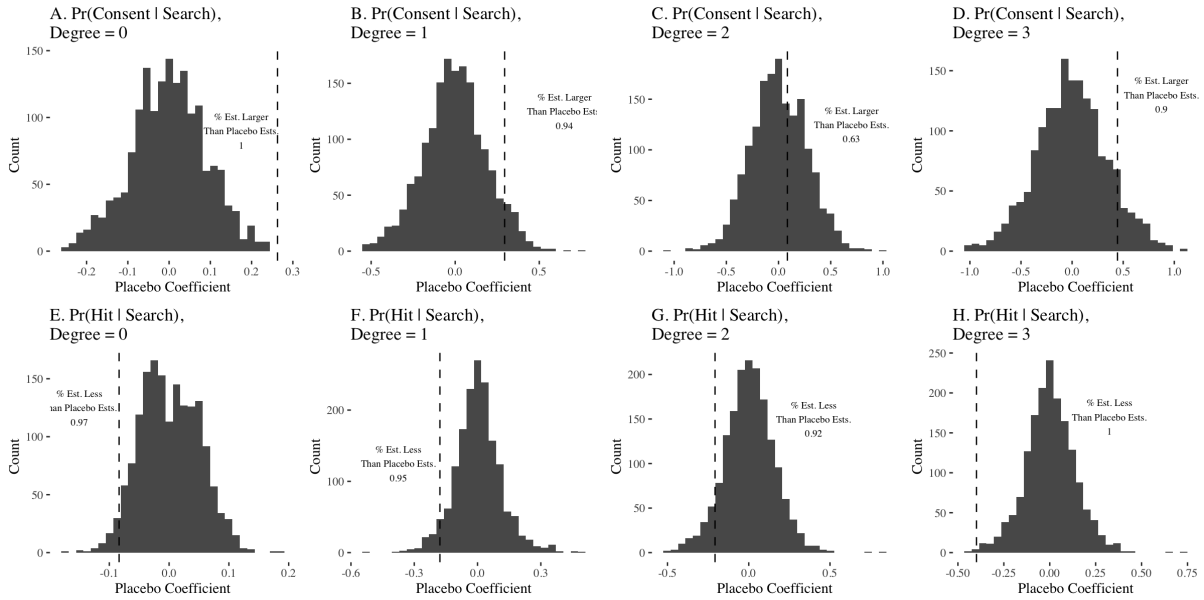

Figure B14: Comparing true effect of OSS on hit and consent search rates (dashed vertical line) with temporal placebo effects (x-axis) based on all potential discontinuities prior to Operation Strong Safety (discontinuities are at least 50 days prior to OSS or after the first day of the dataset, January 1, 2009) and using the full traffic stop-and-search data (25-day bandwidth). Panels A-D do not include control covariates. Panels E-H include control covariates. Annotations denote the proportion of placebo estimates the true estimate is larger than.

B.12 Donut RDiT Estimates

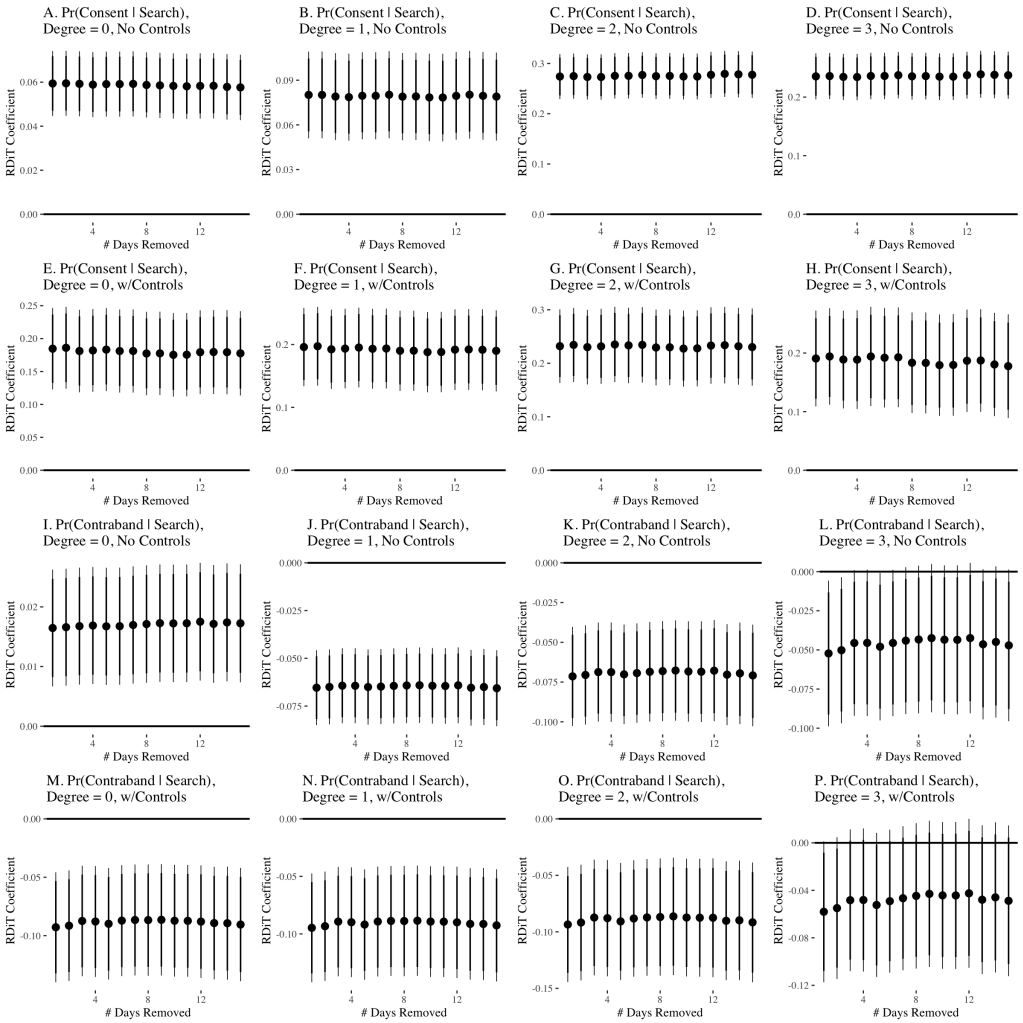

Figure B15: Donut hole RDiT estimates removing 1-15 days before and after OSS is implemented to rule out anticipatory effects. X-axis is the number of days removed, y-axis is the RDiT coefficient using the full stop-and-search data but removing days near the OSS discontinuity. Panels A-H are re-analyses using the consent search rate outcome. Panels I-P are re-analyses using the contraband recovery rate outcome. Panels A-D and I-L do not include control covariates. Panels E-H and M-P include control covariates.

B.13 Effects of OSS on Crime

B.13.1 Descriptive Statistics

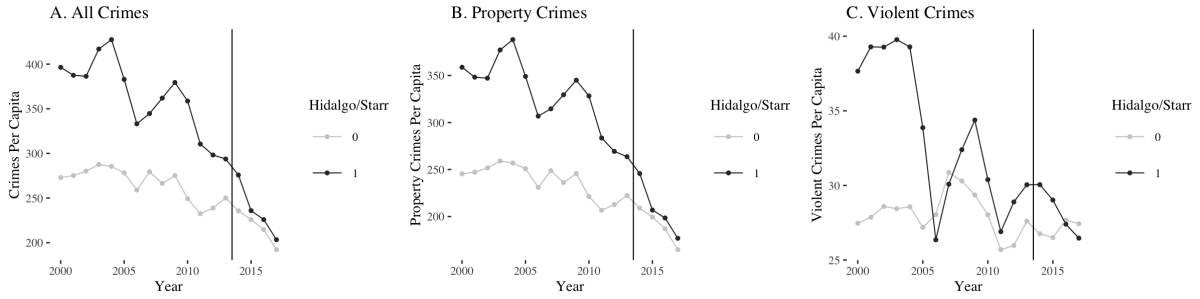

Figure B16: Average crime rates (y-axis) over time (x-axis, 2000-2017). Panels A, B, and C display total, property, and violent crime rates over time (incidents divided by county population multiplied by 10,000 persons). Vertical line is the moment OSS is implemented. Line color denotes data from Hidalgo/Starr (black) and all other Texas counties (grey). Crime data are from the FBI Uniform Crime Report.

B.13.2 Synthetic Control Estimates

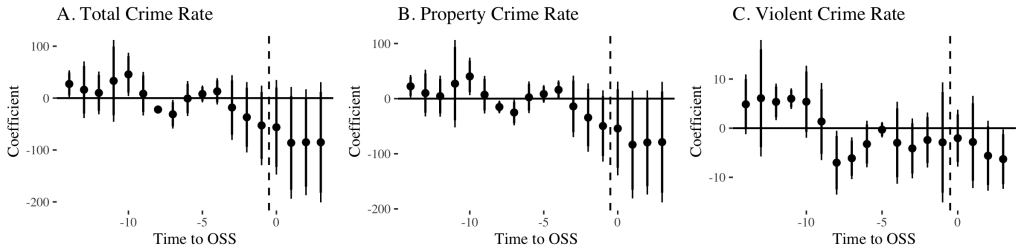

Figure B17: Event study estimates characterizing effect of Operation Strong Safety on total (Panel A), violent (Panel B), and property (Panel C) crime rates in Hidalgo/Starr relative to a synthetic counterfactual.

Table B35: Effect of Operation Strong Safety on Crime Rate (per 10,000 people)

	Total Crime Rate (1)	Property Crime Rate (2)	Violent Crime Rate (3)
OSS	-78.16	-74.01	-4.19
	(53.11)	(49.24)	(3.58)
N	4572	4572	4572

Note: Models 1, 2, and 3 characterizes ATT for OSS on all crimes, property crimes, and violent crimes per 10,000 residents in Hidalgo and Starr counties. SEs derived from parametric bootstrap procedure (1000 repetitions)

B.14 Ruling Out Inexperienced Officers Alternative Explanation

Table B36: RDiT Effect of OSS on the Consent Search and Contraband Recovery Rate Among Officers Experienced in Policing Hidalgo and Starr

	Pr(Consent Search)			
OSS	0.07	0.05	0.22^{***}	0.23^{**}
	(0.05)	(0.05)	(0.06)	(0.07)
N	7632	7632	7632	7632
R^2	0.06	0.06	0.06	0.06
	Pr(Contraband Recovery)			
OSS	-0.15^{***}	-0.15^{***}	-0.15^{***}	-0.14^{**}
	(0.03)	(0.03)	(0.04)	(0.05)
N	7632	7632	7632	7632
R^2	0.01	0.01	0.01	0.01
Controls	Y	Y	Y	Y
Polynomial	0	1	2	3

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$. 95% confidence intervals displayed using robust standard errors.

B.15 Accounting for Bundled Treatment

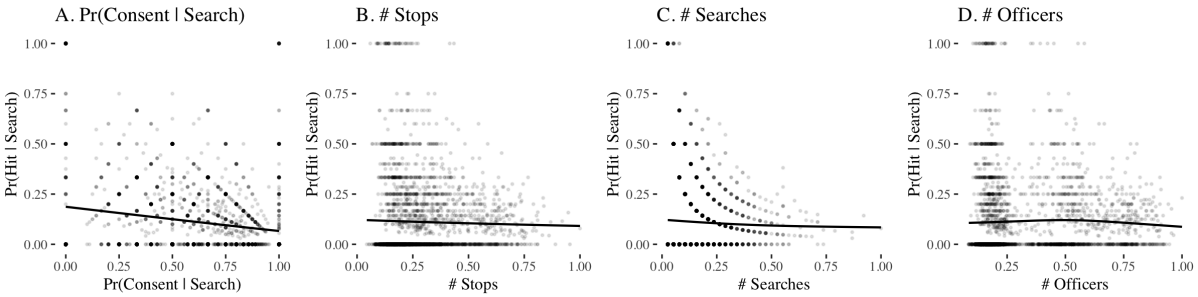

Figure B18: Association Between Dimensions of Policing Tactics (x-axis) and Hit Rates (y-axis) throughout Hidalgo and Starr counties. Panels A, B, C, and D display the association between consent search rates, the number of stops, the number of searches, and the number of officers and hit rates. Fitted line is a loess model. Data are aggregated to the day-level.

Table B37: Association Between Dimensions of Policing Tactics and Hit Rates

	Contraband Recovery Rate					
	(1)	(2)	(3)	(4)	(5)	(6)
Consent Rate	-0.12^{***}	-0.10^{***}	-0.21^{***}	-0.13^{***}	-0.10^{***}	-0.21^{***}
	(0.02)	(0.02)	(0.03)	(0.02)	(0.02)	(0.03)
# Stops	0.02	-0.11^{**}	-0.05			
	(0.02)	(0.04)	(0.04)			
# Searches	-0.03	0.03	0.02			
	(0.03)	(0.04)	(0.05)			
# Officers				0.04^{**}	-0.02	-0.06
				(0.01)	(0.05)	(0.03)
Sample	Full	Pre-OSS	Post-OSS	Full	Pre-OSS	Post-OSS
R^2	0.04	0.03	0.10	0.04	0.03	0.10
N	2742	1833	909	2742	1833	909

Note: $^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$. The outcome for each model is the contraband recovery rate. Consent Rate is the consent search rate conditional on a stop-and-search. # Stops is the number of stops per day. # Searches is the number of stop-and-searches per day. # Officers is the number of officers operating in Hidalgo and Starr per day. Data are aggregated to the daily-level and derived from the Hidalgo and Starr stop data. All covariates rescaled between 0-1. HC2 robust SEs in parentheses.

B.16 Further Demonstrating No Endogenous Driver Behavior

B.16.1 Crashes Over Time

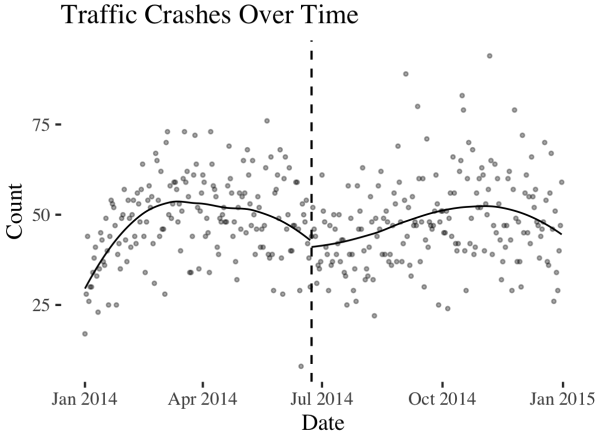

Figure B19: Daily number of traffic crashes (y-axis) over time (x-axis) in Hidalgo and Starr counties during 2014. Dark lines are fitted loess linens on each side of the moment OSS was implemented. Dashed vertical line is the moment OSS is implemented.

B.16.2 OSS Traffic Crashes Analysis (Full Dataset)

Table B38: Effect of OSS on Traffic Crashes (Using All Data)

	# Traffic Crashes							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
OSS	−0.72	−9.53***	−3.26	−2.69	−5.24	−4.94	−0.93	−1.10
	(1.27)	(2.50)	(3.55)	(4.72)	(3.89)	(4.03)	(4.34)	(4.95)
Controls	N	N	N	N	Y	Y	Y	Y
Polynomial	0	1	2	3	0	1	2	3
N	365	365	365	365	364	364	364	364
R^2	0.00	0.05	0.15	0.16	0.42	0.43	0.45	0.45

Note: $^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$. All regressions characterize the effect of OSS on the number of traffic crashes within Hidalgo and Starr counties. Models 1-4 do not include control covariates. Models 5-8 adjust for for day of week, month, and year fixed effects. Models 1-4 and Models 5-8 use 0, 1st, 2nd and 3rd order polynomials for the running variable respectively. HC2 robust SEs in parentheses.

B.16.3 OSS Traffic Crashes Analysis (Close to Discontinuity)

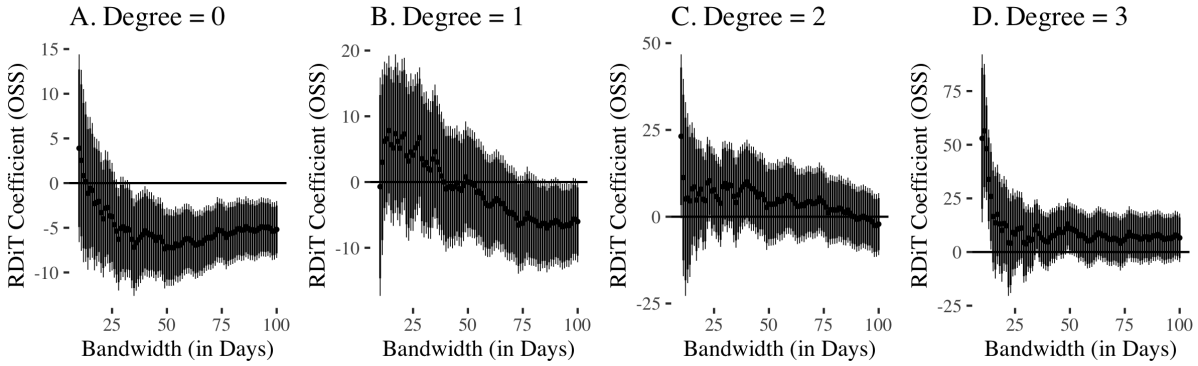

Figure B20: RDiT effect of OSS on number of traffic crashes (y-axis) by different bandwidths (x-axis). Panels A-D characterize estimates where the running variable degree (days to OSS) is to the 0th, 1st, 2nd, and 3rd degree. 95% CIs displayed derived from robust SEs.