Immigration Enforcement, Police Trust and Domestic Violence

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Abstract

Domestic violence is a serious under-reported crime in the United States, especially among undocumented women given their reluctance to seek assistance for fear of deportation. While the Violence Against Women Act (VAWA) allows battered immigrants to petition for legal status without relying on abusive U.S. citizen or legal permanent resident spouses, we find that intensified interior immigration enforcement has curbed the VAWA self-petition rate. In contrast, sanctuary policies limiting the cooperation of law enforcement with Immigration Customs Enforcement partially counteract that impact. Understanding survivors' responses to immigration policy is crucial given growing police mistrust and vulnerability to crime among immigrants.

Keywords: Immigration Enforcement, Trust Acts, Undocumented Immigration, United States.

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"He told me nobody would help me, because I don't have papers",
Domenica, The New York Times, June, 2018

1.   Introduction

The past decades have witnessed an extraordinary growth in immigration enforcement that relies heavily on state and local law enforcement to apprehend undocumented immigrants. Police testimony, anecdotal reports, and empirical research suggest local police involvement in immigration enforcement increases fear and mistrust among immigrant communities, reducing their willingness to engage with the police (Nguyen and Gill 2015). In response, some states and localities have limited the cooperation of their law enforcement personnel with Immigration Customs Enforcement (ICE) via, so-called, sanctuary policies.[3] These are state Trust Acts, as well as local level ordinances, resolutions and practices intended to increase community trust and cooperation with the police. This study provides the first empirical evidence on how domestic violence reporting among immigrants responds to interior enforcement and sanctuary policies.

Domestic violence is a serious under-reported crime in the United States, with 20 people being physically abused by an intimate partner every minute.[4] Undocumented women are particularly prone to this type of violence given their low socio-economic status and frequent dependence on their partners' income –traits linked to domestic violence (Aizer 2010).[5] Furthermore, partners of undocumented immigrant women often use immigration status as a control mechanism to ensure they do not leave an abusive relationship.[6,7] While

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[3] Los Angeles Policy Department. 2009. "The LAPD Fights Crime, Not Illegal Immigration." *LA Times*, Oct. 27. Available at: http://articles.latimes.com/2009/oct/27/opinion/oe-bratton27

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

[5] According to the National Violence Against Women Survey (NVAWS), approximately 23 percent Hispanic/Latino females are victimized by intimate partner violence during their lifetimes. In addition, forty-eight percent of Latinas report that their partner's violence increased after they immigrated to the United States (Tjaden and Thoennes 2000).

[6] See: https://www.nationallatinonetwork.org/safety-planning/systems-based-safety-and-security-from-the-aggressor/143-english/facts-statistics

[7] Furthermore, immigrant women are very likely to have at least one U.S.-born citizen child (Passel 2006). Fear of losing their children precedes legal status, language or money considerations when deciding whether to report the behaviour to the authorities (Kasturirangan, Krishnan, and Riger 2004) .

undocumented immigrant survivors still qualify for protections under the 1994 Violence Against Women Act (VAWA),[8] intensified enforcement has resulted in greater reluctance to seek assistance for fear of deportation (Orloff, Jang, and Klein 1995) . This situation might have deteriorated further following the Administration's June 11, 2018 decision to disallow protection from deportation on the grounds of domestic violence [9]

Understanding how domestic violence reports by immigrants respond to immigration enforcement and sanctuary policies is crucial given the high economic and social cost of domestic violence and the growing share of mixed-status marriages.[10,11,12]

To our knowledge, this is the first study examining how tougher immigration enforcement, as well as the subsequent policies limiting law enforcement cooperation with ICE, might impact VAWA self-petitions. As such, it contributes to the growing literature analyzing the impact of immigration enforcement on undocumented immigrants (e.g. Amuedo-Dorantes, Arenas-Arroyo, and Sevilla 2018; Amuedo-Dorantes and Arenas-Arroyo, n.d., 2018; Bohn, Lofstrom, and Steven 2014) , as well as to our understanding of the impact of sanctuary-city practices (Wong 2017). In addition, the analysis makes an important contribution to the domestic violence literature examining the response of domestic violence reports to other types of changes. For instance, Miller and Segal (2016) show that having more female officers increases the number of domestic violence incidents reported to the police. In our case, we explore how the adoption of tougher immigration enforcement policies, followed in some instances by the adoption of practices or formal policies limiting

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[8] Under the 1994 VAWA, undocumented immigrant victims of domestic abuse can petition for legal status without relying on the sponsoring of their abusive citizen/legal permanent resident spouse, parent or child.

[9] See: https://www.nytimes.com/2018/06/11/us/politics/sessions-domestic-violence-asylum.html

[10] The World Health Organization describes violence against women as a "global public health problem of epidemic proportions." For a detailed discussion of these costs and the urgency of this problem, please visit: http://www.who.int/mediacentre/news/releases/2013/violence_against_women_20130620/en/

[11] Costs of intimate partner violence (IPV) against women alone in 1995 exceeded an estimated $5.8 billion. These costs included nearly $4.1 billion in the direct costs of medical and mental health care and nearly $1.8 billion in the indirect costs of lost productivity.
See: https://www.cdc.gov/violenceprevention/intimatepartnerviolence/consequences.html

[12] The share of married couples with at least one non-citizen member per married couples has increased from 7 percent to 10 percent between 2001 and 2016.

law enforcement cooperation with ICE, might affect VAWA self-petitions filed by undocumented immigrants to the police. Understanding these impacts is crucial given the current policy environment of heightened immigration enforcement and the Administration's decision to consider domestic violence as proper grounds for protection from deportation, even if referred to individuals seeking asylum.

The paper is organized as follows. Section 2 provides some background on violence against women and immigration policy on that topic. Section 3 describes the data used in the analysis, whereas Section 4 details the methodological approach. Section 5 presents the main findings, followed by a number of identification and robustness checks. Finally, Section 6 summarizes our findings and closes the study.

2. Violence Against Women Acts and Immigration Policy

Remaining married is essential for foreign spouses of U.S. citizens or LPRs who wish through adjust their temporary status and apply for lawful permanent residence under the family-based category. According to the Immigration and Naturalization Act (INA) provisions, foreign spouses of U.S. citizens and lawful permanent residents (LPR) can be sponsored by their spouses as long as they are living together. This requirement tends to discourage immigrant spouses from leaving abusive marriages.

To address this problem, the 103rd Congress included three provisions related to abused aliens in the Violence Against Women Act (VAWA) of 1994:[13] (1) self-petitioning by abused spouse and children, (2) suspension of deportation, and (3) cancelation of removal. The House Judiciary Committee explained that "the purpose of permitting self-petitioning is to prevent the citizen or resident from using the petitioning process as a means to control or

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[13] VAWA is Title IV of the Violent Crime Control and Law Enforcement Act of 1994, P.L. 103-322.
The Violence Against Women Act (VAWA) of 1994 and its subsequent reauthorizations in 2000 and 2005 authorized funding related to domestic violence for enforcement efforts, research and data collection, prevention programs, and services for victims.

abuse an alien spouse."[14] The 1994 VAWA was the first federal law addressing domestic violence crimes in mixed-status marriages, which have been on the rise. As shown in Figure 1, the share of marriages between a citizen and a non-citizen has grown from slightly over 7 percent in 2001 to more than 10 percent in 2016. Under the new legislation, battered immigrant spouses and children could gain legal immigration status, independent of their batterers. Immigrant spouses had the right to self-petition for legal residency, if they could prove:

1. They entered marriage "in good faith",[15]

2. The petitioner's deportation would result in "extreme hardship" to either herself or her child,[16]

3. They are of "good moral character",[17]

4. Either the self-petitioner or any of her children had been battered or had been the subject of extreme cruelty perpetrated by the spouse during the marriage,[18]

5. The batterer is a United States citizen or a lawful permanent resident,[19] and

6. The petitioner resided in the United States with her spouse.[20]

It is also worth noting that, although both men and women can be the victims of domestic violence, women are more prone to this type of violence (Nelson, Bougatsos, and Blazina 2012). In addition, being foreign-born can make matters worse. Immigrant women are more vulnerable than their U.S.-born counterparts to endure domestic violence due to cultural and religious norms, economic circumstances and language barriers. Immigrant victims of Intimate Partner Violence (IPV) may choose not to tell authorities of their abuse

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[14] U.S. Congress. House Committee on the Judiciary. Violence Against Women Act of 1993, report to accompany H.R. 1133, 103rd Cong., 1st Sess., H. Rept. 103-395, p. 37.
[15] VAWA I § 40701(a)(1)(C)(iii)(1).
[16] AWA I § 40701(a)(1)(C)(iv)(II).
[17] VAWA I § 40701(a)(1)(C)(iii).
[18] VAWA I § 40701(a)(1)(C)(iii)(I).
[19] VAWA I § 40701(a)(1)(C)(iii).
[20] VAWA I §§ 40701(a)(1)(C)(iii), 40701(a)(2)(B)(ii).

for fear to being deported if they separate from their abuser. In that regard, (Raj et al. 2005) show that the odds of IPV reporting are higher for immigrant women who had spousal dependent visas or whose partners refused to change their immigration status or threatened them with deportation, than for other immigrant women. Finally, other demographic traits also seem to play a critical role. Specifically, younger and minority immigrant women are more likely to experience domestic violence (Breidling et al. 2014). According to prior studies, forty-eight percent of Latinas report that their partner's violence against them increased after they immigrated to the United States. Similarly, a survey of immigrant Korean women to the United States found that 60 percent had been battered by their husbands (Tjaden and Thoennes 2000).

3.   Data Sources and Descriptive Statistics

Our purpose is to learn how immigration policy can affect VAWA self-petitions. Specifically, we wish to gauge the effect that the intensification of immigration enforcement that has taken place throughout the country since the early 2000s, followed by the restricted cooperation of some police departments with ICE, influences the granted number of VAWA self-petitions. To that end, we combine state-level data on VAWA self-petitions over the 2000-2016 period, with two population-weighted indexes: one created using detailed data on interior immigration enforcement measures at the local and state levels, and another one using information on Trust Acts enacted at the state level and on the adoption of alike practices by what have been labelled as sanctuary cities.

3.1   VAWA Self-Petitions

Data on VAWA self-petitions were obtained from the United States Citizenship and Immigration Services (USCIS) through a Freedom of Information Act (FOIA) request. Figure 1 displays the mean share of VAWA self-petitions per one thousand immigrants computed using state-year shares. Since their inception, the share of VAWA self-petitions

has been rising until it reached its peak around 2007. From 2008 onward, coinciding with the implementation of Secure Communities and the intensification of interior immigration enforcement,[21] the share started to drop up until 2014, when prioritized immigration enforcement (Priority Enforcement Program, PEP) was announced by the Department of Homeland Security Secretary, Jeh Johnson, as a replacement for Secure Communities.[22] On average, as shown in Table 1, yearly VAWA self-petitions at the state level averaged 0.21 per 1,000 foreign-born –that is, 21 per 100,000 non-citizen, over the period under consideration.

3.2   Immigration Enforcement

We collect historical data on various immigration enforcement measures detailed in Table A in the Appendix. Data on 287(g) agreements at the county and state levels is gathered from the ICEs 287(g) Fact Sheet website[23]. Data on the rolling of the Secure Communities program at the county level is compiled from ICE's releases on activated jurisdictions.[24] Once it reaches nationwide coverage, Secure Communities is replaced by the Priority Enforcement Program in 2015. Finally, data on state level omnibus immigration laws is gathered from the National Conference of State Legislatures.[25]

Since these immigration policies have been enacted at different geographic levels and points in time, we construct an index that serves as a proxy for the intensification of immigration enforcement and provides several advantages over inclusion of multiple policy

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[21] As we shall explain in what follows, Secure Communities is one of the various interior immigration enforcement programs adopted by the Department of Homeland Security over the time period under examination. It relies on partnerships among federal, state, and local law enforcement agencies to ensure the identification and removal of undocumented immigrants. The program, which has been responsible for the large increase in deportations between 2008 and 2014, was replaced by the Priority Enforcement Program (PEP) in 2015. On January 25, 2017, it was reinstated by the Department of Homeland Security per an executive order signed by President Donald Trump.

[22] PEP is an Immigration Customs Enforcement (ICE) program that works with state and local law enforcement to identify for removal migrants who come into contact with law enforcement and are among the Department of Homeland Security (DHS) immigration enforcement priorities.

[23] https://www.ice.gov/factsheets/287g

[24] See: https://www.ice.gov/doclib/secure-communities/pdf/sc-activated.pdf

[25] See: http://www.ncsl.org/documents/statefed/omnibus_laws.pdf

indicators.[26] *First*, the index not only addresses the distinct geographic coverage of various measures (some at the county level, others at the state level) through the construction of a population weighted measure of immigration enforcement but, in addition, it accounts for the number of months each measure was in place in that particular year. In that manner, it allows us to capture the depth and intensity of immigration enforcement in a given MSA, as opposed to just whether enforcement existed or not. *Second*, immigration enforcement is an interconnected system administered by various federal, state, and local authorities and agencies with similar missions and, some measures, such as Secure Communities, were enacted as a continuum of prior existing measures, like the 287(g) program. Not only are the various immigration enforcement initiatives correlated but, in addition, the effectiveness of any given measure is often linked to its combination with other initiatives. The index allows us to better address this interconnectedness by combining the various policies into an index. *Third*, the index provides a more manageable and comprehensive way of measuring and assessing the overall impact of intensified interior immigration. [27]

To construct our index, we calculate the following population-weighted index for each enforcement initiative *k*:

(1) $IE^k_{st} = \frac{1}{N_{2000}} \sum_{c \in s}^{S} \frac{1}{12} \sum_{m=1}^{12} \mathbf{1}(E_{m,c}) P_{c,2000}$

where $\mathbf{1}(E_{m,c})$ is an indicator function that informs about the implementation of a particular policy in county *c* during month *m* in year *t*. The index IE^k_{st} takes into account: (1) the number of months during which policy *k* was in place in year *t*,[28] as well as (2) the size of the

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[26] It is worth noting that the index is a proxy of the intensity of immigration enforcement to which respondents in a particular MSA might be exposed to. At the end of the day, the true intensity of any enforcement measure will inevitably vary across jurisdictions as each one is different and might implement alike measures more or less strictly depending on who is in charge of its implementation or other unobserved local traits. To address that limitation, we include area fixed-effects as well as area-specific time trends intended to capture such idiosyncrasies.

[27] In this manner, we capture the depth or intensity of enforcement, versus whether enforcement existed or not. See Amuedo-Dorantes, Arenas-Arroyo, and Sevilla (2018)

[28] Specifically, the summation over the 12 months in the year captures the share of months during which the measure was in place in any given year.

state's population affected by its implementation.[29] The overall enforcement to which women

living in state *s* and year *t* are exposed to is then computed as the sum of the indices for each

enforcement initiative at the (state, year) level:[30]

(2) $IE_{s,t} = \sum_{k \in K}^{K} IE_{s,t}^{k}$

Figure 3 displays the evolution of interior immigration enforcement as captured by the

index from equation (2) over the time period under examination. Interior immigration

enforcement took off after 2006, following the rolling adoption of 287(g) agreements and,

later on, Secure Communities, reaching a peak around 2012. Over the period under

examination, the intensity of police-based immigration enforcement averaged 0.21 (see Table

1).[31]

3.3   Trust Acts and Sanctuary City Practices

Finally, we also gather data on the enactment of Trust Acts, as well as on the adoption

of the so-called sanctuary city practices. A non-negligible number of cities, counties, and

states have either adopted formal laws limiting the cooperation of their law enforcement with

ICE through the enactment of Trust Acts[32] or, alternatively, through ordinances, resolutions,

regulations or simply the practice of refusing to observe ICE detainers.[33] These practices,

most of which flourished after the implementation of the Secure Communities Program, were

aimed at increasing community trust and cooperation with the police, particularly in

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[29] To weigh it population-wise, we use the term: $P_{c,2000}$ –namely, the population of county *c* according to the 2000 Census (prior to the rolling of any of the enforcement initiatives being considered), and *N* –the total population in state *s*.

[30] Where *k* refers to each policy, *i.e.*: 287(g) local agreements, 287(g) state agreements, Secure Communities, Omnibus Immigration Laws.

[31] The index values ranged from 0 (no enforcement) to 3.98 (close to full-year state-wide implementation of all four police-based immigration enforcement measures being considered).

[32] For instance, California Senate Bill 54 effectively makes California a "sanctuary state" by legalizing and standardizing state-wide non-cooperation policies between California law enforcement agencies and federal immigration authorities. See: https://www.fairus.org/legislation/state-local-legislation/california-sanctuary-state-bill-sb-54-summary-and-history

[33] An ICE detainer—or "immigration hold"—is one of the tools used by ICE to apprehend individuals who come in contact with local and state law enforcement agencies. It is a written request that a local jail or other law enforcement agency detain an individual for an additional 48 hours (excluding weekends and holidays) after his or her release date in order to provide ICE agents extra time to decide whether to take the individual into federal custody for removal purposes.

immigrant communities. Their adoption rendered these localities the label of "sanctuary cities."[34]

As with immigration enforcement, we opt for combining all the various actions on the part of local and state-level law enforcement departments into a separate index in order to gauge their impact. Specifically, using information on the adoption timing of such practices, we construct a population-weighted index indicative of the adoption of Trust Acts or alike sanctuary city practices at the state-year level, which we refer to as: $SCP_{s,t}$:[35]

$$(3) \quad Sanctuary\ City\ Practices_{s,t} = SCP_{s,t} = \sum_{k \in K}^{K} [\frac{1}{N_{2000}} \sum_{c \in s}^{S} \frac{1}{12} \sum_{m=1}^{12} \mathbf{1}(SCP_{m,c}) P_{c,2000}]_{s,t}^{k}$$

Figure 3 displays the evolution of such practices, which takes off after a peak in interior immigration enforcement and seems to stabilize after 2014. Because the vast majority of Trust Acts creating the so-called sanctuary cities were not enacted until 2013, the share of the immigrant population residing in sanctuary areas averaged 5 percent between 2000 and 2016 (see Table 1).[36]

4. Methodology

In order to learn about the impact of tougher interior immigration enforcement and the adoption of sanctuary city practices on the rate of VAWA self-petitions, we exploit the temporal and geographic variation in the adoption of both policies using panel data for the 2000-2016 period:

$$(4) \quad y_{s,t} = \alpha + \beta_1\ IE_{s,t} + \beta_2\ SCP_{s,t} + X'_{s,t}\ \beta_3 + \gamma_s + \theta_t + \gamma_s t + \varepsilon_{s,t}$$

where $y_{s,t}$ is our outcome variable – the share of VAWA self-petitions per 100,000 non-citizen population in state *s* and year *t*. The vector $IE_{s,t}$ represents the immigration

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[34] See: https://cis.org/Map-Sanctuary-Cities-Counties-and-States

[35] Where *k* refers to whether the adoption of the local or statewide Trust Acts, ordinances, regulations, resolutions, policies or, simply, practices.

[36] Table 1 also displays the means and standard deviations for other controls included in our study. For instance, population wise, the share of Hispanics in the various U.S. states averages 10 percent and unemployment rates 6 percent.

enforcement index capturing the intensity of enforcement to which individuals living in state s in year t are exposed to according to equation (2). Likewise, the vector $SCP_{s,t}$ represents the sanctuary city practice index, and it captures the share of individuals in state s and year t covered by Trust Acts or residing in what have been labeled as sanctuary localities (see equation (3)).

In addition to our key controls, equation (4) includes a vector of state-level time-varying characteristics (*i.e.* $X_{s,t}$).[37] The latter include: the ratio of female to male wages constructed following Aizer (2010),[38] the annual unemployment rate in the state and the natural log of per capita income in the state and year. These are included to identify the impact of relative income separately from the impact of general economic conditions in the state. We also include a series of race and ethnicity controls capturing the share of Hispanics, blacks and Asians, as well as the natural log of the number of women between the ages of 15 and 44 in the state in a given year. Lastly, the vector $X_{s,t}$ includes information on the natural log of non-intimate homicides to address secular trends in violent crime.

Finally, equation (4) includes a series of state and year fixed effects, as well as state-specific linear trends. Combined, the aforementioned controls allow us to capture a variety of statewide policy changes, such as welfare reform, expansions in the EITC, changes in Medicaid eligibility, or state laws potentially correlated to domestic violence rates. They also help us capture linear trends in domestic violence in any given state.

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[37] Table B in the Appendix defines each additional regressor and its source.

[38] Following Aizer (2010), we construct the ratio of female to male wages. This measure overcomes the endogeneity of individual wages and accounts for the fact that theory predicts that potential, not actual, wages affect domestic violence. The measure is reflects the exogenous demand for female and male labor, and it is based on the index of labor demand originally proposed by (Bartik 1991). Exploiting the history of sex and race segregation by industry, we construct measures of local labor market wages of women (men) based on wage changes in industries dominated by women (men).

Equation (4) is estimated by ordinary least squares (OLS). Observations are weighted by the non-citizen population in the (state, year) cell, and standards errors are clustered at the state level.

5. Immigration Policy and VAWA Self-Petitions

5.1 Main Findings

Our preliminary results from estimating equation (4) are shown in Table 2. The first model specification does not include any of the state-level time-varying traits that might be considered endogenous, whereas the second model specification does. Both model specifications include state and year fixed-effects, as well as state-specific time trends to account for any unobserved state-level time-varying traits not accounted for in our modeling.[39]

Regardless of the model specification used, the estimated coefficients reveal the damage caused by intensified immigration enforcement, as well as the important role played by sanctuary city practices in counteracting undocumented immigrants' fear to report to the police in the midst of intensified enforcement. Specifically, a one standard deviation increase in immigration enforcement, approximately equal to 1.3 times the average level of interior immigration enforcement during the 2000 through 2016 period, curbs the VAWA self-petition rate by 10 percent. In contrast, a one standard deviation increase in sanctuary city practices, equal to 4 times its average level over the 2000 through 2016 time span we focus on, boosts the rate of petitions by 2 percent.

5.2 Identification Challenges

One of the main underlying assumptions in our empirical strategy is that differences in the VAWA self-reports across states did not predate the adoption of intensified

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[39] We also experiment with including state-year fixed effects. Our results prove robust to the use of that alternative state-time level control. Therefore, we opt for the less restrictive use of a state-level temporal trend.

immigration enforcement or sanctuary city practices. To assess if that was the case, we estimate equation (5), which adds a full set of dummies spanning from four years prior to the adoption of any immigration enforcement or sanctuary city practice in the state in question to the controls in equation (4), as follows:

(5) $\quad y_{s,t} = \alpha + \sum_{b=-3}^{-1} \delta_b^{IE} D\_IE_{s,b} + \sum_{b=-3}^{-1} \delta_b^{TA} D\_SCP_{s,b} + \beta_1 \ IE_{s,t} + \beta_2 \ SCP_{s,t} +$

$\qquad + X'_{s,t} \ \beta_3 + \gamma_s + \theta_t + \gamma_s t + \varepsilon_{s,t}$

where $D\_IE_{s,b}$ is a dummy for b years prior to the enforcement index turning positive and $D\_SCP_{s,b}$ is a dummy for b years prior to the sanctuary city practice index turning positive.

Table 3 shows the results from estimating equation (5) via OLS. It is evident that reductions in VAWA self-petitions did not take predate the adoption of tougher immigration enforcement measures by the states, as none of the coefficients for the years preceding the adoption of tougher immigration enforcement are statistically different from zero. Furthermore, the point estimate on the immigration enforcement index continues to be statistically different from zero, with the same one standard deviation increase in immigration enforcement lowering the VAWA self-petition rate by 10 percent. Similarly, the estimates in Table 3 confirm that the positive impact of sanctuary city practices in promoting VAWA self-petitions did not precede the adoption of those policies by the states. Rather, despite the inclusion of the additional placebo indicators, the point estimate on the sanctuary city index is still statistically different from zero and of alike magnitude to the estimate in the second model specification of Table 2.

Another concern when assessing the impact of policies, especially when focusing on a migrant population, is the endogenous exposure to the policies. This endogeneity might stem from the non-random adoption of immigration policies by cities, counties and states, as well as the self-selection of migrants into different locations. For example, undocumented migrants might be sensitive to immigration enforcement due to the inherent risk of

deportation in areas with tougher enforcement. Since migrants, especially undocumented ones, are a relatively mobile population, they might move in response to the adopted enforcement measures. In those instances, exposure to tougher immigration enforcement, in itself, is likely to be endogenous and, in the example just given, result in a downward biased estimate of the impact of intensified immigration enforcement on self-petitions. By the same token, undocumented migrants might feel attracted to more permissive sanctuary locations. If that is the case, the impact of those policies might be overstated.

To assess the degree to which our estimates might be biased due to the non-random adoption of policies and the also non-random residential choices made by undocumented immigrants, we instrument migrants' likely exposure to the two types of immigration policies being examined using information on what their probable residential choices would have been in the absence of such measures. To that end, we utilize information on the past residential locations of non-citizens (in the spirit of Bartel, 1989; Card, 2001; and Cortes and Tessada, 2011; among many others). Specifically, we rely on data from the 1980 Census to construct the share of undocumented immigrants in each state –a share we use to gauge what their most probable location would have been prior to the implementation of the two sets of immigration policies as follows:

(6) $Share\ of\ Undocumented\ Immigrant_{s,1980} = \frac{undocumented\ immigrants_{s,1980}}{undocumented\ immigrants_{1980}}$

We then interact the share in equation (6) with the enforcement and sanctuary city practices indexes in each state and year to instrument for the likely exposure to those measures. The *shift-share* instruments, where the *shifts* are the levels of enforcement or permissiveness adopted by each state in any given year and the *shares* coincide with the share in equation (6) above, are highly correlated to our two policy measures. The correlation is based on immigrants' entrenched tendency to reside in areas with established networks of their countrymen (Bartel 1989; Card 2001; Cortes and Tessada 2011, among others).

Table 4 displays the results from this additional identification check. The last rows confirm that the instrument fulfills basic requirements. The F-stats from the first stage regressions are larger than the recommended size of 10 (Stock and Yogo 2005). The estimated coefficients from the first stage regressions are positive and statistically significant, confirming the entrenched tendency for immigrants to locate in areas with established networks of their countrymen. Finally, the estimates from the second stage regression reveal that the same one standard deviation increase in the enforcement index lowers the VAWA self-petition rate by close to 16 percent, whereas a one standard deviation increase in the sanctuary city practices index raises that rate by 1.19 percent. Hence, as predicted above, our prior estimates provide us with a lower bound of the true impact of tougher immigration enforcement, and a possibly upper bound of the true impact of sanctuary city practices on VAWA self-petitions.

5.3 Robustness Check

Thus far, we have demonstrated that immigration enforcement has curtailed VAWA self-petitions, whereas the adoption of sanctuary city practices has helped counteract that impact. We have also shown that the suggested impacts did not predate the adoption of the policies, and that the impacts are not largely different once we address the potential endogeneity biases afflicting out estimates.

In what follows, we address another common concern when measuring the intensity of immigration enforcement. The latter refers to the fact that the index collapses information on the adoption of various immigration enforcement measures that, despite all of them engaging the local or state law enforcement in alike ways, might look different in other regards, such as their propensity to result in actual deportations. To address this concern, we repeat the estimation of equation (4) using, instead, deportation figures. Specifically, we substitute the immigration enforcement index with the number of deportations related to

immigration charges per 100,000 non-citizen in any given (state, year). Table 5 shows the results from this exercise. A doubling of deportations would lower the VAWA self-petition rate by approximately 0.5 percent. In other words, increased deportations seem to also curtail VAWA self-petition rates. Additionally, just as we had in Tables 2-4, sanctuary city practices continue to counteract that impact. A one standard deviation in the index raises the share of VAWA self-petitions by 2.5 percent.

6. Summary and Conclusions

Using data on VAWA self-petitions by state and year for the 2000 through 2016 period, and exploiting the temporal and geographic variation in the adoption of tougher immigration enforcement and sanctuary city practices limiting the cooperation between law enforcement and ICE, we identify the impact of both sets of policies on the rate of VAWA-self petitions. Specifically, we find that a one standard deviation increase in immigration enforcement, approximately equal to two-thirds of the average increase in interior immigration enforcement over the 2000-2016 period we examine, curbs the rate of VAWA self-petitions by 5.5 percent. Yet, the subsequent adoption of sanctuary city practices helps to partially counteract that impact, raising the rate of petitions by close to 2 percent. The findings, which prove robust to a number of identification and robustness checks, underscore one of the many unintended consequences of tougher immigration enforcement, as well as the value of safeguards to guarantee immigrants feel safe to come forward when they are victims of crimes.

To our knowledge, this is the first study examining how tougher enforcement is affecting the reporting of domestic violence by immigrants, as well as the effectiveness of sanctuary cities created by Trust Acts and alike regulations in counteracting that impact. Aside from contributing to the literature on the consequences of immigration policy on undocumented immigrants and their families (*e.g.* Amuedo-Dorantes, Arenas-Arroyo, and

Sevilla 2018), the analysis informs about domestic violence survivors' behavioral responses to public policies (*e.g.* Iyengar, 2009). Learning about these responses is crucial at a time of growing police mistrust by minorities and heightened immigrant vulnerability to crime given migrants' reluctance to contact law enforcement.

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Table 1: Descriptive Statistics

Statistic	Mean	S.D.	N
Dependent Variable			
VAWA Self-petitions rate	20.66	13.54	867
Independent Variables			
Key Policy Regressors			
Immigration Enforcement	0.66	0.90	867
Trust Acts	0.05	0.22	867
State-level Time-Varying Characteristics:			
Share Hispanic	0.10	0.10	867
Share Black	0.11	0.11	867
Share Asia	0.01	0.03	867
Ln Female Population	0.30	0.02	867
Wage Ratio	1.03	0.18	867
Ln(Income Per Capita)	6.10	0.17	867
Unemployment Rate	0.06	0.02	867
Ln(Violent Crime)	9.48	1.26	867

Table 2: Immigration Policy and VAWA Self-petitions – OLS Estimates

Model Specification:	(1)	(2)
Regressors	Coefficient (S.E.)	Coefficient (S.E.)
Immigration Enforcement (IE)	-2.3499	-2.3010*
	(1.516)	(1.325)
Sanctuary City Practices (SCP)	2.0733**	1.8011**
	(0.910)	(0.700)
Wage ratio		0.3391
		(1.436)
Unemployment rate		8.0622
		(17.418)
Ln(Income Per Capita)		11.9351
		(32.855)
Share Hispanic		-16.9786
		(32.983)
Share Black		-43.6359
		(32.688)
Share Asian		0.0000
		(0.000)
Ln(female population)		32.6597
		(43.742)
Ln(violent crime)		-1.1579
		(8.775)
Observations	867	867
R-squared	0.882	0.883
State FE	Yes	Yes
Year FE	Yes	Yes
State Time Trend	Yes	Yes
Dependent Variable Mean	20.66	

Notes: All regressions include a constant term. Robust standard errors are in parentheses and standards errors are clustered at the state level. ***$p<0.01$, **$p<0.05$, *$p<0.10$.

Table 3: Identification Check #1 – Event Study

Regressors	Coefficient (S. E.)
One Year Prior to the Adoption of IE	-3.3264
	(2.137)
Two Year Prior to the Adoption of IE	-0.9712
	(1.549)
Three Year Prior to the Adoption of IE	-0.1364
	(1.182)
One Year Prior to the Adoption of SCP	0.6383
	(0.591)
Two Year Prior to the Adoption of SCP	-0.1067
	(0.646)
Three Year Prior to the Adoption of SCP	0.3973
	(1.212)
Sanctuary City Practices (SCP)	2.0043**
	(0.847)
Immigration Enforcement (IE)	-3.0470*
	(1.846)
Observations	867
R-squared	0.889
State-level Time-Varying Characteristics	Yes
State FE	Yes
Year FE	Yes
State Time Trend	Yes
Dependent Variable Mean	20.66

Notes: The model includes a constant term, as well as the controls in specification (2) of Table 2. Robust standard errors in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Table 4: Identification Check #2 – Instrumental Variable Estimation

| Regressors	Coefficient (S. E.)
Immigration Enforcement (IE)	-3.7202**
	(1.826)
Sanctuary City Practices (SCP)	1.1289**
	(0.444)
Observations	867
R-squared	0.859
State-level Time-Varying Characteristics	Yes
State FE	Yes
Year FE	Yes
State Time Trend	Yes
Dependent Variable Mean	20.66
First Stage for "IE"	20.04***
IV	(2.55)
Sanderson-Windmeijer Multivariate F-test	108.51
First Stage for "TA"	10.21***
IV	(0.48)
Sanderson-Windmeijer Multivariate F-test	268.7

Notes: The model includes a constant term, as well as the controls in specification (2) of Table 2. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 5: Robustness Check Using Alternative Measure of the Intensity of Enforcement

Regressors	Coefficient (S. E.)
Deportations	-0.0015*
	(0.001)
Trust Acts	5.0213*
	(2.604)
Observations	867
R-squared	0.878
State FE	Yes
Year FE	Yes
State Time Trend	Yes
Dependent Variable Mean	20.66

Notes: The model includes a constant term, as well as the controls in Table 2. Deportations refer to those due to immigration charges. They are measured per 100,000 non-citizens. The data are available from: http://trac.syr.edu/phptools/immigration/charges/deport_filing_charge.php. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Figure 1
Share of Mixed-Citizenship Couples
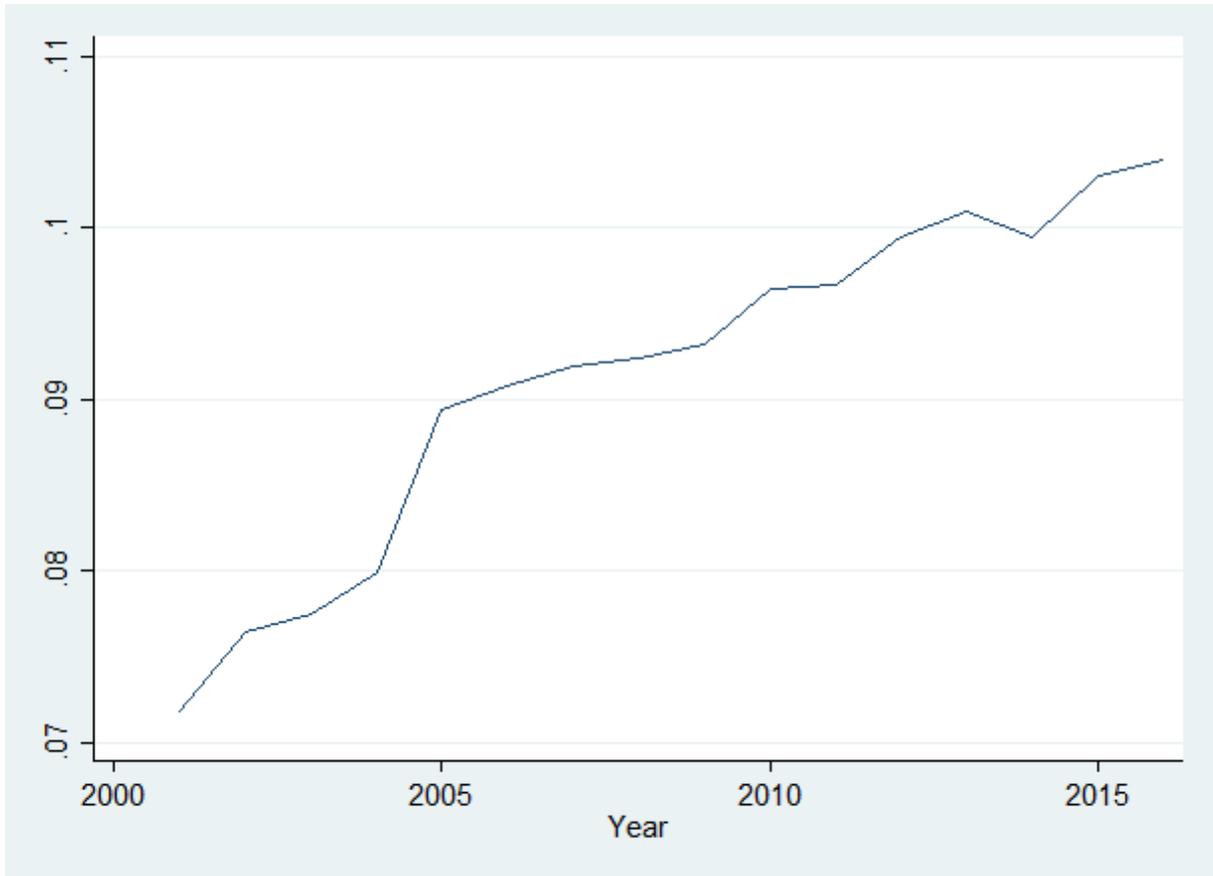
**Notes:** Share of married couples with at least one non-citizen member per married couples.
Source: Authors' calculation using ACS data.

Figure 2
WAVA Self-Petitions per 100,000 Non-Citizen Immigrants
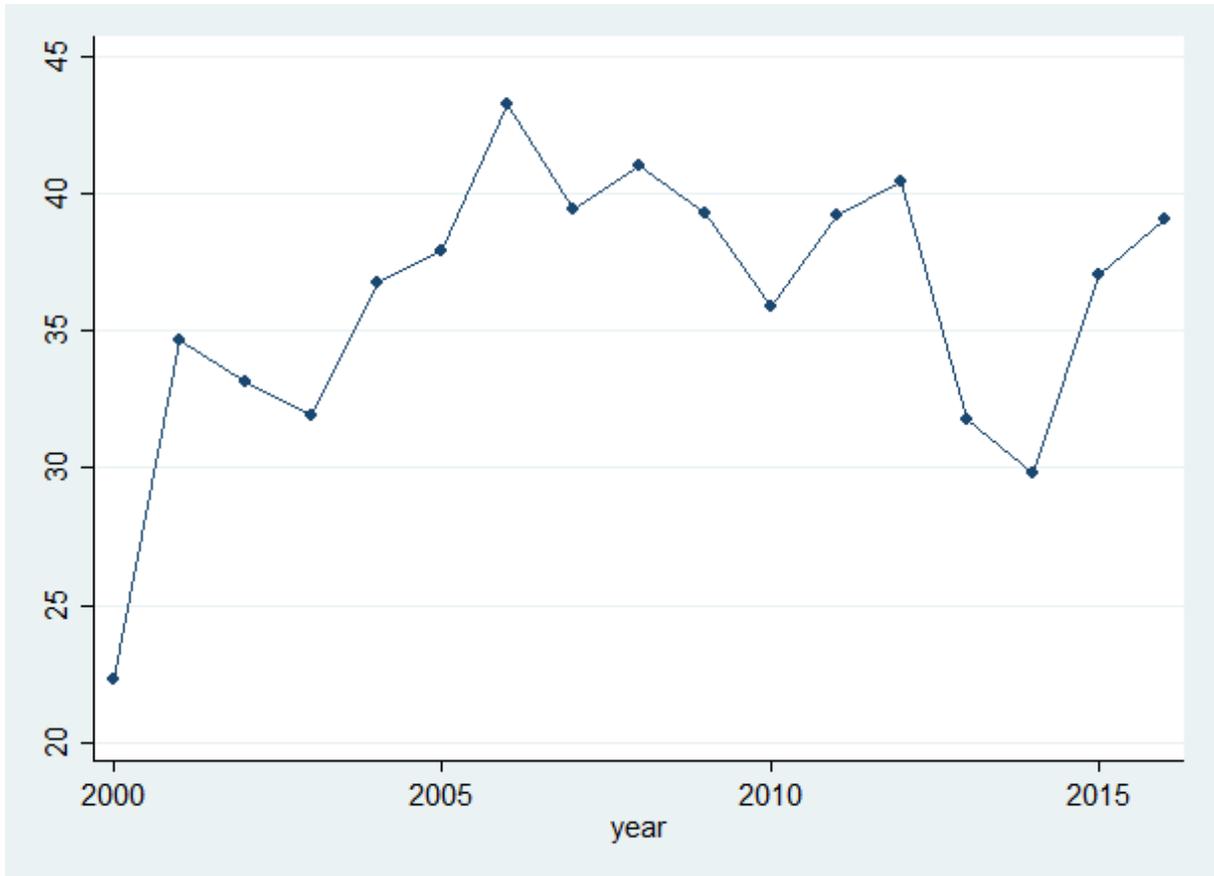
Source: Average VAWA-self petitions form the United States Citizenship and Immigration Services.

Figure 3
Average Values of the Immigration Enforcement and Trust Act/Sanctuary City Practices Indexes
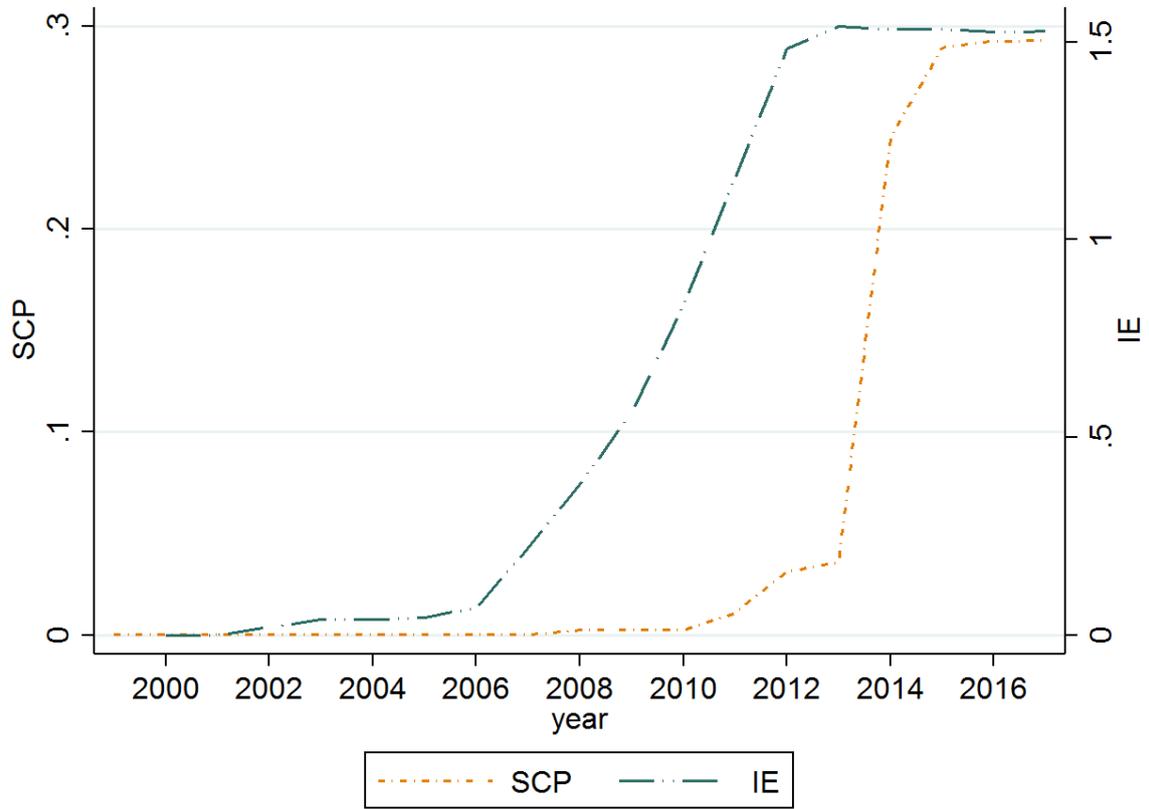
Table A: Immigration Enforcement Programs

Nature of the Law	Law	Years	Where?	Objective	Who implements it?	Scope	Signed by	What it Consists of:
Police-Based Measures	**287(g)**	2002-2012	Street/Jail	Make communities safer by the identification and removal of serious criminals	State and local law enforcement entities	State and Local (County, City or Town)	State and local enforcement entities signed a contract (Memorandum of Agreement - MOA) with the U.S. Immigration and Customs Enforcement (ICE)	There are various functions: **Task Force**: allows local and state officers interrogate and arrest noncitizens during their regular duties on law enforcement operations. **Jail enforcement** permits local officers to question immigrant who have been arrested on state and local charges about their immigration status. **Hybrid model:** which allow participate in both types of programs.
	SC	2009-2014 2017-	Nation's jail and prisons	Identify noncitizens who have committed serious crime using biometric information	Police	Local (County)	Jurisdictions	The program allows for the submission of biometric information on detainees that is contrasted against records in FBI and DHS databases.
	OILs	2010-	Street/Jail	Identification noncitizen	State and local law enforcement entities	State	State governor	Comprehensive laws that may include: • A "show me your papers" clause, enabling the police to request proper identification documentation during a lawful stop. • Require that schools report students' legal status.

Table B: Variable Definitions and Sources

Variable Name	Definition	Source
VAWA Self-petitions Rate	Share of VAWA self-petitions per 100,000 non-citizens by state and year.	United States Citizenship and Immigration Services by Freedom of Information Act request.
Wage Ratio	Ratio of female to male wages constructed as in Aizer (2010)	American Community Survey (2000 to 2016)
Income Per Capita	Per Capita Income by state and year	
Unemployment Rate	Unemployment Rate by state and year	
Share Hispanic pop	Share of Hispanic Population by state and year	
Share Black	Share of Black Population by state and year	
Share Asia Pop	Share of Asia Population by state and year	
Share Female Pop	Share of female population between 15 and 44 years old	
Violent Crime	Violent Crime by state and year	Uniform Crime Reporting Statistics