Immigration enforcement awareness and community engagement with police: Evidence from domestic violence calls in Los Angeles

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Abstract

The unwillingness of Latino and immigrant communities to interact with the police or report crime is a recognized concern of the Los Angeles Police Department (LAPD). Using data on calls for service dispatched to LAPD patrols from 2014 through 2017, we assess if heightened awareness of immigration enforcement, as captured by a novel Google Trends index on related searches, is associated with reduced calls to report domestic violence in predominately Latino noncitizen neighborhoods. We find that domestic violence calls per capita dropped in LAPD reporting districts with a higher concentration of Latino noncitizens as awareness about immigration enforcement increased. The decline provides empirical evidence of the "chilling effect" of immigration enforcement on Latino immigrant engagement with the police, underscoring the need to engage communities increasingly alienated by federal immigration policy.

Keywords: Immigration enforcement, crime reporting, domestic violence, Latino immigrant communities, Los Angeles

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"Sadly, it appears that [the Immigration and Customs Enforcement Agency's] aggressive tactics, including arresting people at courthouses, are having a chilling effect. … No person should fear that reporting a crime or going to court will put them at risk of deportation," Michael Kaufman of the American Civil Liberties Union of Southern California in "Fearing deportation, undocumented immigrants wary of reporting crimes" by Tom Darth, *The Guardian*, March 23, 2017.

1. Introduction

The unwillingness of Latino and immigrant communities to report criminal incidents or assist in investigations is a recognized concern of the Los Angeles Police Department (LAPD). In 2017, the department announced that crime reports among Latinos in the first three months of 2017 had dropped relative the same period the year prior (Gorman, 2017). Officials cited a 10 percent decline in domestic violence reports as a particularly troublesome shift. The department attributed this decline to heightened mistrust of the criminal justice system amid federal pressure for police agencies to assist immigration authorities. Law enforcement officials have expressed similar concerns (Khashu, 2009), as well as scholarly work on the topic (Cox & Miles, 2015; Vidales et al., 2009; Vishnuvajjala, 2012).

This study contributes to a small, but growing body of research examining the impact of immigration enforcement on community-police engagement. Prior research has pointed out correlations between immigration enforcement and individual willingness to report crime, showing that crime reporting is inhibited in areas with sizeable immigrant populations. Yet, to date, only one study has examined the influence of immigration enforcement on community cooperation (Cox & Miles, 2015), finding little to no impact of the Secure Communities program on the rate at which crimes are solved.

Our study makes four important contributions. First, instead of relying on a specific immigration policy or enforcement action, we use Google Trends data to identify periods in which individuals may be more alert to ongoing immigration enforcement. Second, we use a more direct measure of community engagement unencumbered by police or prosecutorial discretion, namely, calls for service. Third, we use geographic information on ethnicity and citizenship to gauge the differential impact of immigration enforcement awareness in areas with residents more likely to fear immigration enforcement. Fourth, we pay particular attention to calls made to report domestic violence given the vulnerability of immigrants, particularly those undocumented, to this type of crime (Raj & Silverman, 2002).

We find that between January 2014 and December 2017, domestic violence calls per capita dropped 3 percent when immigration enforcement awareness rose by one standard deviation in predominately Latino noncitizen reporting districts, relative to others. This finding proves robust to the use of alternative measures of immigration enforcement awareness. In addition, placebo checks confirm the distinct effect of awareness on domestic violence calls. We then perform an event study that exploits the uptick in immigration enforcement awareness following the 2016 presidential election. We find that domestic violence calls per capita declined 8 percent in predominately Latino noncitizen reporting districts, compared to others, after President Trump was elected to office. This result validates our initial finding and suggests that anti-immigrant rhetoric and stepped-up immigration enforcement in the months following the election reduced engagement in Latino noncitizen reporting districts. Our findings persist when we use crime reports, account for incident severity, and consider other types of calls, including calls to report violent and nonviolent incidents.

In sum, we find evidence that recent escalations in rhetoric and federal enforcement actions have had a "chilling effect" on calls for service among Latino noncitizens in Los Angeles, most strikingly for domestic violence. These results counter the finding from Cox and Miles (2015) that heightened immigration enforcement has little to no impact on community cooperation with law enforcement. Our findings highlight a major challenge to law enforcement agencies seeking to ensure public safety of Latino

immigrant communities as immigration enforcement escalates. A back-of-the-envelope calculation using our estimates suggests that one domestic violence call for service in Latino noncitizen districts is suppressed for every two deportations. This finding highlights the tradeoff between aggressive interior immigration enforcement and protection against domestic violence. The tradeoff confirms the concerns expressed by many law enforcement officials and underscores the need for policy measures ensuring the safety of communities increasingly alienated by federal immigration policy.

2. Contextual Background

Federal laws from the late-1980s to early-2000s laid the groundwork for state and local police involvement in immigration enforcement.[1] In the mid-2000s, partnership programs like 287(g) and Secure Communities deputized local law enforcement officers to assist federal authorities in enforcing immigration law.[2] Associations between local police and immigration enforcement grew as detentions and deportations increased (Hagan et al., 2010). Cases of immigrants arrested and detained without warrants or following minor traffic offenses are well-documented (Capps et al., 2011). Police testimony, anecdotal reports, and scholarly work suggest police involvement in immigration enforcement has had a "chilling effect" on immigrant crime reporting (Abrego, 2011; Burnett, 2015; *Public Safety and Civil Rights Implications of State and Local Enforcement of Federal Immigration Laws*, 2009; Theodore, 2013).

Immigration enforcement propelled into public consciousness after the 2016 presidential election. President Trump has delivered on anti-immigration campaign promises through executive orders and agency directives. To date, nationals from seven countries have been restricted entry into the U.S., refugee admissions have been reduced, temporary protected status for certain countries terminated, public charge rules redefined, asylum claims curtailed, and interior arrests of undocumented immigrants scaled up (Boghani, 2019; Pierce, 2019).[3] The administration has used its executive power to target all undocumented immigrants for deportation, diverging from earlier priorities that focused on convicted violent offenders. To achieve its aim, the administration has pressured law enforcement agencies to assist in achieving its mandate. However, police chiefs and sheriffs in jurisdictions with sizeable immigrant populations have expressed concern, arguing that their involvement may jeopardize decades of advances in community policing (Burnett, 2015; Magnus, 2017). Indeed, several state and local law enforcement agencies have limited their cooperation with immigration authorities, a move that has prompted federal threats to withhold funding and subsequent legal battles (Correal, 2020).

The LAPD has stressed that recent escalations in federal immigration enforcement have reduced the willingness of Latinos to engage with police (Gorman, 2017). Los Angeles is home to 1.5 million immigrants, the overwhelming majority are Latino (49 percent) originating primarily from Mexico and Central America (U.S. Census Bureau, 2016b). Latinos represent nearly three quarters of the city's noncitizens. Conservative estimates put the number of undocumented at 300,000, roughly seven percent of the population (Hill & Hayes, 2015; Passel & Cohn, 2017). Los Angeles Mayor, Eric Garcetti, has

[1] See Kandel (2016) for detailed background.

[2] Section 287(g) of the Immigration and Naturalization Act was added by Congress in 1996 to provide means by which federal immigration authorities could deputize state and local law enforcement agencies to assist in identifying and detaining immigrants suspected of violating federal immigration law. 287(g) programs vary across agencies, with some restricting police involvement to screening individuals after booking or in local jails, while others permit local officers to apprehend individuals suspected of immigration violations during routine policing activities. Secure Communities was implemented on a county-to-county basis in 2008 and rolled-out nationally in 2013. The data-sharing program integrated FBI criminal databases with immigration systems to permit instantaneous screening of arrestee fingerprint data. Matches flagging noncitizens with deportable violations generate requests for the local agency to detain the individual until transferred to immigration authorities. Though priority classifications were tempered in November 2014 under the Priority Enforcement Program, automatic fingerprint matching continues and priorities have since expanded under the current administration.

[3] At the time of this paper, the temporary protected status for foreign nationals from Haiti, Nicaragua, Sudan, Honduras, El Salvador, and Nepal had been terminated.

expressed fear that immigration arrests could strain community-police relations and potentially trigger riots (Smith, 2017).

These fears originate in the city's long and complicated history of policing immigrant and Latino communities. Prior to 1979, the LAPD required that officers check the immigration status of suspected immigrants, regardless of criminal involvement, and notify immigration authorities of violations (Sklansky, 2001). Residents believed this led to abuse and prevented many from reporting crimes or assisting officers in criminal investigations. Recognizing the fallout, the LAPD adopted Special Order 40, which explicitly prohibits officers from "initiat[ing] police action with the objective of discovering the alien status of a person" or arresting individuals for "illegal entry" (Maya, 2002). Despite the codification of Special Order 40, officer involvement in immigration enforcement persisted (Sklansky, 2001). It was common for officers to over-patrol Mexican-American communities and ignore the due process rights of undocumented residents (Maya, 2002). In 1998, the Rampart Scandal exposed years of severe police misconduct targeting Mexican street gangs in predominately Latino neighborhoods.[4]

In 2001, the city entered into a consent decree that would lead to scores of reforms overhauling the way LAPD took complaints, used confidential informants, ran gang units, investigated officer use of force, and audited itself (*U.S. v. City of Los Angeles*, 2001). Since then, the department has taken deliberate action to improve relations with immigrant and minority communities, and has reaffirmed its detachment from immigration enforcement (Arcos, 2017; Stone et al., 2009). Despite these efforts, wariness of law enforcement among minority and immigrant communities still runs high (Jennings et al., 2015). The LAPD has cited heightened immigration enforcement as a catalyst for growing mistrust among Latinos, referencing notable drops in domestic violence and sex crime reporting (Gorman, 2017).

3. Related Literature

Our study builds on two literatures. The first one considers why immigrants may be deterred from reporting crime, while the second one reflects on how police involvement in immigration enforcement influences community-police engagement.

Existing research on immigrant relations with law enforcement indicate several reasons why incidents may go unreported. Language and cultural differences can be a direct barrier to police engagement (Culver, 2004; Davis, 1985; Pogrebin & Poole, 1990). If an individual does not have confidence their report will be taken seriously, they may be less likely to call or engage with the police.[5] Additionally, past experiences and perceptions of police legitimacy in one's home country may shape perceptions of local law enforcement. If former experiences were negative or authorities were perceived as illegitimate, these views may extend to the U.S. and prevent immigrants from engaging with local officials (Menjívar & Bejarano, 2004; Pogrebin & Poole, 1990).[6] Importantly, in the context of this paper,

[4] Both the LA Riots and Rampart Scandal were periods of heightened tension between the LAPD and immigrant/minority groups. In April 1992, following the acquittal of four LAPD officers accused of using excessive force in the beating of Rodney King, riots broke out throughout the city. They erupted first in predominately African-American portions of South Los Angeles, but soon spread to Pico-Union, a neighborhood that was, and still is, predominately Latino and home to immigrant families from Mexico and Central America. In 1998, it came to light that 70 officers in the Rampart Division anti-gang unit had participated in an array of illegal conduct, including shootings, beatings, framings, and perjury. This ultimately led to the dismissal of more than a hundred wrongful convictions and roughly $90 million in payments to settle civil lawsuits filed by the victims, many of whom were young, poor, working-class African Americans and Latinos (some of whom were recent immigrants).

[5] Over a third of LAPD officers speak one or more languages other than English (Winton, 2008), and 911-operators have immediate access to translation service for most all languages. These resources, however, may not be known to non-English speaking residents.

[6] In 2017, the public sector corruption index in Mexico—the country of origin of more than three quarters of Latinos in Los Angeles—sat at 29 out of 100 (where 0 indicates high corruption), tied with Russia and Honduras. Indices for Guatemala and El Salvador—two other major sending countries—were 33 and 28, respectively (https://www.transparency.org/news/feature/corruption_perceptions_index_2017).

personal or vicarious contact with authorities perceived as unfair, discriminatory, or hostile can result in the questioning of police legitimacy or the perception of police as a threat (Davis & Henderson, 2003; Menjívar & Bejarano, 2004). This is especially relevant for immigrants without legal status, who may reasonably decide to avoid law enforcement if they feel police are enforcing federal immigration law (Coutin, 2011). Additionally, the nature and circumstance of the crime itself may dissuade individuals from reporting incidents to authorities. Some crimes are particularly susceptible to underreport, as is the case with rape and sexual assault (Baumer & Lauritsen, 2010). While the literature is mixed on whether domestic violence is more or less likely to be reported to the police (Felson & Paré, 2005), cultural norms and immigrant status may reduce domestic violence reporting (Erez, 2000; Erez, Adelman, & Gregory, 2009; Salcido & Adelman, 2004).

Three studies have used the National Crime Victimization Survey (NVCS) to estimate patterns of immigrant crime reporting. Despite clear advantages to using the NCVS to measure reporting behavior, the survey only recently began collecting information on respondent citizenship status. Therefore, existing studies rely on geographic characteristics to explore these questions. Gutierrez and Kirk (2017) examined individual crime reporting behavior in large metropolitan areas between 2002 and 2004. They found that individuals living in metro areas experiencing rapid immigrant growth in the 1990s were more likely to underreport violent crime relative to metro areas that did not experience such growth. Xie and Baumer (2019), using county-level data from 1996 to 2014, give context to these findings, revealing that lower rates of violent crime reporting were unique to new immigrant destinations relative to areas with more established immigrant communities. Comino et al. (2016) used metro-level data from 1981 to 1994 to determine whether crime reporting increased among Hispanics living in metro areas with large shares of immigrants applying for amnesty in 1986.[7] The study estimated that the rate of crime reporting tripled among likely undocumented Hispanics after gaining legal status. Overall, these studies provide evidence that immigrant composition can explain geographic variation in crime reporting patterns, and that legal status may help explain this variation. However, they do not address the potential role of immigration enforcement in explaining community engagement with police.

Four studies have used surveys on attitudes to establish correlates between immigration enforcement and willingness to report crime. Theodore et al. (2013) surveyed over 2,000 Latinos living in four major counties with large Latino populations (Cook, Harris, Los Angeles, and Maricopa) in 2012 and asked whether they were likely to contact the police if they were victims of a crime. Forty-four percent of surveyed Latinos reported they were less likely to call the police out of fear that the interaction would reveal their legal status or the status of people they know. These fears were more prevalent among undocumented immigrants surveyed (70 percent), but not confined to immigrants, with 28 percent of native-born Latinos reporting the same unwillingness to contact the police. Becerra et al. (2017) used the 2008 Pew Hispanic Center survey of 1,668 Latino adults (62 percent noncitizen) to examine the relationship between the degree to which respondents "worry that [they], a family member, or close friend could be deported" and their agreement with the following statement: "if [they] were the victim of a violent crime, would [they] call the police to report this." Those with higher levels of deportation fear were significantly less likely to indicate they would call the police to report violent crime victimization. Messing et al. (2015) used the same survey but restricted their analysis to women. Like Becerra et al. (2017), they found that fear of deportation reduced willingness to report violent crime victimization but extended their analysis to control for the respondent's "confidence that police officers in [their] community will treat Latinos fairly." The relationship between deportation fear and willingness to report victimization was no longer significant after controlling for respondents' confidence in the police, suggesting that individual perceptions of police could offset enforcement-related deterrents to reporting crime. Vidales et al. (2009) surveyed a purposive sample of 91 Latino residents living in Costa Mesa, CA before and after an unsubstantiated, but publicized,

[7] The 1986 U.S. Immigration Reform and Control Act (IRCA) provided legal status to undocumented immigrants that entered the country before 1982 and lived continuously in the U.S. with a clean criminal record.

controversy involving the deployment of federal immigration agents to local jails. Respondents were asked if they would "report to the police if [they] witnessed a robbery/act of vandalism/serious accident." In a pre-post analysis, the authors found significant decreases in respondent willingness to report robbery and acts of vandalism following the controversy, but no change for serious accidents. These studies suggest that perceived increases in immigration enforcement influence resident perceptions of police, but they do not address the causal effect of immigration enforcement.

Only one study has estimated the causal effect of immigration enforcement on community engagement with police. Cox and Miles (2015) examined how the local-federal partnership program, Secure Communities, influenced the rate at which law enforcement agencies solved index crimes, finding little to no impact of the program.[8] Clearance rates served as a proxy for community cooperation with police in that crimes tend to clear when residents participate in criminal investigations.[9] But clearance rates capture more than community-police cooperation; clearance rates also reflect discretionary decisions made throughout the criminal justice process. Secure Communities increased the likelihood that noncitizens arrested or charged with certain crimes would be deported. It is reasonable to assume that the program influenced line-level officer and prosecutor behavior along the way (Armenta & Alvarez, 2017; Eagly, 2013).[10] While this study provides early evidence that immigration enforcement does not reduce community-police cooperation, we still know little about how awareness of immigration enforcement influences community engagement with police.

The present study addresses current gaps in the literature in four ways. First, we focus our attention on calls to report domestic violence given the vulnerability of immigrants, particularly those without documentation status, to this type of crime (Raj & Silverman, 2002). Second, we use a more direct measure of community-police contact less susceptible to discretionary decisions or procedural omissions: calls for service. Calls provide a layer of anonymity that official crime reports do not. In fact, calls for service are not contingent on crime reporting at all. Residents may call for service to settle disputes or resolve issues. Third, rather than consider the impact of specific immigration enforcement initiatives, we examine how heightened awareness of immigration enforcement influences engagement with the police. It may not be one particular policy that causes individuals to avoid contact but, rather, the overall atmosphere created by a host of enforcement actions and the public's perception of how police are implementing them. To that end, we construct a Google Trends proxy of awareness to identify periods in which individuals may be more alert to immigration enforcement. Fourth, we use geo-processing techniques to estimate population shares by ethnicity and citizenship to determine if calls for service decreased in reporting districts with large shares of Latino noncitizens. We focus on this group because it is overrepresented among the undocumented population and, therefore, more likely to harbor fears related to immigration enforcement.

4. Data

The objective of this study is to explore the impact of immigration enforcement awareness on domestic violence calls in predominantly Latino noncitizen reporting districts. We make use of three data sources: (1) calls for service dispatched to LAPD patrols between 2014 and 2017; (2) Google Trends indices measuring the relative volume of online searches related to immigration enforcement in Los Angeles over

[8] Cox and Miles (2015) exploit the 2013 nationwide rollout of the program to predict changes in the rate at which crimes were cleared. The program is described in greater detail in footnote 2. The FBI Uniform Crime Reporting (UCR) program identifies eight serious crimes, or Part I offenses (also known as Part I index crimes), defined as: murder and non-negligent homicide, rape, robbery, aggravated assault, burglary, motor vehicle theft, larceny-theft, and arson.

[9] A crime is considered "cleared" when an offender has been arrested, charged with the offense, and turned over to court for prosecution.

[10] After an arrest, law enforcement agencies present information about the case and about the accused to the prosecutor, who will decide if formal charges will be filed with the court. If no charges are filed, the accused must be released. The prosecutor can also drop charge after making efforts to prosecute (Schlesinger & Zawitz, 1988).

the same period; and (3) tract-level population characteristics from the American Community Survey. The latter, along with historical LAPD crime rates and information on LAPD programming, are used to control for confounding characteristics associated with calls for service.

4.1 LAPD Calls for Service

We use calls for service as a proxy of community engagement with police. Public calls to police remain the most efficient source of information exchange between police and the public (Kessler, 1993). Police are called to assist in many types of situations; interpersonal disputes make up a significant proportion of calls for service (Hirschel et al., 1994). We focus on calls dispatched to LAPD patrols surrounding the 2016 presidential election. Our study period featured increases in deportations in the final years of the Obama presidency, anti-immigrant positions taken during the presidential campaign, and actions taken by the Trump administration in its first year. We obtained the universe of calls for service placed between January 2014 and December 2017 available on the city's open data webpage.[11] This file included information on the date and time of the call, the reporting district ("district") where the call was dispatched, and radio codes with information on the incident reported.[12] We excluded internal police calls (i.e., back-up requests, field investigations), automatically generated calls (i.e., security alarms), and removed districts with small resident populations, leaving 3,198,978 calls for our analysis.[13]

Calls were collapsed at the month- and district-level (N=53,520), and grouped into four categories: total calls, and calls to report domestic violence, violent crime, and nonviolent crime.[14] Total calls include those made to report all types of crimes, as well as suspicious activities, public disturbances, and landlord/tenant disputes among others. Domestic violence calls consist of those classified as such by the radio dispatcher. They make up 6 percent of total calls.[15] Violent calls are those that correspond to index crimes, and make up roughly 15 percent of total calls.[16] Nonviolent calls include those made to report crimes that were neither violent nor property-related. This subcategory consists primarily of calls to report public disturbances and suspicious activities. They make up 79 percent of total calls.

There are three important limitations to using calls for service as a proxy of community-police engagement. First, call records do not include information on a caller's race/ethnicity or citizenship status. Hence, we rely on aggregate characteristics of the geographic area where the call was dispatched to proxy the ethnic background and citizenship status of the caller.[17] Crime reports do include information on the race/ethnicity of the victim. However, we settled on call data because of its comprehensiveness. Calls made during our study period nearly quadrupled the number of criminal incidents reported to the LAPD over the period. Second, while residents retain more anonymity when placing a call versus filing a crime

[11] Retrieved from https://data.lacity.org/ on February 10, 2018.
[12] We classified calls by referencing the LAPD Manual (http://www.lapdonline.org/lapd_manual/) alongside the 614 different call type descriptions in the data.
[13] We excluded districts with less than 100 residents. This included 20 districts near LAX, Griffith Park, Hansen Dam, Dodger Stadium, Sepulveda Basin, near freeways, and in more industrial areas of the city.
[14] Our analytic dataset consists of 48 months for 1,115 LAPD districts.
[15] We identified domestic violence calls as those with "DOM VIOL" in the abbreviated call type description, which coincide with radio codes tagged with a "D" to denote the report pertained to domestic violence. Over 93 percent of domestic violence calls were classified as one of the following: domestic violence (radio code 620D); battery domestic violence (242D); domestic violence restraining order violation (620DR); battery domestic violence suspected (242DS); or domestic assault with a deadly weapon (245D). Where abbreviated descriptions were not clear, we used an online flashcard resource posted by a retired-LAPD officer matching radio broadcasts with associated incidents (https://quizlet.com/133744192/lapd-incident-types-and-associated-broadcasts-flash-cards/).
[16] We include calls with radio codes that coincide with the eight FBI UCR Part I index offenses. See footnote 8 for the complete list.
[17] We are only able to identify the district where the incident occurred, not the address where the call originated. While information on the caller would provide a clearer understanding of noncitizen Latino reporting behavior, the district is the narrowest unit available and, as such, is our primary unit of analysis.

report, calls are still likely to produce officer presence where the call was made. If an individual fears deportation, they may want to limit exposure altogether. That said, calls provide an incomplete picture of reporting behavior. Third, calls reflect both reporting behavior and criminal activity. This is an important consideration for our study, which raises the following question: are calls decreasing because crime reporting is down or because crime is decreasing? During periods of heightened awareness of immigration enforcement, Latino noncitizens may be wary of committing crime out of fear the police and, by extension, immigration authorities may apprehend them. We reference trends in homicide rates over our study period to disentangle the two processes and conclude that our results, discussed in future sections, are likely reflective of drops in crime reporting. The result of this exercise is located in Appendix A.

4.2 Google Trends Index to Proxy for Immigration Enforcement Awareness

We measure awareness of immigration enforcement using an index of Google searches related to the Immigration and Customs Enforcement Agency (ICE). Search indices have been increasingly used by social scientists to measure issue salience (Mellon, 2014) and public attitudes (Stephens-Davidowitz, 2014), as well as to proxy deportation fear among Hispanic residents (Alsan & Yang, 2019). Early attempts at validating these indices suggest their overlap with traditional public opinion polls (Mellon, 2014) and may reveal socially sensitive attitudes that traditional surveys struggle to capture (Stephens-Davidowitz, 2014).

Google Trends analyzes web queries made from the Google search engine. It then calculates the relative volume of queries for terms or topics made over time from a particular geographic area.[18] Nearly 86 percent of residents in Los Angeles County have internet access (U.S. Census Bureau, 2016a), and 87 percent of web queries in the U.S. are made from the Google search engine.[19] We experimented with two different strategies to create a Google Trends index ("GT index") that captures immigration enforcement awareness in Los Angeles over our study period. The first column of Table 1 outlines the "search term" approach that used a composite made up of the following immigration enforcement-related terms: ICE police + deport + ICE immigration + undocumented.[20] The search was difficult to tailor to exclude unrelated queries. As seen in Table 2, our "search term" approach captured queries related to ice (frozen water) and petitions to deport celebrities among other unrelated queries. Recognizing the limitations of this approach, we took advantage of the Google Trends "topics" feature. Google Trends's algorithms can use semantics of web queries to group them into topics that share the same concept in any language. The "topic" search strategy, which is outlined in the second column of Table 1, used the topic "U.S. Immigration and Customs Enforcement Agency" categorized under "Law and Government".[21]

Table 2 presents the top ten related topics and queries for the "search term" and "topic" approaches. The "topic" strategy was the most precise, capturing search queries such as "ice", "immigration ice", "ice raids", "police ice," "ice enforcement", as well as queries in Spanish, such as "redadas de ice" and "servicio de inmigratión y control de aduanas de los estados unidos."[22] The "search term" results were not as

[18] The geographic area of the search is narrowed based on computer IP-address. The use of a virtual private network (VPN) can disguise IP-address locations, which would throw off the geolocation accuracy of Google Trends results. The U.S. has one of the lowest VPN usage rates in the world (https://www.globalwebindex.net/reports/vpn-usage-around-the-world). Therefore, we assume the use of VPN software is relatively low and does not compromise the representativeness of our city-level search results.
[19] Figure reflects search engine market share retrieved for the period 2014 to 2017: https://gs.statcounter.com/search-engine-market-share/all/united-states-of-america
[20] Phrases capture searches that contain both words, in any order (e.g., ICE police would capture searches that included both ICE and police). The "+" acts as an "or" function. Search inputs are not case sensitive, but misspellings, spelling variations, synonyms, plural or singular versions of the terms would not be included.
[21] We use the "category" feature of Google Trends to narrow searches that pertain to policy or institutional actions. We compared the related queries produced when we restricted results to those categorized under "Law and Government" to those produced without a category restriction. We found the categorized strategy included more pointed searches concerning immigration enforcement. E.g., the top ten queries for the restricted category included narrowed terms like "immigration ice" and "ice detainee locator," while the unrestricted search produced more general terms like "immigration" and "what is ice."
[22] Related queries in Spanish are not listed in Table 2 because they occurred less frequently than the top ten listed in this table.

consistently relevant (e.g., top related queries included those on celebrities and misspellings of the Home Depot). For this reason, we use the GT index produced from the "topic" search strategy; henceforth, referred to as "GT index" in our benchmark model specification.

We use the variation in the GT index over our study period to proxy resident awareness of immigration enforcement. Google Trends data are indexed to the highest observed search volume in a given week, which is set to 100.[23] The GT index reflects the ratio of searches made in week w relative to the searches made in the week with the highest search volume, that is:

$$(1) \qquad GT\ index_w = \left[\frac{\#\ searches\ related\ to\ immigration\ enforcement_w}{\#\ searches\ related\ to\ immigration\ enforcemcent\ made\ in\ top\ week}\right] \times 100$$

Our study period featured public appeals for heightened immigration enforcement and executive actions escalating interior enforcement efforts. The GT index was at its highest the week of February 12, 2017. This was a period that followed ICE raids in Southern California that sparked widespread reports of police checkpoints and searches aimed at deporting noncitizens (Rubin et al., 2017).[24]

The GT index captures awareness among individuals with ready access to the devices and services needed to conduct web queries. That said, the GT index may not be representative of searches performed by Latino non-citizens, as this population may have less access to computers or mobile devices that permit online querying. If Latino noncitizens were not looking at the internet, our estimates may be downward biased. However, the citywide average reflected in the GT index likely captures awareness that stretches beyond individuals performing the web search, representing a shared awareness of publicized events.

We use an alternative formulation of the GT index that takes into account a notable spike in immigration enforcement-related queries following the 2016 presidential election. We collapse the GT index at the monthly level by averaging weekly indices. We then create an awareness index that reflects the percent change in immigration enforcement-related queries in month t relative to those made in November 2016, the month President Trump was elected to office.

$$(2) \qquad Awareness\ index_t = \left[\frac{GT\ index_t - GT\ index\ at\ Trump\ election}{GT\ index\ at\ Trump\ election}\right]$$

This normalized scale captures the temporal variation in searches over our study period, providing a more intuitive measure of immigration enforcement awareness. Figure 1 plots the monthly variation in the awareness index, which spiked during Obama-era interior enforcement escalations and increased more markedly following the election of President Trump.

4.3 District-level Sociodemographic and Crime Characteristics

We use tract-level data from the U.S. Census Bureau's American Community Survey (ACS) to estimate the share of Latino noncitizens in each district along with other sociodemographic characteristics. The ACS 5-year estimates produce reliable and current measures of household characteristics for small geographic areas averaged over 60 months (e.g., 2013 ACS estimates are derived from data collected monthly from January 2009 through December 2013).[25] We retrieved ACS 5-year estimates for the nine

[23] The Google Trends index is a relative measure of search interest that ranges from 0 to 100. The week with the highest search volume takes a value of 100 and the index scales values relative to this top week. For instance, a weekly index of 25 indicates that the volume of online queries were 25 percent what they were the week with the largest number of queries.

[24] Google uses a random sampling routine to produce the GT index. To account for variability in the sampling process, we pulled 65 GT indices between May 22, 2018 and July 1, 2018, and use the average of the indices here.

[25] The ACS collects survey information continuously nearly every day of the year and aggregates the results over a specific time-period. The data collection is spread evenly across the entire period to avoid over-representation of any particular month or year.

sociodemographic variables and years listed in Table 3. Because district geographies do not map directly onto census tracts, we uploaded geospatial vector data for LAPD's 1,135 districts to QGIS, alongside vector data for census tracts, and exported geometric intersections to STATA to create weights representing the tract composition of each district.[26] Using these weights, we were able to construct district-level estimates of sociodemographic variables.[27] Figure 2 shows the geographic variation in Latino noncitizen shares by district. Latino noncitizens are predominately concentrated in the areas south and east of downtown Los Angeles (in the Hollenbeck, Newton, and Northeast LAPD division areas), as well as in the eastern portion of the San Fernando Valley (in the Mission and Foothill divisions). These areas overlap with neighborhoods characterized by higher rates of unemployment, more households living below the poverty line, lower education levels, and younger populations.

We use LAPD historical crime rates and district-level LAPD programming to control for confounding characteristics associated with calls for service. We retrieved data on crime incidents from the city's open data webpage.[28] Non-traffic-related crime incidents from 2013 serve as a baseline control for district-level crime trends. The LAPD operates the Gang Reduction and Youth Development (GRYD) program, which seeks to reduce gang-related violence in areas of the city where this violence is most prevalent.[29] The program currently consists of 23 GRYD zones encompassing 552 districts, which we control for so as not to confound immigration enforcement awareness influences with GRYD program effects.

5. Methodology

We use the following benchmark specification to examine the relationship between immigration enforcement awareness and domestic violence calls:

$$(3)\ y_{dt} = \alpha + \beta_1(LNC_d \times awareness_t) + X'_{dt}\delta + \beta_2(crime_d \times trnd) + \beta_3(GRYD_d \times trnd) + \gamma_d + \vartheta_t + \varepsilon_{dt}$$

The dependent variable is the number of domestic violence calls per 1,000 residents dispatched to district d in month t. We consider changes in different types of domestic violence calls, as well as overall calls, including those to report violent and nonviolent incidents in supplemental analyses.

The vector LNC_d is a dummy variable indicative of a district with a population share of Latino noncitizens in the 75th percentile in 2013, the year before our study period.[30] Note that LNC_d is not listed as a separate regressor in Eq. 3 as it is collinear with district fixed-effects (γ_d). The vector $awareness_t$ is the continuous measure defined in Eq. 2. It captures the percent change in immigration enforcement-related searches compared to those made the month President Trump was elected to office.[31] Note that

[26] Shapefiles were retrieved from the LA Times data repository (http://boundaries.latimes.com/set/lapd-reporting-districts/) as provided by the LAPD. The LAPD patrol area encompassed 1,166 unique census tracts.
[27] A limitation to this approach is that the degree of overlap assumes equal population distribution across tracts. Our weights reflect the tract proportion in each district. If 50 percent of a district fell into a tract with a population of 1,000, the population share from that tract would be 500. If households were unevenly dispersed, for example, concentrated outside the segment overlapping the district, the population allocated to the district would be inflated. This is a limitation inherent in most geographic aggregates of household characteristics. There may be nuance block-by-block, but that nuance is concealed when aggregated across larger geographic units.
[28] Retrieved from https://data.lacity.org/ on March 1, 2018.
[29] The GRYD program focuses on primary and secondary prevention, intervention, and community engagement and collaboration to reduce gang violence in designated GRYD zones (Dunworth et al., 2010).
[30] This dummy captures districts with Latino noncitizen population shares above 25 percent in 2013. We use this measure for interpretation convenience; similar findings are obtained using a continuous measure of the share of Latino noncitizens.
[31] In subsequent robustness checks, we experiment with using the alternative search strategy to create the awareness index.

$awareness_t$ is not listed as a separate regressor in Eq. 3 because it is collinear with monthly fixed-effects (ϑ_t).

Eq. 3 includes a number of controls. First, we include the time-varying district-level vector X_{dt}, which incorporates characteristics associated with calls for service, including population share by age, educational attainment, and poverty, as well as unemployment and median household income. These regressors are available on a yearly basis. Second, we account for district differences in crime rates. To address reverse causality concerns, we use the number of crime incidents per 1,000 residents in 2013, the year before our study period. To allow for changes at the district-level over time, we interact this variable with a monthly time trend. Next, we include a dummy variable, $GRYD_d$, indicative of whether a district is located within a GRYD zone. To allow for time-varying GRYD program effects, we interact the dummy variable with a monthly time trend. Finally, we include district (γ_d) fixed-effects to account for unobserved, time-invariant district-specific characteristics, such as residing in an economically depressed district, as well as monthly (ϑ_t) fixed-effects to account for time-varying characteristics, such as citywide changes in criminal activity. Standard errors are clustered at the district level.

Our coefficient of interest is β_1, which captures the change in domestic violence calls per capita in Latino noncitizen districts, relative to other districts, as immigration enforcement awareness rises. Our identification strategy exploits the temporal and geographic variation shown in Figures 1 and 2. Figure 1 charts the monthly variation in our awareness index, described in Eq. 2. It is clear from Figure 1 that immigration enforcement awareness spiked following the 2016 election. Barring a few exceptions, the relative volume of searches related to immigration enforcement is recognizably larger in the post-election period. Figure 2 shows the 2013 district-level variation in the share of Latino noncitizens in the LAPD patrol area. We exploit these geographic distinctions to classify districts as Latino noncitizen districts where the share of Latino noncitizens is above or below the 75th percentile.

We conduct a number of identification and robustness checks to assess the validity of our findings. We begin by addressing the potential endogenous nature of searches related to immigration enforcement with regards to domestic violence calls. Endogeneity biases could originate from non-observables potentially correlated with online searches, as well as from calls for service influencing immigration enforcement awareness.[32] To address these concerns, we conduct a couple of analyses. First, we exploit the clear uptick in awareness of immigration enforcement in the final year of our study period (Figure 1) coinciding with President Trump's election on November 8, 2016. In particular, we assess if, as contended by police departments (Gorman, 2017), there has been a clear reduction in police contact post-election in Latino noncitizen districts, relative to others. Second, we conduct an event study analysis that allows us to assess whether differences in call trends predated the election.

We then perform a series of robustness checks addressing the measurement of our key regressors. First, instead of the dummy variable for districts with Latino noncitizen population shares in the 75th percentile, we re-estimate the model using the continuous measure of Latino noncitizen resident share. Second, we exclude from our comparison those districts with non-Hispanic white citizen shares in the 75th percentile. Third, we experiment with an alternative awareness index, namely, an index created using the "search term" strategy described in Table 1. Finally, we experiment with using ICE deportations and detainers as alternatives to our awareness index.

[32] For example, calls for service may result in added presence of officers in a district, which could prompt immigration enforcement-related searches as residents investigate whether the activity is related to immigration enforcement. Conversely, increases in immigration enforcement-related searches may prompt residents to call the police more frequently perhaps to report suspected undocumented immigrant neighbors. An advantage to focusing on intra-household calls like domestic violence is that we likely avoid calls generated by this latter phenomenon.

We also perform placebo checks to corroborate the nonrandom nature of our findings. In the first check, we conduct the same analysis outlined in Eq. 3, this time replacing the awareness index with a placebo derived from a Google Trends topic search on "Traffic." We would not expect to find a statistically significant relationship between this placebo awareness index and domestic violence calls. In a second placebo check, we swap the Latino noncitizen district dummy in Eq. 3 for a placebo dummy indicative of a district with a population share of non-Hispanic white citizens in the 75th percentile in 2013. Other things equal, we would not expect domestic violence calls to decline in these districts as immigration enforcement awareness rises.

To conclude, we conduct three analyses of heterogeneous effects. First, because call data does not include information on the race/ethnicity of the caller, we use reported crime data to explore how immigration enforcement awareness impacts domestic violence crimes with Latino and non-Hispanic white victims. Second, we consider how immigration enforcement awareness influences different types of domestic violence calls, distinguishing between violent and nonviolent domestic calls. In a third set of analyses, we examine how immigration enforcement awareness impacts all calls for service, as well as violent and nonviolent calls.

6. Descriptive Evidence

Table 4 displays basic descriptive statistics for the full sample and by district type. We classify Latino noncitizen districts as those where Latino noncitizens represent more than 25 percent of the population. Based on this grouping, a quarter of our district sample is considered Latino noncitizen. On average, 34 percent of residents in these districts are Latino noncitizen, compared to 10 percent in other districts.

The GT index averaged 6.9 over the study period. This means that the volume of immigration enforcement-related searches averaged 6.9 percent of the volume of searches made in the month with highest search volume. As noted earlier, we standardized the GT index around the 2016 election to produce an awareness index that captures monthly variation in searches relative to those made the month President Trump was elected to office. Our awareness index averaged 0.03 over the study period, meaning that searches related to immigration enforcement were roughly equal to what they were in November 2016. Barring a few exceptions, the volume of immigration enforcement-related searches were recognizably larger in the post-election period. As an initial validity check, we plot the monthly awareness index alongside two measures of city-level immigration enforcement: ICE deportations and detainer requests. As Figure 3 illustrates, in both instances, our awareness index correlates positively to city-level immigration enforcement over our study period.

Table 4 also highlights notable differences in sociodemographic and crime-related characteristics across districts. Latino noncitizen districts are younger. On average, 28 percent of residents in Latino noncitizen districts are under age 18 and just 8 percent are over age 65, compared to 19 and 13 percent, respectively, in other districts. Residents in Latino noncitizen districts have lower education levels relative to other districts. Forty-six percent of residents in Latino noncitizen districts do not have a high school degree (or GED equivalent) and only 11 percent have a college degree, compared to 17 and 38 percent, respectively, in other districts. Though unemployment rates are similar across districts, median household income is lower and poverty rates are higher in Latino noncitizen districts. Median annual household income in Latino noncitizen districts average $34,500, nearly half the average in other districts ($64,500). The average poverty rate in Latino noncitizen districts (33 percent) doubles the average in other districts (17 percent). These differences are also reflected in crime-related characteristics. Crime rates in 2013, the year prior to our study period, averaged 51 incidents per 1,000 residents in Latino noncitizen districts compared to 47 incidents in other districts. The vast majority of Latino noncitizen districts (87 percent)

were located in GRYD zones, compared to 43 percent of other districts. The descriptive statistics in Table 4 underscore important differences that will need to be accounted for in our analysis.

Figure 4 compares the relationship between average monthly domestic violence calls and immigration enforcement awareness by district type. A few facts are worth noting. First, monthly domestic violence calls in Latino noncitizen districts double those in other districts. Secondly, while domestic violence calls and immigration enforcement awareness are inversely related in both types of districts. The relationship is more pronounced in Latino noncitizen districts. In what follows, we assess if the descriptive evidence offered by Figure 4 prevails once we account for the differences evident in Table 4, as well as unobserved district-level and monthly effects.

7. Domestic Violence Calls and Immigration Enforcement Awareness

7.1 Main Findings

The objective of this study is to explore the impact of immigration enforcement awareness on domestic violence calls in Latino noncitizen districts. An average of 20 people are physically abused by an intimate partner every minute.[33] Police mistrust is particularly palpable among immigrant victims of domestic violence (Vidales, 2010). The fact that women of low socioeconomic status are particularly vulnerable to domestic violence (Aizer, 2010) aggravate concerns regarding the potential impact of immigration enforcement on crime reporting in Latino noncitizen districts.

We estimate two model specifications: (1) a baseline model that estimates domestic violence calls per capita excluding time-varying district-level controls; and (2) a full model that incorporates all time-varying district-level controls. The results from this exercise are shown in Table 5. As can be seen therein, our estimates are robust to the inclusion of district-level crime and programming trends, as well as additional time-varying district-level controls. Hence, in what follows, we focus our attention on the full model specification.

Domestic violence calls per capita decline 2.8 percent in Latino noncitizen districts, relative to other districts, when the awareness index increases by one standard deviation.[34] This effect is non-negligible when compared to the impact of other statistically significant controls. For instance, a 3 percent increase in the share of the population under age 18 (raising the average share from 22 to 25 percent) lowers domestic violence calls by 2.0 percent. A similar increase in the share of residents over age 65 (raising the average share from 11 to 14 percent) increases calls by 2.3 percent.

Domestic violence calls increase when the share of elderly residents and college educated residents increases, but decrease when the share of residents under age 18 increases. These results likely reflect both variation in the opportunity for domestic exchanges (those under age 18 are less likely to be involved in domestic relationships), and differences in reporting behavior (educated and older residents are more likely to call for service). Additionally, it appears districts located within GRYD zones experience fewer domestic violence calls than non-GRYD districts, a result that may reflect reporting differences or indirect program effects. In sum, the estimates in Table 5 support the hypothesis that immigration enforcement awareness reduces domestic violence calls in districts with a larger share of residents likely fearful of intensified immigration enforcement.

[33] Domestic violence national statistics retrieved from www.ncadv.org.

[34] The impact is computed as: $[(1\ s.d.\ increase\ in\ awareness\ index \times \beta_{interaction\ term} \times 100)/\mu_{dependent\ variable}]$.

7.2 Identification

Our empirical strategy relies on the assumption that immigration enforcement awareness is exogenous to domestic violence calls. However, awareness could be correlated to a number of unobservables potentially responsible for the change in calls. To address this concern, we conduct an event study. Given that our key explanatory variable is not a single event, but a continuous practice (monthly web queries), we exploit the clear uptick in immigration enforcement awareness toward the end of our study period (Figure 1) to establish our event timeline.

First, we check if domestic violence calls changed after the 2016 election. We create a dummy variable that takes a value of 1 for November 2016 and the months that follow. We then interact this dichotomous variable with our dummy variable for Latino noncitizen districts.

$$(4)\ y_{dt} = \alpha + \beta_1(LNC_d \times post_t) + X'_{dt}\delta + \beta_2(crime_d \times trnd) + \beta_3(GRYD_d \times trnd) + \gamma_d + \vartheta_t + \varepsilon_{dt}$$

Our coefficient of interest continues to be β_1, which captures the change in the volume of domestic violence calls per 1,000 residents in Latino noncitizen districts, compared to other districts, after President Trump was elected to office. As in our main model specification, we estimate Eq. 4 for monthly domestic violence calls. We cluster standard errors at the district level.

The results from this exercise are shown in the first two columns of Table 6. We calculate the impact of the election as: $[(\beta_{interaction\ term} \times 100)/\mu_{dependent\ variable}]$. As seen in the second column of Panel A, our full model specification reveals how monthly domestic violence calls declined 7.7 percent following the election in Latino noncitizen districts, relative to other districts. In order to check for pre-trends, we restrict the period to months preceding the 2016 election and interact LNC_d with a time trend. Panel B shows the results of this check. Our baseline specification suggests that, prior to the 2016 election, domestic violence calls in Latino noncitizen districts were increasing slightly relative to other districts. However, upon controlling for time-varying district-level characteristics, differences between the two districts were no longer statistically distinguishable from zero.

Second, we perform an event study using the 2016 election as our event. We begin by collapsing calls at the quarterly level to ease visual inspection of trends in call activity.[35] We create a number of lags and leads indicative of the quarters prior to and after the election, which we include in our full model specification:

$$(5)\ y_{dt} = \alpha + \sum_{-10}^{5} \beta_t(LNC_d \times qtr_t) + X'_{dt}\delta + \lambda(crime_d \times trnd) + \mu(GRYD_d \times trnd) + \gamma_d + \vartheta_t + \varepsilon_{dt}$$

Eq. 5 estimates a coefficient β_t for each quarter that is standardized to ensure that the difference in domestic violence calls is centered at zero in the third quarter of 2016, that is, before the election.

Figure 5 plots the β_t coefficients on the interaction between the Latino noncitizen district dummy and quarter. Different call patterns emerge post-election when compared to the pre-election period. We see evidence of an upward trend in calls leading up to the election, but a noticeable decline thereafter. Though most of the plotted estimates were not statistically different from zero, one coefficient was negative and statistically significant in the pre-election period compared to nearly all of the quarter coefficients in

[35] The figure in Appendix B plots the raw times series data used in our event study. This figure plots average quarterly domestic violence calls per capita by district type. While calls trended downward in both districts, this drop was slightly more pronounced in Latino noncitizen districts.

the post-election period, which were negative and statistically different from zero ($p < 0.05$). We produced three different versions of the event study, all of which can be found in Appendix C.[36] Overall, the pattern in Figure 5 suggests that domestic violence calls were not trending downwards prior to November 2016. In fact, it appears that they were increasing, but dropped thereafter. The clear break in the trend suggests that reductions in domestic violence calls evidenced in Table 5 and Table 6 are not likely driven by pre-existing unobservables or reverse casual mechanisms.

7.3 Robustness Checks

We perform a variety of checks to assess the robustness of our findings. We first use an alternative classification of districts impacted by immigration enforcement, and consider an alternative set of comparison districts. In Panel A of Table 7.1, we substitute the Latino noncitizen district dummy variable with a continuous measure of the share of Latino noncitizens in a district. Our results are consistent with those produced in Table 5. Specifically, a one standard deviation increase in the awareness index lowers domestic violence calls per capita by 2.2 percent in districts where 16.5 percent of residents are Latino noncitizen (the full sample average). If the share of Latino noncitizens rises to the 33.8 percent average in districts classified as Latino noncitizen in our sample, a one standard deviation increase in the awareness index would result in a 4.5 percent drop in domestic violence calls per capita, exceeding our original estimate. To ensure we are not capturing relative increases in domestic violence calls in districts unaffected by immigration enforcement, we exclude districts with non-Hispanic white citizen resident shares in the 75th percentile. As can be seen in Panel B, our estimate attenuates slightly (1.8 percent), but it still predicts a reduction in domestic violence calls as the awareness index rises by one standard deviation.

In the next set of robustness checks, we experiment with alternative measures of immigration enforcement that should be correlated with our awareness index. In Panel C of Table 7.1, we replace our original awareness index with an alternative awareness index that reflects the relative change in a GT index produced using the "search term" strategy described in Table 1. Domestic violence calls per capita drop by 3.5 percent in Latino noncitizen districts, relative to other districts, when the alternative awareness index increases by one standard deviation.[37] Finally, in Panels D and E of Table 7.1, we replace the awareness index with two measures of city-level immigration enforcement. The estimates in Panel D suggest that an additional one hundred deportations per month would reduce domestic violence calls by 10.9 percent.[38] Similarly, according to the estimates in Panel E, an additional one hundred detainers per month would reduce domestic violence calls by 2.8 percent.

Next, we conduct two placebo checks. First, we re-estimate our models using a placebo awareness index constructed from a GT index produced using a topic search for traffic.[39] Other things equal, the placebo awareness index should be completely unrelated to differences in domestic violence calls across districts. Indeed, as evidenced by the estimates in Panel A of Table 7.2, the coefficients on the interaction terms are not statistically different from zero. In other words, there is no evidence that domestic violence calls in Latino noncitizen districts respond differently when unrelated searches increase. Second, we experiment with a placebo for Latino noncitizen districts, specifically districts with residents not likely to be concerned about immigration enforcement. We create a dummy variable for districts with a non-Hispanic white citizen resident share in the 75th percentile, and remove from the comparison group districts with a Latino noncitizen population share in the 75th percentile. Other things equal, domestic violence calls

[36] Figure C.1 plots the interaction term from the baseline model of Eq. 5 that excludes time-varying district-level controls; this plot tracks Figure 5 quite closely. Figures C.2. and C.3 distinguish between calls to report violent and nonviolent domestic incidents. Here we can see notable drops in both types of calls following the 2016 election. Corresponding estimates of the change in calls per capita can be found in the first, third, and fourth columns of Table 6, respectively.

[37] Alternative awareness index s.d. equal to 0.720.

[38] The impact is computed as: $[(\beta_{interaction\ term} \times 100)/\mu_{dependent\ variable}]$.

[39] We used a topic search for "Traffic."

in the placebo districts should be unaffected by changes in the awareness index. As evidenced by the estimates in Panel B of Table 7.2, the coefficients on the interaction terms are not statistically different from zero. As such, there is no evidence that domestic violence calls in districts unlikely to be affected by immigration enforcement respond differently when immigration enforcement awareness increases.

In sum, our results prove robust to the use of alternative measures of our key explanatory variables. Additionally, placebo checks suggest that our findings are not spurious or driven by unobserved factors present in other GT indexes or in districts with a greater share of residents not likely to be targeted by immigration enforcement.

8. Heterogeneous Effects

We also conduct a series of analyses of heterogeneous effects. First, because calls for service data does not contain information on the race or ethnicity of the caller, we experiment with using data on crimes reported to the LAPD. LAPD crime data includes information on the race/ethnicity of the victim. We use information on the victim to construct a measure of the number of domestic violence incidents with a victim of a particular race/ethnicity per 1,000 residents of that racial/ethnic background.[40] Instead of including an interaction between the awareness index and the Latino noncitizen district dummy, we regress reported crime on the awareness index, as well as on fixed effects and time-varying district-level controls included in Eq. 3. The results, shown in the first column of Table 8.1, suggest that domestic violence incidents with a Latino victim per 1,000 Latino residents decreased by 3.9 percent as the awareness index rose by one standard deviation. This estimate aligns with those in Table 5. This finding is particularly noteworthy when held in contrast to the statistically insignificant coefficient on the awareness index for domestic violence incidents with a non-Hispanic white victim per 1,000 non-Hispanic white residents. In particular, the result is suggestive of Latino victims being less likely to report domestic violence crime when immigration enforcement awareness is high.

Secondly, we consider whether immigration enforcement awareness influences different types of domestic violence calls. Specifically, we distinguish between violent and nonviolent domestic incidents.[41] Our results, displayed in Table 8.2, suggest that immigration enforcement awareness lowers both violent and nonviolent domestic calls in Latino noncitizen districts, relative to other districts. A one standard deviation increase in the awareness index decreases violent domestic calls per capita by 3.3 percent, compared to a 2.1 percent decrease (significant at $p<0.10$) in nonviolent domestic calls. Our results diverge from existing work that finds violent domestic assaults are less likely to go unreported (Felson at al., 2002). Immigration enforcement considerations may help contextualize such a difference. Violent crimes are likely to result in more severe criminal justice and immigration penalties. As a result, individuals may be less willing to report such crimes in an effort to limit exposure to an increasingly severe immigration system.

Thirdly, we look at the broader impact of immigration enforcement awareness on other types of calls for service, as opposed to solely those related to domestic violence. Specifically, we look at *all* calls, while we also distinguish between calls made to report violent and nonviolent incidents. To that end, we re-estimate Eq. 3 using these three dependent variables. Table 8.3 shows our estimates. As found for domestic violence calls, increased immigration enforcement awareness decreases total calls, as well as violent and nonviolent calls in Latino noncitizen districts, relative to other districts. Specifically, a one standard deviation increase in the awareness index lowers overall calls per capita by 1.1 percent in Latino

[40] Domestic violence-related crimes were identified as those in which the officer-reported modus operandi was domestic violence. We use this classification, rather than singling out intimate partner violence crimes, to preserve a sample large enough to carry out this supplemental analysis.

[41] Forty-five percent of domestic violence calls could be classified as nonviolent; they consisted of general disputes (33 percent), restraining order violations (11 percent), and kidnappings (1 percent). The remaining 55 percent were to calls to report incidents of assault (10 percent) and battery (45 percent).

noncitizen districts, relative to others. The same is true for violent and nonviolent calls. A one standard deviation increase in the awareness index reduces violent and nonviolent calls per capita by 1.1 percent.

9. Summary and Conclusions

Debates over police involvement in immigration enforcement have been partially motivated by concerns over immigrant willingness to report crimes. Law enforcement officials throughout the U.S. have expressed concern that incidents will go unreported as individuals worry they might expose themselves, or others, to immigration authorities. Our study ratifies these concerns. Using more than 3 million calls for service and online searches related to ICE, we find that domestic violence calls per capita decline 3 percent when immigration enforcement awareness increases by one standard deviation in districts with a higher share of Latino noncitizens, relative to other districts. In other words, immigration enforcement awareness reduced calls to report domestic violence in predominately Latino noncitizen districts in Los Angeles between 2014 and 2017. This result counters the finding from Cox and Miles (2015) that heightened immigration enforcement has little to no impact on community cooperation with law enforcement.

We face a number of limitations in this study. First, we lack information on the ethnicity or citizenship status of the caller; which limits our ability to more accurately pinpoint the personal characteristics of those making calls to the police. We use data on crimes reported to the LAPD that capture victim race/ethnicity to address this limitation, and find that domestic violence crimes with Latino victims declined as immigration enforcement awareness increased. However, this data likely includes a selected sample of individuals comfortable with identifying themselves to the police. We also recognize that collaboration with the police not only depends on events within the U.S., but also on experiences and issues related to an individual's country of origin. The ACS does not provide tract-level population estimates by country of origin over our study period, which limited our ability to explore these important distinctions. Similarly, Google Trends does not estimate GT indices for geographic units within cities, which kept us from observing more granular variations in district-level awareness across different communities.

To conclude, we derive a back-of-the-envelope calculation of the extent to which aggressive interior immigration enforcement suppresses domestic violence calls for service. Using the estimate derived from our full model specification in Table 5, along with population figures, we calculate that a percent increase in immigration enforcement awareness suppresses 90 domestic violence calls in Latino noncitizen districts, all else equal.[42] Over our study period, a percent increase in immigration enforcement awareness corresponded with 167 deportations. Therefore, one domestic violence call in Latino noncitizen districts is suppressed for every two deportations.[43] Similarly, one domestic violence call in Latino noncitizen districts is suppressed for every 22 detainer requests.[44] These calculations underscore the cost of aggressive interior immigration enforcement and should be compared to any associated public safety benefits.

Our findings, which prove robust to a number of identification and robustness checks, suggest that recent escalations in rhetoric and federal policy and enforcement actions have had a "chilling effect" on crime reporting among Latino noncitizens in Los Angeles. To put our results in context, Carson and Wellman (2018) estimate that problem-oriented policing interventions decrease calls for service by 22 percent.[45] Our estimate of an 8 percent drop in domestic violence calls following an event wholly unrelated

[42] Estimate calculated as: $[\frac{\beta_{interaction\ term}}{1{,}000} * \ Latino\ noncitizen\ district\ population = -\frac{0.084}{1{,}000} * 1{,}074{,}957 = -90.3]$.

[43] Estimate calculated as: $[\frac{167}{90} = 1.9]$.

[44] Over our study period, one deportation was associated with eleven detainer requests, on average.

[45] Carson and Wellman (2018) evaluated the impact of a problem-oriented policing intervention in a suburban public housing unit on calls for service. The intervention decreased calls by 22 percent but varied depending on the specification and type of call.

to police programming, the 2016 election, is a stark reminder of the challenge faced by law enforcement agencies tasked with ensuring the safety of some of its most vulnerable residents.

Our study highlights that both real and perceived escalations in immigration enforcement can detriment the willingness of targeted populations to engage with the police, particularly to report sensitive crimes, such as those related to domestic violence. These findings stress the need for policy measures to engage communities increasingly alienated by federal immigration policy. This is particularly critical following a remark made by former-Attorney General Jeff Sessions in June 2018 that domestic abuse will no longer be considered grounds for asylum. Though directed at asylum seekers, the statement underplays the importance of domestic abuse to immigration enforcement authorities as grounds to seek protection. Such statements have the potential to curb immigrant willingness to contact law enforcement to report crime or victimization, impeding local efforts to assuage concerns over police involvement in immigration enforcement. Further discussions on how to balance immigration enforcement efforts and public safety are now more important than ever.

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Table 1. Google Trends Search Parameters

Parameters	(1) "Search Term" Strategy	(2) "Topic" Strategy
Location	Los Angeles, CA USA	Los Angeles, CA USA
Time period	Jan 5, 2014 to Dec 31, 2017	Jan 5, 2014 to Dec 31, 2017
Query category[ǂ]	All categories	Law & Government
Search type	Web search	Web search
Date of access	Mar 29, 2018	Mar 29, 2018
Search input	ICE police + deport + ICE immigration + undocumented	U.S. Immigration and Customs Enforcement
Topic	NA	Federal agency

[ǂ] Google algorithms can group searches under different topic categories. Those grouped under "Law and Government" include searches related to policy and institutional actions.

Table 2. Related Queries and Topics by GT Search Strategy

	(1) "Search Term" Strategy	(2) "Topic" Strategy
Related queries	1) undocumented immigrants	1) ice
	2) undocumented students	2) immigration ice
	3) home deport	3) ice raids
	4) undocumented immigrant	4) ice locator
	5) immigration news	5) immigration customs enforcement
	6) deport justin bieber	6) police ice
	7) daca	7) immigration and customs enforcement
	8) ice cube	8) homeland security
	9) office deport	9) ice enforcement
	10) illegal immigration	10) ice detainee locator
Related topics	1) Immigration	1) Immigration
	2) Illegal immigration	2) Deportation
	3) Deportation	3) Raid
	4) U.S. Immigration and Customs Enforcement	4) Detention
	5) Police	5) ICE Detention Center
	6) The Home Depot	6) Ice
	7) Donald Trump	7) United States Department of Homeland Security
	8) Ice	8) Illegal immigration
	9) Justin Bieber	9) Border crossing
	10) License	10) U.S. Customs and Border Protection

Table 3. District-level Sociodemographic and Crime Characteristics

Characteristics	Variables
Ethnicity and immigrant status‡	% of the population that are noncitizen and Hispanic or Latino, 2013 % of the population that are citizen and white non-Hispanic or Latino, 2013
Income	Median annual household income ($), 2014-2017
Poverty	% of the population living below the federal poverty level, 2014-2017
Employment	% of the population unemployed, 2014-2017
Education	% of the population age 25-64 with a bachelor's degree or more, 2014-2017 % of the population age 25-64 without a HS degree (or equivalent), 2014-2017
Age	% of the population over 65, 2014-2017 % of the population under 18, 2014-2017
Historical crime rate	Crime incidents per 1,000 population, 2013
GRYD zone	District located in LAPD-designated GRYD zone, 2014-2017

Note: Historical crime rates reflect incidents of crime in 2013 for each LAPD district collected from original LAPD crime reports. Tract-level characteristics were sourced from ACS 5-year estimates for 2013 to 2017 (2009-13, 2010-14, 2011-15, 2012-16, 2013-17) and geo-processing tools were used to derive district-level estimates.

‡ The ACS asks respondents to indicate whether they are of "Hispanic or Latino" origin. Less than 4 percent of Los Angeles residents of "Hispanic or Latino" origin were of non-Latin American descent. As such, we use the shortened "Latino" description in this paper.

Table 4. Sample Descriptive Statistics

Samples	**All**		**Latino Noncitizen Districts**		**Other Districts**	
Descriptive Statistics	**Mean**	**S.D.**	**Mean**	**S.D.**	**Mean**	**S.D.**
Percent of Latino noncitizens in base year (2013)	16.488	13.046	33.759	6.419	10.234	8.354
Latino noncitizen district (share in 75th pctl)	0.266	0.442	1.000	0.000	0.000	0.000
GT index	6.943	8.362	6.943	8.362	6.943	8.362
Awareness index	0.030	0.301	0.030	0.301	0.030	0.301
Percent under 18	21.667	7.513	27.843	5.315	19.430	6.917
Percent over 65	11.297	5.313	7.582	2.718	12.642	5.383
Percent without a high-school degree	24.456	18.233	46.161	10.447	16.595	13.451
Percent with college degree	31.217	22.453	11.292	7.306	38.433	21.715
Percent unemployed	10.090	4.696	11.570	3.795	9.555	4.872
Median household income	56,566	29,960	34,541	8,751	64,543	30,913
Percent families at or below FPL	21.595	13.281	33.284	9.609	17.362	11.809
Crime rate per 1,000 in base year (2013)	48.411	39.744	51.060	35.056	47.452	41.270
District located in GRYD zone	0.548	0.498	0.873	0.333	0.430	0.495
Observations	53,520		13,392		40,128	

Notes: GT index and awareness index are citywide measures; as such, they do not vary across districts.

Table 5. Regression-based Estimates of Domestic Violence Calls per 1,000 Residents by Immigration Enforcement Awareness and District Type

Model Specification	Baseline	Full
Latino noncitizen district x Awareness index	-0.098**	-0.084**
	(0.025)	(0.026)
Percent under 18		-0.006*
		(0.003)
Percent over 65		0.007*
		(0.003)
Percent high-school graduate or higher		0.000
		(0.002)
Percent with college degree		0.002*
		(0.001)
Percent unemployed		-0.003
		(0.002)
Median household income		0.000
		(0.000)
Percent families at or below FPL		-0.001
		(0.002)
Crime trend		0.000
		(0.000)
GRYD trend		-0.002**
		(0.001)
Time-Varying District-Level Controls	N	Y
Month Fixed-Effects	Y	Y
District Fixed-Effects	Y	Y
Observations	53,520	53,520
R-squared	0.607	0.608
Dependent Variable Mean	0.920	

Notes: All regressions include a constant term. In addition, historical crime rates and the GRYD dummy are interacted with a monthly trend. Standard errors are clustered at the district level and shown in parentheses. ** p<0.01, * p<0.05, + p<0.1

Table 6. Regression-based Estimates of Monthly Domestic Violence Calls per 1,000 Residents before and after the 2016 Election by District Type

	(1)	(2)	(3)	(4)
Dependent Variable	**DV calls**	**DV calls**	**Violent DV Calls**	**Nonviolent DV Calls**
Model Specification	**Baseline**	**Full**	**Full**	**Full**
Panel A: Pre/Post-Election				
Latino noncitizen district x Post election	-0.082**	-0.071**	-0.051**	-0.020
	(0.020)	(0.021)	(0.013)	(0.013)
Observations	53,520	53,520	53,520	53,520
R-squared	0.607	0.608	0.531	0.396
Dependent Variable Mean	0.920	0.920	0.416	0.504
Panel B: Assessing Any Differential Pre-Trends Prior to Election				
Latino noncitizen district x Time trend	0.002+	0.002	0.000	0.001+
	(0.001)	(0.001)	(0.001)	(0.001)
Observations	37,910	37,910	37,910	37,910
R-squared	0.612	0.613	0.535	0.406
Dependent Variable Mean	0.943	0.943	0.516	0.427
For all specifications above:				
Time-Varying District-Level Controls	N	Y	Y	Y
Month Fixed-Effects	Y	Y	Y	Y
District Fixed-Effects	Y	Y	Y	Y

Notes: All regressions include a constant term, as well as the same regressors included in the full model specification presented in Table 5. Standard errors are clustered at the district level and shown in parentheses. ** p<0.01, * p<0.05, + p<0.1

Table 7.1. Robustness Checks

Model Specification	Baseline	Full
Panel A: Using Continuous Measure of Latino Noncitizen Districts		
Percent Latino noncitizen x Awareness index	-0.004**	-0.004**
	(0.001)	(0.001)
Observations	53,520	53,520
R-squared	0.607	0.608
Dependent Variable Mean	0.920	
Panel B: Using Comparison that Excludes Districts Not Targeted by Immigration Enforcement		
Latino noncitizen district x Awareness index	-0.074**	-0.063*
	(0.027)	(0.027)
Observations	40,128	40,128
R-squared	0.592	0.593
Dependent Variable Mean	1.065	
Panel C: Using an Alternative Awareness Index		
Latino noncitizen district x Awareness index	-0.049**	-0.045**
	(0.010)	(0.010)
Observations	53,520	53,520
R-squared	0.607	0.608
Dependent Variable Mean	0.920	
Panel D: Using ICE Deportations from LA instead of Awareness Index		
Latino noncitizen district x (Number of ICE Deportations/100)	-0.101*	-0.100*
	(0.040)	(0.041)
Observations	53,520	53,520
R-squared	0.607	0.608
Dependent Variable Mean	0.920	
Panel E: Using ICE Detainers in LA instead of Awareness Index		
Latino noncitizen district x (Number of ICE Detainers/100)	-0.024**	-0.026**
	(0.009)	(0.009)
Observations	53,520	53,520
R-squared	0.607	0.608
For all specifications above:		
Time-Varying District-Level Controls	N	Y
Month Fixed-Effects	Y	Y
District Fixed-Effects	Y	Y

Notes: All regressions include a constant term, as well as the same regressors included in the baseline and full model specifications in Table 5. Standard errors are clustered at the district level and shown in parentheses. ** p<0.01, * p<0.05, + p<0.1

Table 7.2. Placebo Checks

Model Specification	Baseline	Full
Panel A: Using a Placebo GT Index to Calculate Awareness Index		
Latino noncitizen district x Traffic awareness index	0.127	0.055
	(0.092)	(0.094)
Observations	53,520	53,520
R-squared	0.607	0.608
Dependent Variable Mean	0.920	
Panel B: Focusing on Districts not Targeted by Immigration Enforcement		
Non-Hispanic noncitizen district x Awareness index	0.013	0.011
	(0.023)	(0.023)
Observations	40,128	40,128
R-squared	0.618	0.619
Dependent Variable Mean	0.776	
For all specifications above:		
Time-Varying District-Level Controls		Y
Month Fixed-Effects	Y	Y
District Fixed-Effects	Y	Y

Notes: All regressions include a constant term, as well as the same regressors included in the baseline and full model specifications in Table 5. Standard errors are clustered at the district level and shown in parentheses. ** p<0.01, * p<0.05, + p<0.1

Table 8.1. Heterogeneous Effects: Crime Reported to the Police by Victim Race/Ethnicity

Dependent Variable	**DV Crime w/ Latino Victim per 1,000 Latino Residents**	**DV Crime w/ White Victim per 1,000 White Residents**
Model Specification	**Full**	**Full**
Awareness index	-0.028+	0.251
	(0.015)	(0.205)
Percent under 18	-0.003	0.013
	(0.003)	(0.023)
Percent over 65	0.001	-0.086
	(0.003)	(0.083)
Percent high-school graduate or higher	0.004	0.015
	(0.004)	(0.016)
Percent with college degree	0.020	-0.002
	(0.013)	(0.010)
Percent unemployed	-0.004	-0.001
	(0.003)	(0.035)
Median household income	-0.000	-0.000+
	(0.000)	(0.000)
Percent families at or below FPL	-0.001	-0.009
	(0.001)	(0.057)
Crime trend	-0.000	0.000
	(0.000)	(0.000)
GRYD trend	0.001	-0.007
	(0.001)	(0.008)
Time-Varying District-Level Controls	Y	Y
Month Fixed-Effects	Y	Y
District Fixed-Effects	Y	Y
Observations	53,520	53,520
R-squared	0.024	0.021
Dependent Variable Mean	0.217	0.332

Notes: All regressions include a constant term. In addition, historical crime rates and the GRYD dummy are interacted with a monthly trend. Standard errors are clustered at the district level and shown in parentheses. ** p<0.01, * p<0.05, + p<0.1

Table 8.2. Heterogeneous Effects: Calls to Report Violent and Nonviolent DV Incidents per 1,000 Residents

Dependent Variable: Type of Call	**Violent DV**	**Nonviolent DV**
Model Specification	**Full**	**Full**
Latino noncitizen district x Awareness index	-0.055**	-0.029+
	(0.017)	(0.016)
Percent under 18	-0.003+	-0.003
	(0.002)	(0.002)
Percent over 65	0.005*	0.002
	(0.002)	(0.002)
Percent high-school graduate or higher	0.001	-0.001
	(0.001)	(0.001)
Percent with college degree	0.002*	0.001
	(0.001)	(0.001)
Percent unemployed	-0.003+	-0.000
	(0.002)	(0.001)
Median household income	0.000	0.000
	(0.000)	(0.000)
Percent families at or below FPL	-0.000	-0.000
	(0.001)	(0.001)
Crime trend	0.000	0.000
	(0.000)	(0.000)
GRYD trend	-0.001**	-0.001**
	(0.000)	(0.000)
Time-Varying District-Level Controls	Y	Y
Month Fixed-Effects	Y	Y
District Fixed-Effects	Y	Y
Observations	53,520	53,520
R-squared	0.531	0.396
Dependent Variable Mean	0.504	0.416

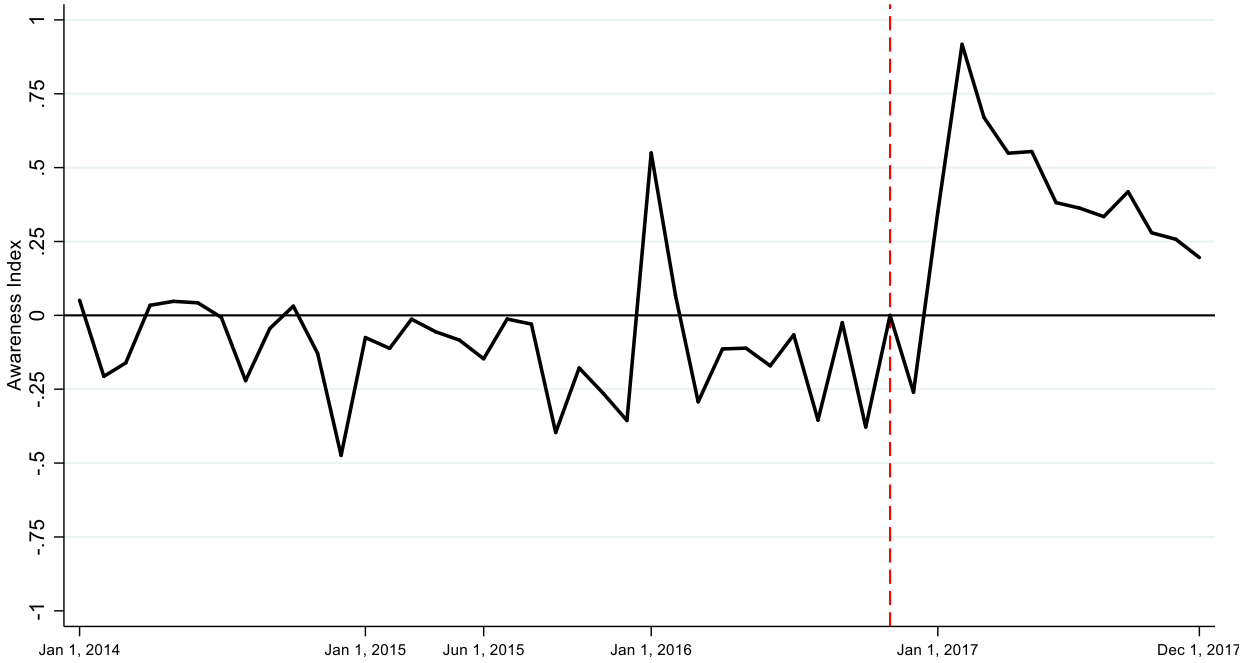
Notes: All regressions include a constant term. In addition, historical crime rates and the GRYD dummy are interacted with a monthly trend. Standard errors are clustered at the district level and shown in parentheses. ** p<0.01, * p<0.05, + p<0.1

Table 8.3. Heterogeneous Effects: All Calls and Calls to Report Violent and Nonviolent Incidents per 1,000 Residents

Dependent Variable: Type of Call	**All Calls**	**Violent**	**Nonviolent**
Model Specification	**Full**	**Full**	**Full**
Latino noncitizen district x Awareness index	-0.610**	-0.086+	-0.484**
	(0.182)	(0.046)	(0.150)
Percent under 18	-0.074**	-0.014*	-0.055*
	(0.028)	(0.006)	(0.023)
Percent over 65	0.110**	0.022**	0.082**
	(0.033)	(0.007)	(0.026)
Percent high-school graduate or higher	0.001	0.003	-0.003
	(0.015)	(0.003)	(0.013)
Percent with college degree	0.018	0.004+	0.012
	(0.012)	(0.002)	(0.010)
Percent unemployed	-0.025	-0.003	-0.017
	(0.021)	(0.005)	(0.015)
Median household income	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)
Percent families at or below FPL	-0.001	0.001	-0.002
	(0.016)	(0.004)	(0.013)
Crime trend	0.001**	0.000**	0.001**
	(0.000)	(0.000)	(0.000)
GRYD trend	-0.030**	-0.005**	-0.022**
	(0.006)	(0.001)	(0.005)
Time-Varying District-Level Controls	Y	Y	Y
Month Fixed-Effects	Y	Y	Y
District Fixed-Effects	Y	Y	Y
Observations	53,520	53,520	53,520
R-squared	0.920	0.869	0.899
Dependent Variable Mean	16.421	2.472	12.915

Notes: All regressions include a constant term. In addition, historical crime rates and the GRYD dummy are interacted with a monthly trend. Standard errors are clustered at the district level and shown in parentheses. ** p<0.01, * p<0.05, + p<0.1

Figure 1. Temporal Variation in Immigration Enforcement Awareness (2014-2017)



Notes: The line plots monthly variation in the awareness index (described in Eq. 2) which measures the percent change in immigration enforcement-related searches in a given month relative to those made the month of the 2016 election (marked by the vertical dashed line).

Figure 2. Latino Noncitizen Population Shares in LAPD Reporting Districts

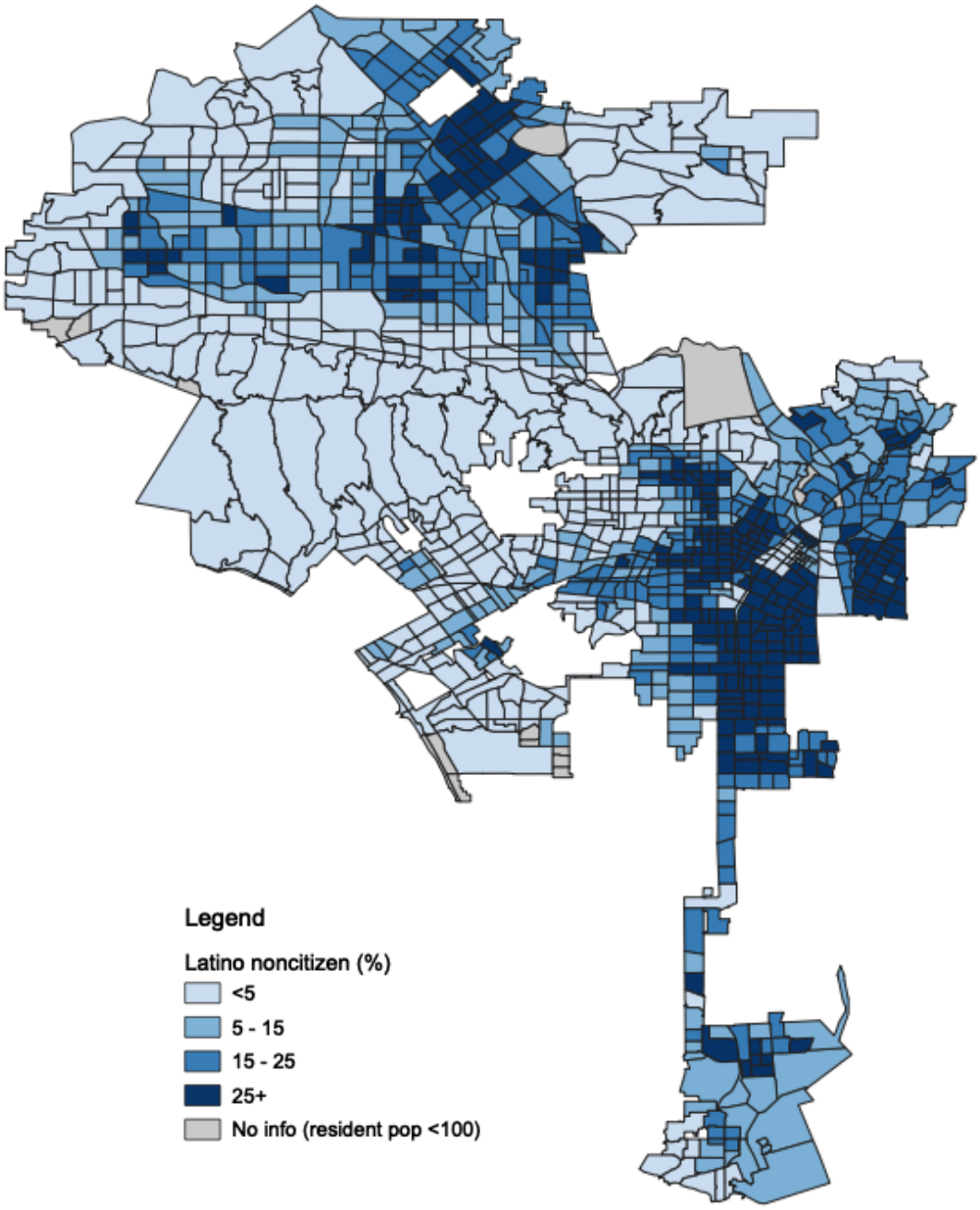
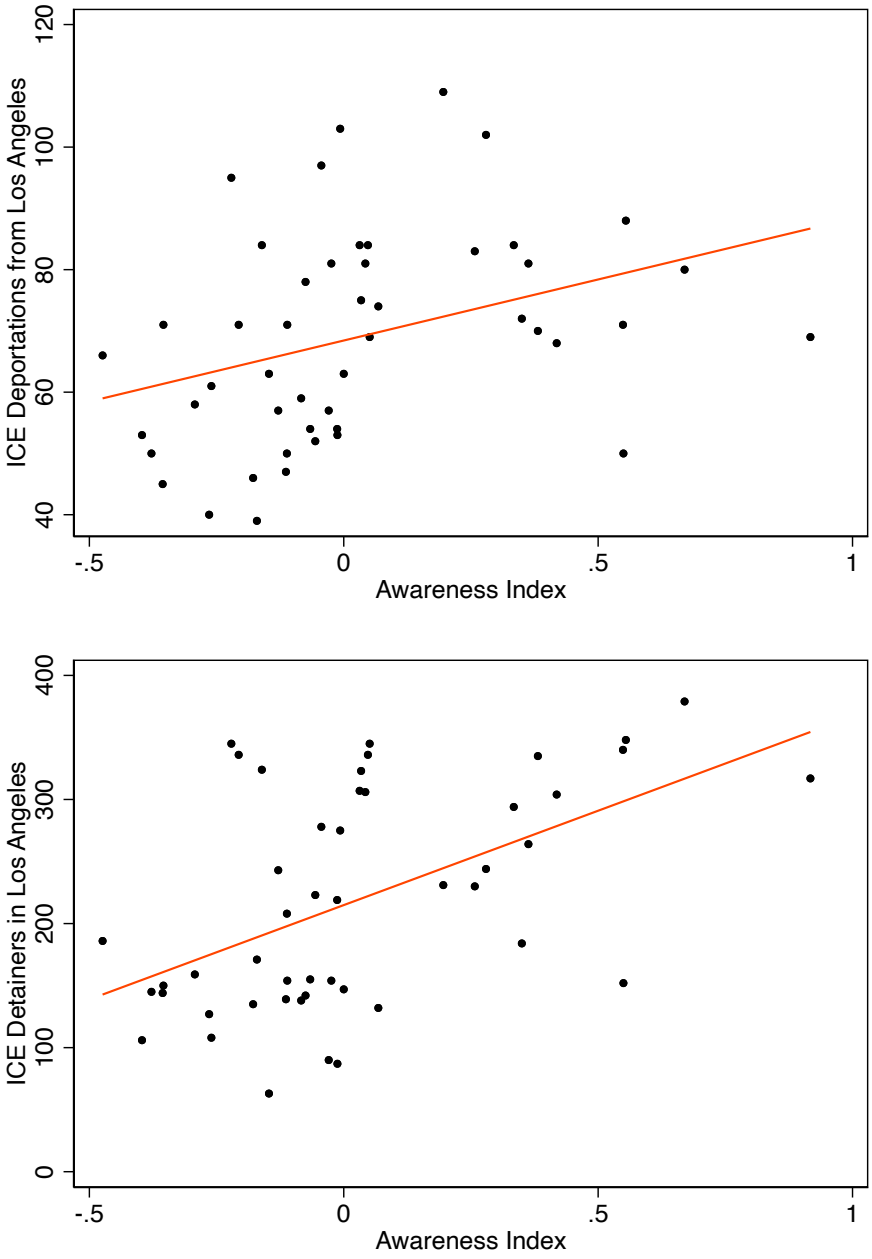
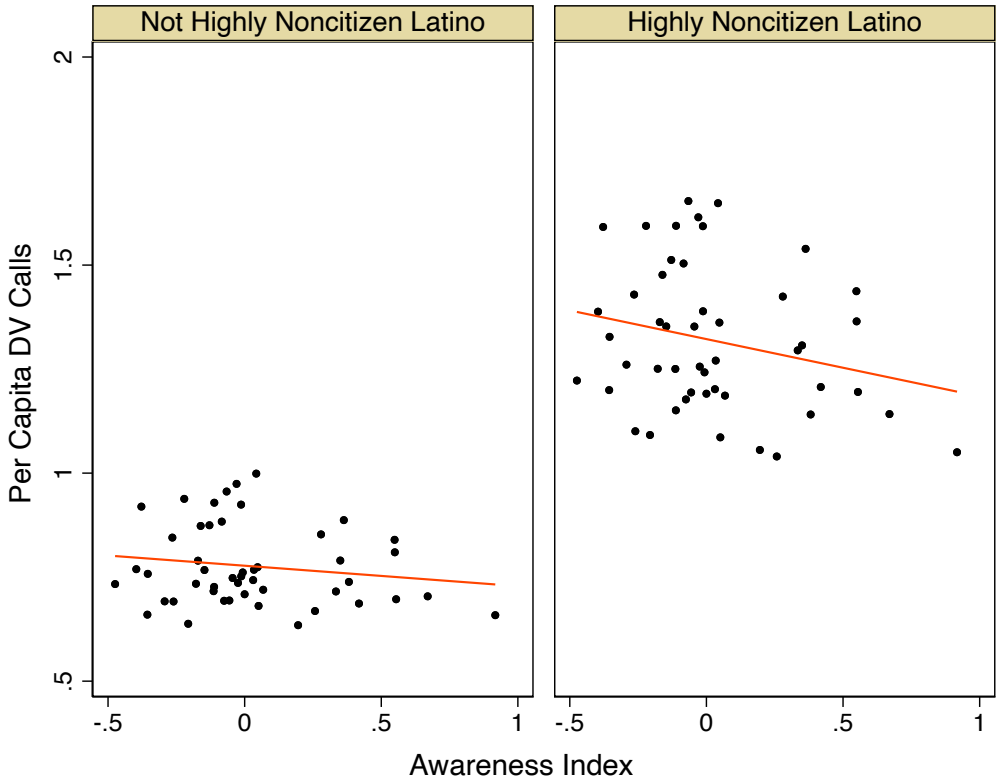


Figure 3. Awareness Index and Monthly Immigration Enforcement Actions



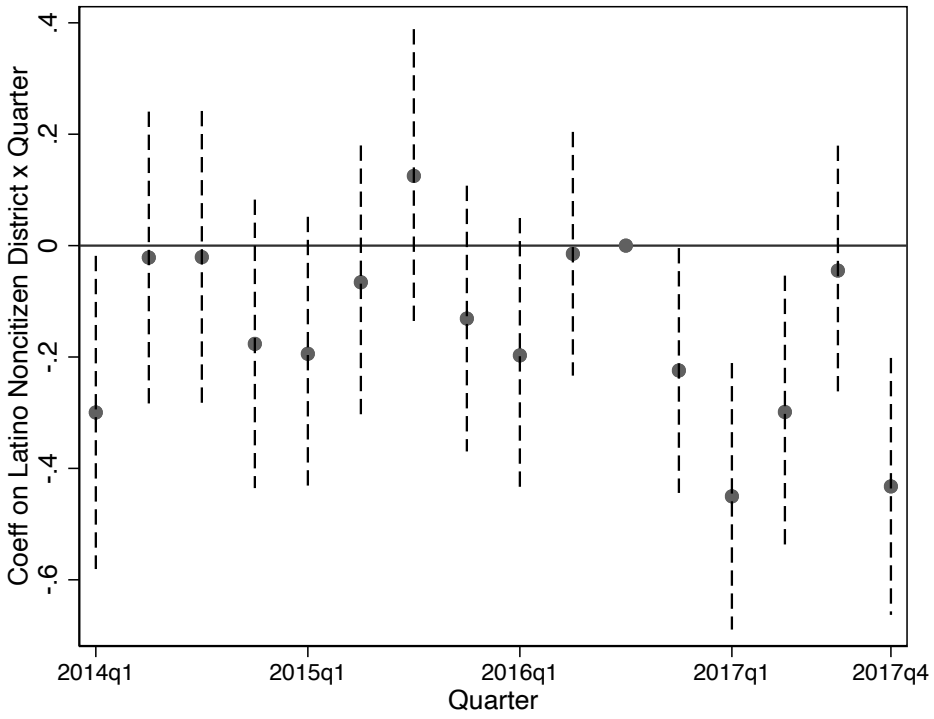
Source: Transactional Records Access Clearinghouse, ICE Deportations and ICE Detainers (2014-2017).
Notes: Each dot plots the number of ICE immigration enforcement actions by the immigration enforcement awareness level in the corresponding month, as measured by the awareness index described in Eq. 2.

Figure 4. Monthly Domestic Violence Calls by Immigration Awareness and District Type



Notes: Each dot on the graphs shows the mean number of domestic violence calls per 1,000 residents according to the level of immigration enforcement awareness, as measured by the awareness index described in Eq. 2, and according to whether the district has a high share of Latino noncitizens (Latino noncitizen population share in the 75th percentile).

Figure 5. Quarterly Domestic Violence Calls per 1,000 Residents in Latino Noncitizen Districts vs Other Districts before and after the 2016 Election



Notes: Figure plots the β_t coefficients from Eq. 5 on the interaction between the Latino noncitizen district dummy and the quarter. Dashed vertical lines represent 95% confidence intervals for each estimate.

Appendix A. Criminal Activity and Immigration Enforcement Awareness

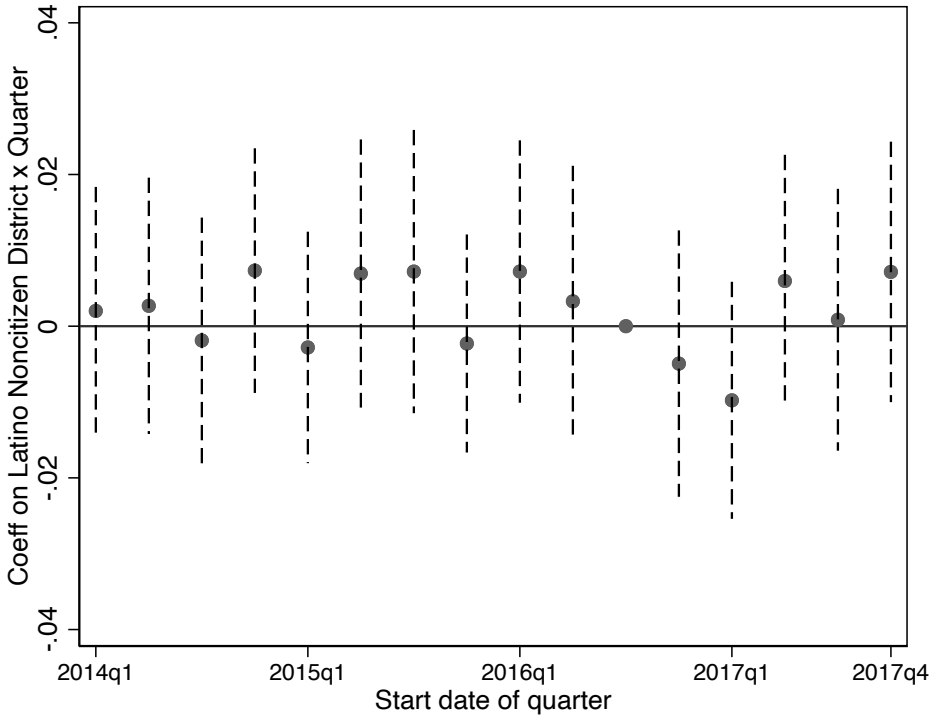
We use calls made to the police as a proxy of community willingness to engage with law enforcement. However, calls reflect both reporting behavior and criminal activity. During periods of heightened immigration enforcement awareness, Latino noncitizens may be wary of committing crime out of fear the police and, by extension, immigration authorities may apprehend them.

Without self-reported victimization data, we are limited in our ability to distinguish non-reporting from decreases in criminal activity. In the absence of such data, we examine patterns in homicide. Research has established a clear link between crime severity and the likelihood of report; the more severe the "loss, harm, threat, or insecurity generated by a criminal incident, the more likely it is to be reported" (Skogan, 1976). As such, criminologists frequently rely on reports of violent crime (i.e.., homicide, robbery, aggravated assault, burglary, larceny, motor vehicle theft, and arson) to study crime trends (Hart & Rennison, 2003). We focus here on LAPD reports of homicide because, unlike other serious crimes, homicides do not require victim report to be identified by police. As such, homicides are less susceptible to selection in reporting, as might be the case with a crime such as motor vehicle theft, where car ownership, insurance coverage, and claim filing behavior may vary by immigrant status.

In order to determine if levels of criminal activity in Latino noncitizen districts are disproportionately affected by immigration enforcement awareness, we perform the same event study analysis outlined in Eq. 5, but swap domestic violence calls for reported homicides per 1,000 residents.[46] Sustained decreases in homicide rates in Latino noncitizen districts after the 2016 election would suggest that our results are driven mainly by decreases in criminal activity. Figure A plots the β_t coefficients from Eq. 5, which show the difference in homicide rates prior to and post-Trump's election in Latino noncitizen districts, compared to other districts. When compared to other districts, homicide rates in Latino noncitizen districts trended downward prior to the election but did not persist in the post-election period. Additionally, throughout the study period, differences in homicide rates across the two types of districts were not statistically different from one another. Absent self-reported victimization data, this exercise provides suggestive evidence that declines in criminal activity cannot account for call declines in Latino noncitizen districts during periods of heightened immigration enforcement awareness.

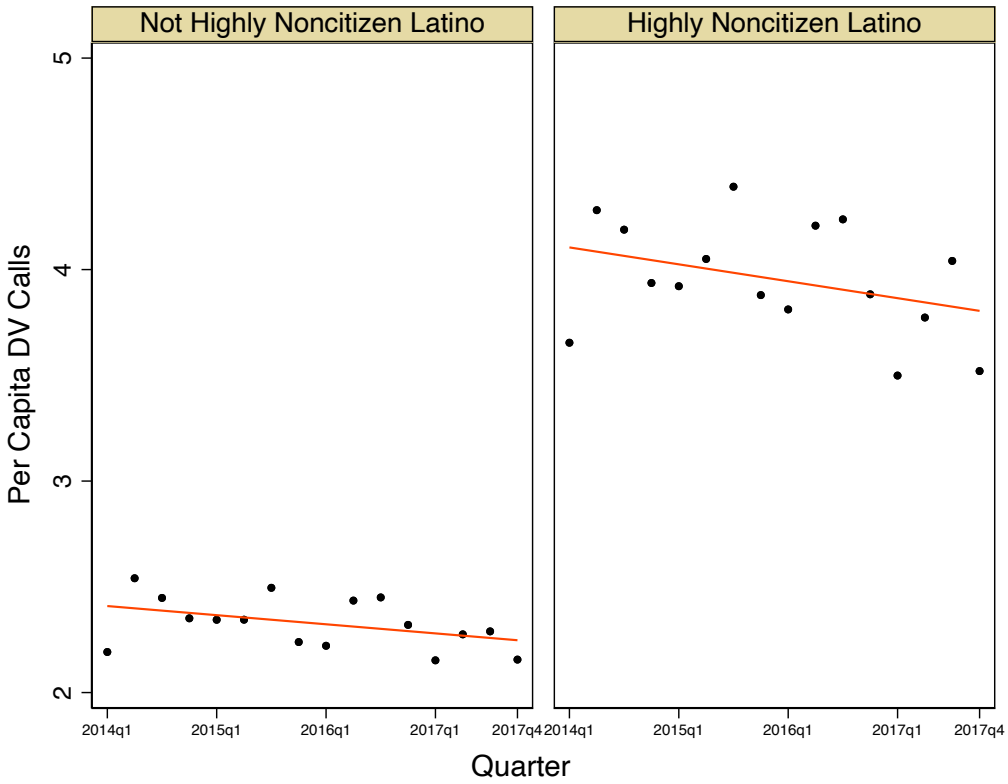
[46] We identified homicides as those with crime code 110 in LAPD crime data retrieved from the city's open data webpage (https://data.lacity.org/A-Safe-City/Crime-Data-from-2010-to-Present/y8tr-7khq).

Figure A. Quarterly Homicides Reported to the LAPD per 1,000 Residents in Latino Noncitizen Districts vs Other Districts before and after the 2016 Election



Notes: Figure plots the β_t coefficients from Eq. 5 on the interaction between the Latino noncitizen district dummy and quarter where the dependent variable is the number of homicides reported to the LAPD per 1,000 residents. Dashed vertical lines represent 95% confidence intervals for each estimate.

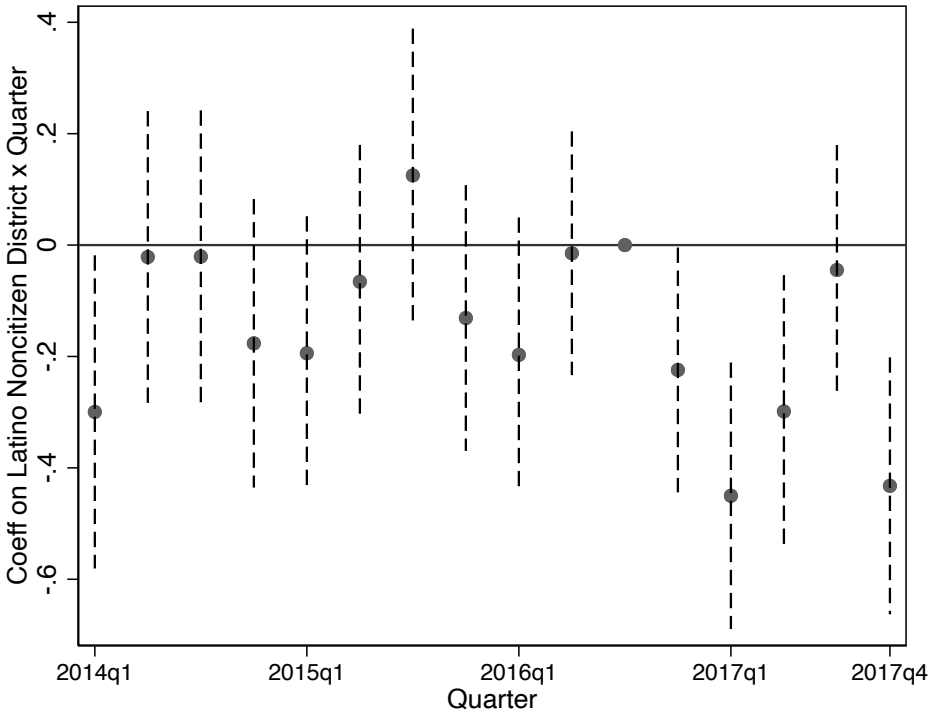
Appendix B. Quarterly Domestic Violence Calls by District Type over Study Period



Notes: Each dot on the graphs shows the mean number of LAPD Calls for Service per 1,00 residents by quarter, and according to whether the district has a high share of Latino noncitizens—one with a share of Latino noncitizens in the 75th percentile.

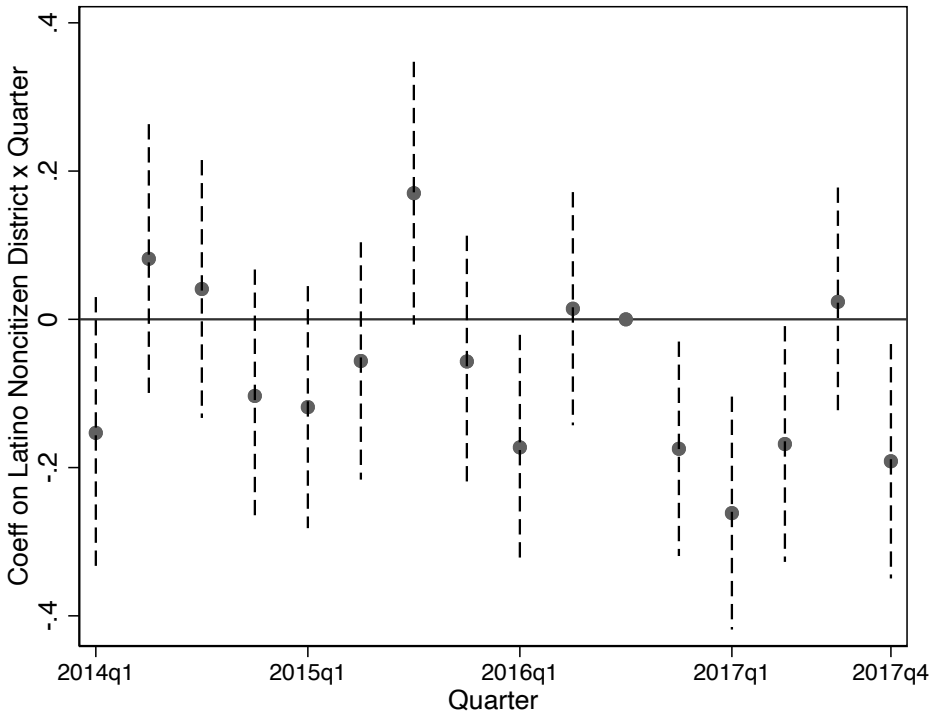
Appendix C. Event Study Analyses

Figure C.1. Quarterly DV Calls per 1,000 Residents in Latino Noncitizen Districts vs Other Districts before and after the 2016 Election



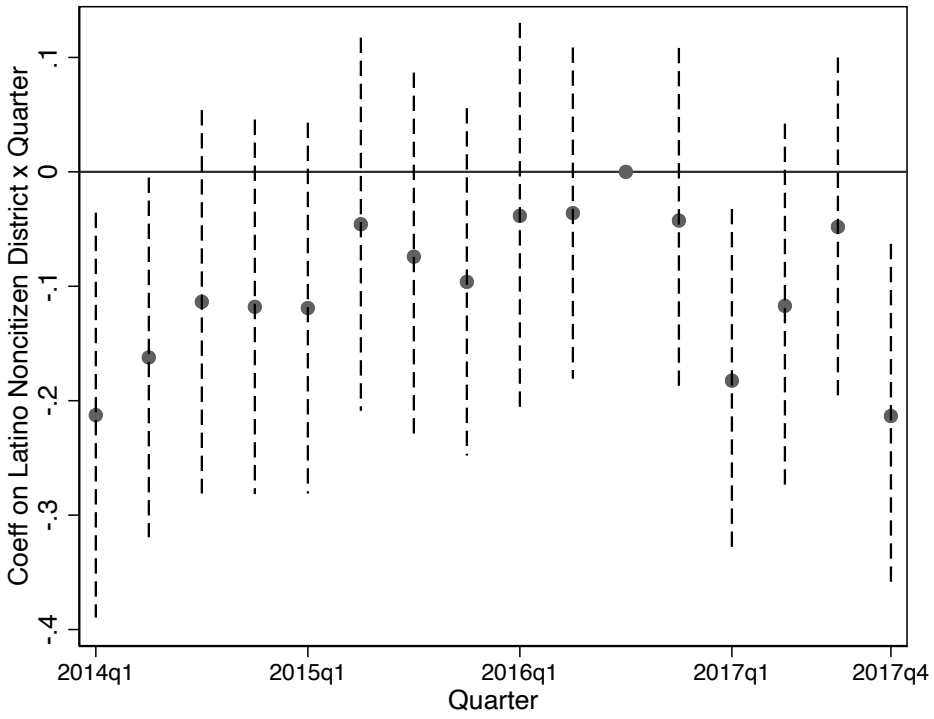
Notes: Figure plots the coefficients on the interaction between the Latino noncitizen district dummy and a quarterly time trend. Dashed vertical lines represent 95% confidence intervals for each estimate.

Figure C.2. Quarterly Violent DV Calls per 1,000 Residents in Latino Noncitizen Districts vs Other Districts before and after the 2016 Election



Notes: Figure plots the β_t coefficients from Eq. 5 on the interaction between the Latino noncitizen district dummy and the quarter. Dashed vertical lines represent 95% confidence intervals for each estimate.

Figure C.3. Quarterly Nonviolent DV Calls per 1,000 Residents in Latino Noncitizen Districts vs Other Districts before and after the 2016 Election



Notes: Figure plots the β_t coefficients from Eq. 5 on the interaction between the Latino noncitizen district dummy and the quarter. Dashed vertical lines represent 95% confidence intervals for each estimate.