The Changing Family Structure of American Children with Unauthorized Parents[1]

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Abstract

Tougher immigration enforcement has been responsible for 1.8 million deportations between 2009 and 2013 alone, most of them involving fathers and heads of household. We exploit the geographic and temporal variation in intensified enforcement to gauge its impact on children's propensity to reside in households singly-headed by mothers with absentee spouses, or without their parents in households headed by relatives or friends. Given the emotional, cognitive and long-run socioeconomic costs of being raised in single-headed households or without parents, gaining a better understanding of the collateral damage of heightened enforcement on the families to which these children belong is warranted.

Keywords: Immigration Enforcement, Unauthorized Immigration, Family Structure, United States.

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"We must do everything in our power to keep families together, and to use common sense in our immigration laws. Children deserve better than to lose a parent because of an inflexible law." (Jose Serrano – American politician)

1. Introduction

Since 9/11, the United States has expanded the number of programs aimed at curbing the number of undocumented immigrants by discouraging their entry and, more importantly, facilitating their apprehension and deportation. Altogether, the various programs have been responsible for 1.8 million deportations between 2009 and 2013 (Vaughan 2013). Despite the magnitude of removals and their non-criminal nature for the most part, the implications of a piecemeal approach to immigration enforcement on immigrant families are, yet, to be well-understood.

With this study, we aim to assess how the escalation of immigration enforcement taking place at the local and state levels since the early 2000s has influenced the structure of the families to which 4.5 million of U.S.-born children with an undocumented parent belong. Our focus is on whether intensified enforcement has contributed to raising the prevalence of two specific types of living arrangements: (1) children living in female-headed households with an absentee spouse, and (2) children living without their parents in households headed by relatives or friends.

The sheer size of this demographic makes this question extremely relevant, especially given what we know about the importance of the family context on later outcomes in life. In 2009, twenty-three percent of youth under 18 years of age resided in an immigrant household, and 29 percent of those children had, at least, one undocumented parent (Passel and Cohn 2011). Even though we care about the well-being of all children, regardless of their citizenship status, most of those children are U.S.-born, accounting for 8 percent of all U.S.-born children

in 2012 –twice as many as in 2002 (Passel *et al.* 2014). They will become eligible voters and, in turn, have a say on the nation's politics and immigration policy.[4]

We rely on a unique data set that combines data from the American Community Survey (ACS) for the 2005 through 2015 period, with detailed information on the intensification of immigration enforcement merged at the Metropolitan Statistical Area (MSA) level. We focus on U.S.-born children most likely impacted by immigration enforcement, as would be the case of children with a likely undocumented parent, as well as other children with similar traits. Because information on the legal status of immigrants is not available in representative datasets, we proxy for the likely undocumented status of parents using traits found to be good predictors of this population –namely: being Hispanic, non-citizen, with less than a high school education and with 5 years or more of residency in the United States. Hence, our focus is on what we refer to as the 'at-risk' population in our study, *i.e* Hispanic children ages 0-15 residing in households headed by an individual with less than a high school education and, in the case of immigrant heads, someone who has been in the United States for, at least, 5 years. Doing so allows us to capture the population of children with a likely undocumented parent (the *treated* group), as well as similar counterparts whose parents are not undocumented (the *control* group).

In order to identify the effect of intensified enforcement on children's living arrangements, we exploit the temporal and geographic variation of interior immigration policies. We find that the average yearly increase in interior immigration enforcement during the 2005-2015 period increases these children's propensity to live in households headed by their likely undocumented mothers with absentee spouses by 20 percent –a finding that supports prior reports and statistics indicative of most deportees being fathers who, in turn, are

[4] In 2016, second generation Latinos will make up about one-third (32 percent) of Latino eligible voters, up from 27 percent in 2008 and 26 percent in 2000. (http://www.pewhispanic.org/2016/01/19/looking-forward-to-2016-the-changing-latino-electorate/)

more likely to be married to also undocumented mothers. Likewise, the average yearly increase in immigration enforcement over the time period under consideration significantly raises the children's likelihood to reside without any of their parents in households headed by naturalized relatives or friends by 19 percent –a result pointing to both parents' intent to leave the children at the care of a relative or friend unthreatened by further deportations. We further are able to confirm that the impacts emanate from police-based immigration enforcement policies directly associated to deportations. These findings prove robust to a number of identification and falsification checks.

This research contributes to a rapidly growing literature concerned with the consequences of a fragmented approach to immigration enforcement. A number of authors have examined how immigration laws end up shaping the immigrant household by delineating who can enter legally using descriptive or qualitative analyses (see for example; Enchautegui and Menjívar 2015).[5] However, an assessment of how intensified immigration enforcement, as captured by the plurality of local and state level immigration enforcement, has been impacting American children's living arrangements across the entire United States is still lacking. In addition, by examining the impact of immigration policies on the families to which 4.5 million children reside, we also contribute to the literature examining the impact of policies on family structure (*e.g.* Bitler *et al.* 2006).

The remainder of this paper proceeds as follows. In section 2, we discuss the expected effect of immigration enforcement on children's living arrangements based on the existing literature. We describe the data in Section 3, and our empirical methodology in Section 4. We present and discuss our main findings and robustness checks in Section 5, and assess our

[5] Capps *et al*. (2007) use a small survey on children whose parents were arrested in three worksite raids to provide some descriptive evidence of how deportation of a parent can result in children being left behind in the care of a single parent, an older sibling, or other relative.

identification strategy in Section 6. In Section 7, we look closer at the channels through which the observed impacts seem to be taking place, and Section 8 concludes the study.

2. Immigration Enforcement and Household Composition

Since 9/11, the United States has witnessed an unprecedented increase in spending on immigration enforcement, which more than quadrupled during that period of time (see Figure 1). In response to the failure by Congress to pass a comprehensive immigration reform, states and localities started to take immigration matters into their own hands. A plethora of initiatives and programs followed, some focused on verifying work eligibility –as in the case of employment verification or E-Verify mandates, and others effectively delegating immigration enforcement on local and state police –as in the case of 287(g) agreements between law enforcement and Immigration Customs Enforcement, or its successor: the Secure Communities program. All these initiatives intended to curb the number of undocumented immigrants by discouraging their entry and, more importantly, facilitating their identification, apprehension and, ultimately, deportation. Altogether, the various programs have been responsible for approximately 1.8 million deportations between 2009 and 2013 alone (Vaughan 2013). While the gap has been closing in more recent years, the number of non-criminal removals continues to exceed that of removals for criminal offenses (see Figure 2).

We focus on how the intensification of immigration enforcement has led to changes in family structure frequently stemming from deportations, most of them involving fathers and heads of household (Capps *et al*. 2016). Deportations often result in single-headed households struggling to make ends meet (Dreby 2012), abandoned children and, overall, ripped apart families. Specifically, prior reports discuss how children are often left back in the United States residing in a singly headed household with their mother (often an undocumented immigrant like their deported father) or, if both parents are deported, with relatives and friends not at risk of deportation (Capps *et al.* 2007). Not surprisingly, the children belonging to such households

often find themselves overburdened with adult responsibilities that interfere with their schooling progression (Menjivar 2006) and adversely impact their health and future employment outcomes (Brooks-Gunn *et al*. 1997; Brabeck and Qingwen Xu 2010; Hagan *et al*. 2010; Delva *et al*. 2013). Given the emotional, cognitive and long-run socioeconomic costs of being raised in a single-headed household (Amato 2005; Chaudry *et al*. 2010), gaining a better understanding of the collateral damage of heightened enforcement on the families to which these children belong is warranted.

3. Data Sources and Samples

We use various sources of data in our analysis: (1) the American Community Survey (ACS) provided by the Integrated Public Use Microdata Series (Ruggles *et al*. 2016) , and (2) local and state-level data on the enactment and implementation dates of a number of interior immigration enforcement initiatives, including: 287(g) agreements, Secure Communities, employment verification mandates and omnibus immigration laws.

3.1 The American Community Survey

The American Community Survey (ACS) for the 2005 through 2015 period is the main source of data in our analysis. The ACS has many advantages. First, it provides rich demographic, social, economic and housing information of a representative sample of individuals and the households to which they belong. Approximately 3.5 million randomly sampled households are interviewed on a yearly basis. Secondly, over the 2005 through 2015 period, the ACS allows us to exploit the temporal and geographic variation of immigration policies by consistently identifying the metropolitan area (MSA) where families live.[6] Third, the 2005 ACS sample is the first yearly sample with a full one-percent sample of the United

[6] An alternative geographic identifier in the ACS is the CONSPUMA, but the latter is only available for the years 2005 through 2011. MSAs are integrated by a large urban core and surrounding communities that have a high degree of economic and social integration with the urban core.

States. Fourth, the ACS gathers information about ethnicity and citizenship status –key traits, along with educational attainment and length of stay in the United States, when trying to proxy for the likely undocumented immigration status of respondents. Finally, because of its sampling and interview process, the ACS is particularly appropriate to study this population. It conducts interviews without regard to legal status, using the near universe of U.S. addresses to derive its interview sample.[7]

One important limitation of representative datasets, such as the ACS, is the lack of information about the legal status of migrants. Hence, we follow the convention in the literature of adopting Hispanic non-citizens as a rough proxy for being a likely undocumented migrant (Bohn and Pugatch 2013, Passel and Cohn 2009, Pope 2016, Orrenius and Zavodny 2016). Nevertheless, to address any concerns regarding the possibility that this proxy of likely unauthorized household heads might include low-skilled immigrants or college students with non-immigrant visas, we further restrict our proxy of being likely unauthorized to Hispanic non-citizens who have lived in the United States 5 years plus and have not completed high school.[8] When we use all these traits, along with the weights of the ACS, we obtain an estimated unauthorized immigrant population in the United States of 12,791,033 individuals –

[7] See: https://www.census.gov/history/pdf/acsdesign-methodology2014.pdf

[8] The Census Bureau and the Department of Homeland Security estimate that nearly 40 percent of non-citizens are authorized immigrants (Acosta *et al*. 2014; Baker and Rytin 2013). As previous research has pointed out (see for example, Bohn and Lofstrom (2013), Orrenius and Zavodny (2016), Passel and Cohn 2009), most unauthorized immigrants have low educational attainment. In addition, more than two thirds of unauthorized immigrants in the United States are from Mexico and Central America. Hence, following the prior literature (Passel and Cohn 2009; Bohn and Pugatch 2013; Pope 2016; Orrenius and Zavodny 2016), we start first by using information on the household head's citizenship status, Hispanic ethnicity and low educational attainment (having less than a high school diploma) to proxy for her/his likely undocumented status. In addition, to address concerns regarding the possibility that such a proxy might include low-skilled immigrants with non-immigrant visas, we further restrict the definition of likely undocumented to Hispanic non-citizens who have not completed high school and have lived in the United States 5 years plus since non-immigrant visas for low-skilled workers are typically granted for a much shorter duration. Finally, we also experiment with alternative proxies of the likely undocumented status of the foreign-born that include information on their specific occupations. Results prove robust to the use of these additional descriptors.

a figure that is very close to the estimated population of 11 to 12 million undocumented immigrants in the United States using the residual method.[9, 10]

Our interest is in examining the implications of intensified immigration enforcement on the structure of the families in which Hispanic U.S.-born children reside by looking at: (1) their likelihood of residing in female-headed spouses with an absentee spouse, and (2) their propensity to reside without any parent in a household headed by relative or friends. To further understand where any found impacts are stemming from, we look at differential impacts according to the birthplace and citizenship status of the household heads. In that manner, we are able to gauge if the child is more likely to reside in a singly headed household with her/his likely undocumented mom, possibly following the deportation of her likely undocumented husband,[11] but not necessarily so in other instances. Likewise, we can gauge if, alternatively, tougher immigration enforcement has raised the likelihood that Hispanic children in our sample reside without any of their parents in households headed by relatives or friends who are not at risk of being deported, as would be the case with household heads who are citizens. To achieve these aims, we focus on Hispanic U.S.-citizen children 15 years old and younger. In this manner, we exclude older children to avoid including potential teen parents as children. Additionally, to be able to better capture what we refer to as 'at risk' households, we make

[9] According to the more elaborate aggregate estimates available at: http://cmsny.org/researchprojects/democratizingdata/tables/, the number was 11,010,000 immigrants –a fairly close estimate considering the Center for Migration Studies (CMS) advertence that: "Estimates are shown for unauthorized population sizes of 1,000 or more. All of the estimates are rounded to 1,000s. The sum of the numbers for the countries is not likely to agree with the U.S. totals because estimates of fewer than 1,000 are not included in the table."

[10] At this juncture, it is worth noting that there are other methods to proxy for the likely undocumented status of immigrants, including the use of out-of-sample predictions that rely on datasets containing information on the legal status of immigrants (*i.e. donor* datasets). Unfortunately, most datasets containing such information are not representative of the immigrant population. One exception is the Survey of Income and Program Participation (SIPP), which has been deemed to be representative of the immigrant population and used as a donor dataset to infer the legal status of immigrants in another dataset (*i.e.* target dataset). Unfortunately, aside from the questionable representativeness of the SIPP in terms of the undocumented immigrant population for the time period under examination (the last module containing information on immigrants' legal status refers to 2008), the SIPP is not valid for doing inferences of policy impacts at the MSA level (Van Hook et al. 2015), as it is the intent of the present study.

[11] As shown in Table B in the appendix, the vast majority of likely undocumented women are married to likely undocumented men.

children living in households headed by Hispanics with less than a high school diploma and who, if foreign-born, have resided in the United States for five years plus our focal point. In this manner, we are able to pick up children with a likely undocumented parent, and retain a sample of children who do not have a likely undocumented parent but resemble the children who do.

Table 1 shows the summary statistics for our samples of children. In Panel A, we display the descriptive statistics for the subsample of children with married mothers for whom the ACS gathers information on the absentee status of the spouse. Approximately 3.3 percent report living in a household headed by a likely undocumented mom whose spouse is absent. The share living in a household headed by a naturalized mom whose spouse is reported as absent is 5.2 percent, and the share living in a household headed by a native mom with an absentee spouse is 10.5 percent. On average, the children are close to 8 years old. Given our focus on children residing in households headed by low-skill and long-term U.S. residents, it is not surprising to find that household heads have, on average, close to 7 years of education and, if foreign-born, have resided in the country for approximately 16 years. Finally, Table 1 displays some local traits, including past MSA characteristics and the share of children receiving Temporary Assistance for Needy Families (TANF).

Panel B of Table 1 further informs on the sample of children used to gauge the impact of intensified immigration enforcement on their likelihood to reside without any parents in a household headed by a relative or friend. Unlike the sample in Panel A, this one is not restricted by their moms' marital status, but they continue to be children residing in 'at-risk' households, *i.e.* households headed by individuals with less than a high school education and who, if foreign-born, have been residing in the United States for 5 years plus. Approximately 7.6 percent of these children reside in households headed by likely undocumented individuals, 9.5 percent reside in households headed by naturalized immigrants, and 18 percent live in

household headed by natives. The remaining descriptive statistics are similar to those seen for the sample of children in Panel A.

3.2 Enforcement Data

In order to exploit the geographic and temporal variation in the adoption of various immigration enforcement initiatives, we gather historical and current data. Specifically, data on the implementation of 287(g) agreements at the state level is gathered for the 2005 through 2015 period from the ICEs 287(g) Fact Sheet website, Amuedo-Dorantes and Bansak (2014), and Kostandini *et al*. (2013). Since the ICE website contains only a list of the current active agreements, we review old websites and prior research using these agreements to ensemble a complete dataset spanning from 2005 to 2015. Once we have the start date of each 287(g) agreement, we calculate the period of time during which these agreements have been in place.

Data on the rolling of the Secure Communities (SC) program is available at the county level from 2008 to 2013 using ICE's Activated Jurisdictions document (U.S. Immigration and Customs Enforcement (ICE) 2017). This document contains the expansion of the SC program at the county level. Data on state level initiatives, such as omnibus immigration laws (OILs) and employment verification (E-Verify) mandates is gathered from the National Conference of State Legislature's Omnibus Laws document (Legislatures 2017) and the National Conference State's website (Legislatures 2017) respectively. These sources allow us identify the date, state and type of OILs or E-verify mandates signed.

Our purpose is to gauge how tougher enforcement might break up families of Hispanic U.S.-born children through the deportation of parents, mainly fathers; thus raising these children's incidence of: (1) living in female-headed households with an absentee spouse, or (2) living without their parents in households headed by relatives or friends. From the onset, it is worth noting that one can only proxy for the intensity of immigration enforcement. After all, even the same 287(g) agreement, for example, can be applied more or less strictly in distinct

locations depending on the local police authorities in charge of its implementation. In addition, since the geographic scope of many of the aforementioned enforcement initiatives is the county, it might be the case that one policy is activated in only one county in the MSA, but not in others. In those instances, some families within that MSA are covered by the measure, whereas others are not. To proxy for the enforcement intensity to which an individual living in MSA *m* in year *t* might be exposed to, we calculate the following population-weighted index for each enforcement initiative *k*:

$$(1) \qquad EI^{k}{}_{mt} = \frac{1}{N_{2000}} \sum_{\boldsymbol{a \in m}}^{\boldsymbol{m}} \frac{1}{12} \sum_{\boldsymbol{t=1}}^{\boldsymbol{12}} \mathbf{1}\left(E_{t,a}\right) P_{a,2000}$$

where $\mathbf{1}\left(E_{t,a}\right)$ is an indicator function that informs about the implementation of a particular policy in city *a* at time (month) *t*. Note that the above index takes into account: (1) the number of months during which a particular policy has been in place in any given year, as well as (2) the population of the cities in question. 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. To weigh it population-wise, we use the term: $P_{a,2000}$ –namely, the population of city *a* according to the 2000 Census (prior to the rolling of any of the enforcement initiatives being considered), and *N* –the total population in MSA *m*.

Hence, the overall enforcement to which children living in local area *m* and time (now: year) *t* are exposed to is computed as the sum of the indices for each enforcement initiative at the (MSA, year) level:[12]

$$(2) \qquad Total\ Enforcement_{m,t} = \sum_{k \in K}^{K} EI_{m,t}^{k}$$

As shown in Table 1, the immigration enforcement index, which varies between 0 and 5, averaged between 0.94 and 1 for the samples and time period under consideration.[13] Figure

[12] Where *k* refers to each policy, *i.e.*: 287(g) local, 287(g) state, secure communities, Omnibus immigration law and E-verify.

[13] As we explain in what follows, we also experiment with alternative immigration enforcement indices to address the impact of various types of policies. Specifically, we distinguish between police-based policies (policies that require the immediate involvement of police officers) and employment-based policies (such as employment

3 illustrates the growing funding of Immigration Customs Enforcement (ICE) –typically in charge of interior immigration enforcement. In addition, Figure 4 shows the growing number of areas adopting tougher immigration enforcement measures between 2005 and 2015. Together, the two graphs underscore the ample temporal and geographic variation accompanying the expansion in interior immigration enforcement –crucial in identifying its impact on our outcomes of interest.

4. Empirical Strategy

To gauge the effect of intensified immigration enforcement on the living arrangements of American children with a likely undocumented parent, we start by estimating the following benchmark model specification, which exploits the aforementioned temporal and geographic variation in the enforcement index, as follows:

$$(3) \qquad y_{i,m,t} = \alpha + \beta_1 \, Total\ Enforcement_{m,t} + X'_{i,m,t}\ \beta_2 + Z'_{m,t}\beta_3 + \\ +(M'_{m,2000} * t)\ \beta_4 \ + \gamma_m + \theta_t + \gamma_m t + \varepsilon_{i,m,t}$$

where $y_{i,m,t}$ is our outcome variable –namely: the *i*th child's living arrangement in MSA *m* and year *t*. $Total\ Enforcement_{m,t}$ is an index that serves as a proxy for the intensity of enforcement to which the child is exposed to. *X'* is a vector of demographic characteristics, including controls for the child's age and its squared term, as well as the household head's years of education and length of U.S. residency, if foreign-born.[14] The vector *Z* contains information on the welfare generosity at the state level, which is known to affect child living arrangements (Bitler, *et al*. 2006). Additionally, to control for potentially endogenous MSA characteristics, as well as for differences in trends across MSAs that might be spuriously correlated with the MSA treatment effect, we add as controls interactions between pre-

verification mandates that involve employers and are not directly linked to deportation orders). In addition, in separate analyses, we further construct indices that distinguish according to the scope (local vs. state-level) of the policies. Results corroborate those found using a single index.

[14] In the case of natives, this term equals their age.

treatment MSAs characteristics (measured in the year 2000) and a time trend –namely: $(M'_{m,2000} * t)$. The vector: $M_{m,2000}$ includes the unemployment rate and the share of Hispanics in the MSA, as well as the share of people voting republican in the state. All of them are referred to the year 2000 –that is, prior to $Total\ Enforcement_{m,t}$ turning positive. Finally, equation (3) includes temporal and geographic fixed-effects (*i.e.* dummies for each year and MSA), as well as MSA-specific time trends to capture other unobserved fixed and time-varying traits potentially affecting our outcomes that we might fail to account for. Standard errors are clustered at the MSA level.[15]

The coefficient of interest is β_1, which captures the relationship between the intensity of local and state-level immigration enforcement and our outcome variables. A positive coefficient would be consistent with our prediction that tougher enforcement increases the incidence of: (1) children living in female-headed households with an absentee spouse, and (2) children living without parents through the splitting up of families following parental deportations.

5. Intensified Immigration Enforcement and Children's Living Arrangements

5.1 Main Findings

As noted earlier, our main aim is to assess how the adoption of tougher immigration enforcement at the local and state levels has influenced the structure of families to which 4.5 million of U.S.-born children with an undocumented parent belong. To that end, Table 2 displays the results from estimating equation (3) to gauge the propensity of these children to reside in female-headed households with an absentee spouse using ordinary least squares (OLS). Our sample consists of Hispanic U.S.-born children who reside with their married mothers in at-risk households –namely households headed by individuals who have less than a

[15] Table A in the appendix describes the variables used in the analysis.

high school diploma and who, in the case of immigrants, have resided 5 or more years in the United States. Because the intensification of the immigration enforcement has impacted children with likely undocumented parents and 54 percent of those children have parents who are both likely undocumented (see Table B in the appendix), it makes sense to distinguish according to whether the mother is likely undocumented, a naturalized citizen or a U.S. native.

We estimate a number of specifications that progressively add controls to assess the robustness of our findings. Focusing on the most complete model specifications, which include MSA and year fixed-effects, as well as MSA-specific time trends, we find that a one standard deviation increase in the enforcement index (equal to the average level of immigration enforcement for the time period under consideration) increases the children's likelihood of living in households headed singly by their likely undocumented mothers with absentee spouses by 20 percent.[16] However, the average yearly increase in interior immigration enforcement during the 2005-2015 period does not appear to raise the children's propensity to reside in households headed singly by naturalized or U.S.-born mothers with absent spouses. These results are easily understood in light of the fact that most undocumented fathers are married to likely undocumented women (see Table B in the appendix). Thus, through the deportation of fathers, intensified immigration enforcement ends up primarily splitting households where both parents are likely undocumented, leaving the mother alone to take care of their U.S.-born offspring.

Table 3 reports on our second outcome of interest –namely, the impact that intensified immigration enforcement is having on the children's likelihood of living without their parents in households headed by relatives or friends. As with our previous outcome, we distinguish according to whether the household head is a likely undocumented immigrant, a naturalized

[16] The standard deviation of the enforcement index is 0.94 and, on average, 3.3 percent of Hispanic children live in a singly headed household with moms who report their spouses as being absent. Therefore: {[(0.007)*0.94]/0.033}=0.20 or 20 percent.

immigrant or a U.S. native since parents might have a preference for leaving their children in a household unthreatened by further deportations. We also estimate a number of specifications that progressively add controls to assess the robustness of our findings. In this case, equation (3) is estimated on a sample of Hispanic U.S.-born children who reside in at-risk households – namely households headed by individuals who have less than a high school diploma and who, if foreign-born, have resided 5 or more years in the United States, without any further restriction on the marital status of the household head.

The estimates show that the same one standard deviation increase in the enforcement index raises the children's propensity to reside without their parents in a household headed by naturalized relatives or friends by 18.8 percent. However, immigration enforcement does not appear to raise these children's propensity to reside without their parents in a household headed by a likely undocumented or native relative or friend. Overall, the results suggest that, perhaps, when deported, parents leave their offspring in households headed by other immigrants who are, nonetheless, naturalized and, as such, not at risk of deportation.

5.2 Robustness Checks

Much of the intensification of immigration enforcement coincided with the onset of the Great Recession. As such, one might be concerned that the estimated impact of intensified immigration enforcement is capturing the effects of the recession despite the inclusion of year fixed-effects addressing macroeconomic fluctuations (*e.g.* economic downturns), as well as MSA-specific time trends. To address that concern, we re-estimate equation (3) using another group of children who, despite being similar in terms of residing in households headed by low-skilled and, when foreign-born, long-term U.S. residents, should have been less likely to be negatively impacted by intensified immigration enforcement, as would be the case with white non-Hispanic children. To the extent that they are not Hispanic, they are less likely to reside

in families that suffer the direct consequences of intensified immigration enforcement.[17] Furthermore, by focusing on white children, we exclude Black children traditionally exhibiting a higher likelihood of living in split households.[18]

Table 4 displays the results from estimating these children's propensity to reside in a female-headed household with an absentee spouse, as well as their likelihood to live without any of the parents in a household headed by a relative or friend. As we would expect, immigration enforcement does not appear to have had an impact on any of the aforementioned events despite the fact that white non-Hispanic children residing in household with low-skilled heads were also severely hit by the economic downturn.

Subsequently, we explore the possibility that our findings might be driven by the harsher implementation of immigration enforcement by some counties. Of particular note in the literature is the case of Maricopa County in Arizona. Sheriff Joe Arpaio has been an extreme advocate of tough immigration enforcement, labelling himself as "America's Toughest Sheriff" (Janofsky 2002). Hence, in Table 5, we re-estimate our models excluding Maricopa County. As can be seen from our estimates in that table, our findings prove robust to the exclusion of that outlier.

6. Identification Assumptions

6.1 Parallel Trends Assumption

Thus far, we have shown how the intensification of immigration enforcement can raise the propensity of Hispanic U.S.-born children residing in at-risk households to live in either: (1) a household headed by a likely undocumented mother who is singly heading the household in the absence of her spouse, and (2) without any parent in a household headed by naturalized

[17] After all, Hispanic ethnicity is one of the key traits identifying the likely undocumented status of the parents.
[18] Approximately 50 percent of black children under 18 live in households singly headed by their mothers, versus close to 30 percent of Hispanic children and about 20 percent of white children. See: https://www.census.gov/hhes/families/files/graphics/CH-2-3-4.pdf.

relatives or friends. We have also shown how these findings are unique to Hispanic children, as opposed to non-Hispanic white children, and how they are not driven by the particularly tough position on immigration enforcement adopted by Maricopa County in Arizona.

The validity of our identification approach and findings relies on a number of assumptions we address in what follows. A first assumption is that the measured impact of intensified enforcement did not pre-date the implementation of tougher enforcement itself. To assess whether that was the case, we estimate equation (3) including a full set of dummies spanning from four years prior to the adoption of any initiative in the MSA in question. In that manner, we are able to gauge if changes in the likelihood of having one of the two living arrangements considered herein preceded the adoption of tougher enforcement measures in each MSA as follows:

$$(4)\quad y_{i,m,t} = \alpha + \alpha + \sum_{b=-6}^{-1} \delta_b D_b + \beta_1 Total\ Enforcement_{m,t} + X'_{i,m,t}\ \beta_2 + Z'_{m,t}\beta_3 + \\ +(M'_{m,2000} * t)\ \beta_4 + \gamma_m + \theta_t + \gamma_m t + \varepsilon_{i,m,t}$$

where D_b is a dummy for b years prior to the enforcement index turning positive. Note that, because the adoption of these initiatives occurred at different points in time across MSAs, D_1 might be equal to 2006 for some MSAs, 2007 for others, and so on.

Table 6 shows the results from estimating equation (4) via OLS. It is evident that the increased likelihood of living in a household singly headed by a likely undocumented mom whose spouse is absent did not pre-date the adoption of tougher immigration enforcement measures at the MSA level, as none of the coefficients for the preceding years are statistically different from zero. Likewise, the estimates in Panel B of Table 6 confirm that the higher likelihood of living without either parent and in a household headed by naturalized relatives or friends did not precede the implementation of tougher immigration enforcement. Furthermore, the point estimates on our key regressors continue to be statistically different from zero and of similar magnitude to the ones in Table 2, Panel A, and Table 3, Panel B.

6.2 The Endogenous Adoption of Immigration Enforcement

A second concern in any policy assessment refers to the potential endogeneity of the policy itself. While understandably not random, the adoption of tougher immigration enforcement needs to be non-endogenous to the family arrangements of Hispanic U.S.-born children in our sample. One way to assess if that is a reasonable assumption is to examine if the adoption timing at each MSA is correlated to the incidence of the living arrangements we are interested in *prior* to the adoption of any enforcement. To that end, we aggregate the data at the MSA level and estimate the following regression:

(5) $$EI\ Year_m = \alpha + X_c^0\alpha + Z_c^0\mu + \varepsilon_c$$

where $EI\ Year_m$ is the year in which MSA *m* enacted its first enforcement measure; X_c^0 is the average probability of living in a household singly headed by a likely undocumented mom whose spouse is reported absent, or the average probability of residing without neither parent in a household headed by a naturalized relative or friend of children in MSA *m* prior to the adoption of any enforcement; and Z_c^0 contains the average MSA unemployment rate and average share of Hispanics in the MSA, also prior to the adoption of any of the enforcement measures. We estimate equation (5) using data from the beginning of our sample period, *i.e.* from 2005.[19] We include state fixed effects, and we cluster standard errors at the state level.

The results from this exercise are displayed in Table 7. None of the incidence rates of the two children's living arrangements at the MSA level *prior* to the adoption of stricter enforcement measures seems to have played a significant role in the adoption timing of tougher immigration enforcement by the MSA. As such, while not random, the adoption of tougher immigration enforcement measures does not appear to be taking place in response to changes in the dependent variables of interest to us in this study.

[19] We exclude from this analysis MSAs in the state of Florida, which were the only ones that had already implemented tougher immigration enforcement measures (namely the state level 287(g) signed by Florida in 2002). Results do not seem to significantly differ, however, when Florida is included.

6.3 The Non-random Location of Immigrants

A last challenge when assessing the impacts of any policy on immigrant families is the non-random residential location of immigrants themselves. This is particularly true when examining the living arrangements of children with likely undocumented parents. After all, unauthorized migrants are likely to respond to intensified enforcement by moving to safer areas with less enforcement. In that case, we might not find a significant impact of tougher enforcement on the living arrangements of children in our sample. In other words, our estimates might be downward biased. Note, however, that this bias is likely to have particularly altered the likelihood of residing in a household headed by a likely undocumented mom, but not the propensity to live in households headed by naturalized individuals unless such households are mixed-status households with likely undocumented individuals who are themselves targets of intensified enforcement. Hence, our focus will be on assessing the bias created in those instances.

There are a number of ways in which can assess if the bias is substantial. One of them is using instrumental variable (IV) methods to instrument for the location of children in our sample using information on the past residential locations of likely undocumented immigrants from the same countries of origin (in the spirit of Bartel 1989; Card 2001; Cortes and Tessada 2011, among many others). Specifically, we can use data from the year 2000 ACS to construct the following share of the concentration of undocumented immigrants from the same country of origin in each MSA in order to gauge what their most probable location would have been:[20]

$$(6)\ Share\ of\ Undocumented\ Immigrant_{m,o,2000} = \frac{undocumented\ immigrants_{m,o,2000}}{undocumented\ immigrants_{o,2000}}$$

Subsequently, to derive an instrument of the enforcement to which each child would have been exposed to had their parents settled in the same locations their countrymen settled in prior to

[20] We are using the population in 2000 given that we cannot consistently identify MSAs in 1980 or 1990 with those in 2000 onwards.

the rollout of stricter immigration enforcement measures, we interact the share of undocumented immigrants for each MSA *m* with the immigration enforcement for that MSA in each year in question. For the above instrument to be valid, it needs to be highly correlated to the likelihood of being exposed to treatment. As we shall show, this assumption is fulfilled owing to the entrenched tendency for immigrants to locate in areas with established networks of their compatriots (Bartel 1989; Massey *et al*. 1993; Munshi 2003; Card 2001; Cortés and Tessada 2010, among many others).

Table 8 shows the IV estimates for both outcomes. Our sample for the first outcome is the same as in Table 2, Panel A. For the second outcome, however, we focus our attention on mixed-status households since they are the ones most likely to have made residential decisions based on intensified immigration enforcement. The last rows confirm that the IV is a good instrument. The F-stats from the first stage regressions are equal to 35.55 and 23.49, respectively; thus, larger than the recommended size of 10 (Stock and Yogo 2005). The estimated coefficient from the first stage regressions are positive and statistically significant, which confirms the entrenched tendency for immigrants to locate in areas with established networks of their countrymen. Additionally, the same one standard deviation increase in immigration enforcement (equivalent to 0.94) increases the probability of living in a household singly headed by a likely undocumented mom whose spouse is reported as absent by 51 percent, and the propensity of living without either parent in a household headed by a naturalized relative or friend by 28 percent. As such, as hypothesized earlier, our estimates in Table 2, Panel A, and Table 3, Panel B, are, if anything, lower bound estimates of the true impact of intensified enforcement.

7. Mechanisms at Work

We have so far documented how the intensification of immigration enforcement appears to raise the propensity of two types of living arrangements among Hispanic U.S.-born

children: (1) living in households singly headed by likely undocumented mothers whose spouses are absent, and (2) living without any parent in households headed by naturalized relatives or friends. The rationale behind these findings, which appear to be unique to Hispanic children, not solely driven by Maricopa County and survive a number of identification checks, is that via deportations of family members, intensified immigration enforcement splits the families of these children.

To assess if enforcement is driving our findings, we first experiment with excluding states that have passed a Trust Act. Trust Acts are adopted with the purpose of increasing trust and community cooperation with the police following the prior implementation of programs, such as 287(g) agreements, increasing information sharing between local, state, and federal government agencies (Skogan and Frydl 2004; Fagan and Meares 2008; Fagan and Tyler 2008; Tyler 2010). We exclude states with Trust Acts to more accurately capture the impact of intensified immigration enforcement, which should be lax or close to null in these areas. The results in Table 9 suggest that a one standard deviation increase in immigration enforcement raises the children's likelihood of residing in a household headed by their likely undocumented mother, whose spouse is absent, by 17 percent. Likewise, the same increase in immigration enforcement raises the children's likelihood of residing without their parents in a household headed by a naturalized relative or friend by 22 percent. Both impacts are not statistically different from the estimated impacts in Tables 2, Panel A, and Table 3, Panel B, suggesting that the impacts being measured therein is that of intensified enforcement.

To further assess if the observed impacts are likely occurring through the splitting of households that follows the deportation of a parent, we distinguish between two types of measures: (1) *employment-based* enforcement, consisting of employment verification mandates checking the work eligibility of immigrants (*i.e.* E-Verify mandates); and (2) *police-based* enforcement involving the local and state police directly linked to the apprehension and

deportation of undocumented immigrants. If the measured impacts of intensified enforcement in Table 2, Panel A, and Table 3, Panel B, were indeed capturing the impact of deportations, we would only expect police-based enforcement, which is directly linked to deportations, to have a significant impact on the living arrangements of children.

Table 10 displays the estimates from this additional robustness check. As we would expect, a one standard deviation increase in police-based immigration enforcement raises the children's likelihood of residing in a household headed by their likely undocumented mother, whose spouse is absent, by 38 percent. Likewise, the same increase in police-based immigration enforcement raises the children's likelihood of residing without their parents in a household headed by a naturalized relative or friend by 19 percent. However, employment-based measures, which are not directly linked to deportations, do not seem to have a statically significant impact on the children's living arrangements.

8. Summary and Conclusions

Since 9/11, we have witnessed an unprecedented escalation of interior immigration enforcement that led to unparalleled increases in deportation figures –the vast majority of men, many of whom were fathers of U.S.-born children. In this paper, we gauge the impact that the escalation of immigration enforcement is having on the structure of families to which 4.5 million U.S.-born children with an undocumented parent belong by raising the prevalence of two specific types of arrangements: (1) children living in female-headed households with an absentee spouse, (2) children living without parents.

We find that the piecemeal approach to immigration enforcement has raised the exposure of these children to living in households singly headed by their likely undocumented mothers with absentee spouses, as well as their propensity to live without any of their parents in a household headed by a naturalized immigrant. The first result points to the possibility that these children might have been impacted by the deportation of their fathers, given that

undocumented migrants are more likely to be married with other undocumented immigrants. The second finding further points to the possibility that, through the deportation of one or both of the parents, children might be left behind living with relatives or friends who are not at risk of deportation. Our findings prove robust to a number of identification and robustness checks, and reveal that the observed impacts originate from immigration enforcement more directly linked to deportations, as is the case with what we refer to as police-based enforcement – namely, immigration enforcement involving local and state police.

The implications of these findings go beyond informing the immigration policy debate, to also help policymakers concerned about the design of policies that address children's inequalities due to parental immigration status. An estimated 7,823 additional children would start living in households singly headed by their likely undocumented mothers with absentee spouses if immigration enforcement were to intensify by one standard deviation – approximately equal to the average level of immigration enforcement over the period under analysis.[21] Likewise, approximately 9,018 children would start living without their parents in households headed by a naturalized relative or friend.[22] These effects are non-negligible. Gaining a better understanding of the impacts of intensified immigration enforcement is not only imperative given the consequences on these children, all of them U.S. citizens, but also in light of the strengthening of immigration enforcement and the executive orders signed by President Trump.

[21] In 2005, an estimated 39,112 children in our sample of study were living in households singly-headed by their likely undocumented mothers with absentee spouses. Hence, a one standard deviation increase in immigration enforcement would increase add 7,823 children to that pool (*i.e.* the estimated 20 percent increase).

[22] In 2005, an estimated 56,482 children in our sample were living without any of their parents in households headed by a naturalized relative or friend. A one standard deviation increase in immigration enforcement would raise the size of this group by 9,018 children (*i.e.* the estimated 19 percent increase).

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Table 1: Summary Statistics

Descriptive Statistics:	Mean	S.D
First Outcome: Children's Likelihood of Living in Households Singly Headed by their Married Moms with Absent Spouses		
Probability of Living with a Mom whose Spouse is Absent:		
Probability the Mother is Likely Unauthorized	0.033	0.178
Probability the Mother is Naturalized	0.052	0.223
Probability the Mother is U.S.-born	0.105	0.306
Enforcement Index	1.008	0.943
Enforcement Index using Historical Location	0.074	0.121
Police-based enforcement	0.904	0.798
Employment enforcement	0.099	0.292
Child's Age	7.772	4.357
Years of education of HH Head	6.913	3.354
Years in the United States of HH Head	15.606	6.394
Share of Children Receiving TANF in MSA	0.550	0.497
MSA Unemployment Rate in 2000	0.526	0.212
Share Voting Republican in the State in 2000	0.476	0.080
MSA Share of Hispanics in 2000	0.292	0.177
Observations	91,828	
Second Outcome: Children's Likelihood of Living without their Parents		
Probability of Living without parents:		
Probability the HH Head is Likely Unauthorized	0.076	0.265
Probability the HH Head is Naturalized	0.095	0.293
Probability the HH Head is U.S.-born	0.180	0.384
Enforcement Index	0.936	0.947
Enforcement Index using Historical Location	0.076	0.130
Police-based enforcement	0.832	0.769
Employment enforcement	0.073	0.255
Child's Age	7.310	4.440
Years of education of HH Head	6.850	3.579
Years in the United States of HH Head	18.177	7.899
Share of Children Receiving TANF in MSA	0.552	0.497
MSA Unemployment Rate in 2000	0.523	0.213
Share Voting Republican in the State in 2000	0.476	0.079
MSA Share of Hispanics in 2000	0.293	0.177
Observations	195,874	

Notes: *Sample*: Hispanic U.S. citizen 0-15 years old residing in households headed by a low-skilled individual (someone with less than a high school diploma), who has resided in the United States for 5 years or more. In Panel A, the sample is further restricted to married household heads who report on the absentee status of their partners.

Table 2: Probability of Living in Households Singly Headed by their Married Moms with Absent Spouses

	Panel A: Likely Undocumented HH Head				**Panel B: Naturalized HH Head**				**Panel C: U.S. Born HH Head**			
	(1)	**(2)**	**(3)**	**(4)**	**(1)**	**(2)**	**(3)**	**(4)**	**(1)**	**(2)**	**(3)**	**(4)**
Enforcement Index	**0.001**	**0.005***	**0.005****	**0.007****	-0.006	-0.007	-0.010	-0.001	-0.007	-0.007	-0.009	-0.015
	(0.002)	**(0.003)**	**(0.003)**	**(0.003)**	(0.006)	(0.008)	(0.009)	(0.011)	(0.006)	(0.006)	(0.006)	(0.011)
Individual Characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Welfare Programs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Area Characteristics	No	No	Yes	Yes	No	No	Yes	Yes	No	No	Yes	Yes
Years FE	No	Yes	Yes	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes
MSA FE	No	Yes	Yes	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes
MSA-trends	No	No	No	Yes	No	No	No	Yes	No	No	No	Yes
Observations	91,828	91,828	91,828	91,828	15,351	15,351	15,351	15,351	18,130	18,130	18,130	18,130
R-squared	0.000	0.014	0.014	0.021	0.001	0.050	0.052	0.069	0.003	0.066	0.064	0.087
Dependent Variable Mean	0.033				0.052				0.104			

Notes: *Sample***:** Hispanic U.S. citizen between 0 and 15 years old in households headed by a married mother who reports on the absentee status of her partner, and who is low skilled (less than High School Diploma) and a long-term resident (5 or more years in the United States). Table 2 reports the estimates from equation (3) for various subsamples of mothers –those who are likely undocumented, those who are naturalized immigrants, and those who are U.S.-born. *Model specifications:* All model specifications include a constant term. In addition, specification (1) includes individual characteristics. Specification (2) includes area and time fixed effects. Specification (3) adds aggregate MSA-time controls and other state welfare programs, and Specification (4) further adds the MSA-specific time trend as in equation (2) in the text. Standard errors are in parentheses and are clustered at the MSA level. ***p<0.01, **p<0.05, *p<0.1.

Table 3: Probability of Living without Their Parents

	Panel A: Likely Undocumented HH Head				Panel B: Naturalized HH Head				Panel C: U.S. Born HH Head			
	(1)	**(2)**	**(3)**	**(4)**	**(1)**	**(2)**	**(3)**	**(4)**	**(1)**	**(2)**	**(3)**	**(4)**
Enforcement Index	0.002	0.001	0.001	0.001	0.006	0.010	**0.013***	**0.019****	0.005	-0.004	-0.002	-0.008
	(0.002)	(0.002)	(0.002)	(0.002)	(0.005)	(0.007)	**(0.008)**	**(0.009)**	(0.007)	(0.006)	(0.007)	(0.010)
Individual Characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Welfare Programs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Area Characteristics	No	No	Yes	Yes	No	No	Yes	Yes	No	No	Yes	Yes
Years FE	No	Yes	Yes	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes
MSA FE	No	Yes	Yes	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes
MSA-trends	No	No	No	Yes	No	No	No	Yes	No	No	No	Yes
Observations	131,100	131,100	131,100	131,100	43,079	43,079	43,079	43,079	34,005	34,005	34,005	34,005
R-squared	0.029	0.038	0.038	0.042	0.052	0.071	0.070	0.077	0.052	0.082	0.080	0.090
Dependent Variable Mean	0.076				0.095				0.18			

Notes: *Sample***:** Hispanic U.S. citizen between 0 and 15 years old in households headed by a low skilled (less than High School Diploma) and long term resident (5 or more years in the United States). We distinguish according to whether the HH Head is a likely undocumented immigrant, a naturalized immigrant or U.S.-born. *Model specifications:* All model specifications include a constant term. In addition, specification (1) includes individual characteristics. Specification (2) includes area and time fixed effects. Specification (3) adds aggregate MSA-time controls and other state welfare programs, and Specification (4) further adds the MSA-specific time trend as in equation (2) in the text. Standard errors are in parentheses and are clustered at the MSA level. ***p<0.01, **p<0.05, *p<0.1.

Table 4: Robustness Check #1
Probability of Living Arrangement among White Non-Hispanic Children

Regressors	Model Specification			
	(1)	(2)	(3)	(4)
Panel A: Probability of Living in a Female-Headed Household with an Absentee Spouse				
Enforcement Index	0.003***	0.002**	0.002	0.002
	(0.001)	(0.001)	(0.001)	(0.001)
Individual Characteristics	Yes	Yes	Yes	Yes
Welfare Programs	No	No	Yes	Yes
Area Characteristics	No	No	Yes	Yes
Years FE	No	Yes	Yes	Yes
MSA FE	No	Yes	Yes	Yes
MSA-trends	No	No	No	Yes
Observations	367,507	367,507	367,507	367,507
R-squared	0.002	0.008	0.007	0.010
Dependent Variable Mean	0.017			
Panel B: Probability of Living without Any Parent in a Household Headed by Relatives or Friends				
Enforcement Index	0.009***	0.001	-0.003	-0.005
	(0.003)	(0.004)	(0.005)	(0.005)
Individual Characteristics	Yes	Yes	Yes	Yes
Welfare Programs	No	No	Yes	Yes
Area Characteristics	No	No	Yes	Yes
Years FE	No	Yes	Yes	Yes
MSA FE	No	Yes	Yes	Yes
MSA-trends	No	No	No	Yes
Observations	72,911	72,911	72,911	72,911
R-squared	0.009	0.038	0.037	0.050
Dependent Variable Mean	0.121			

Notes: *Sample***:** White non-Hispanic U.S. citizen between 0 and 15 years old in households headed by a low skilled (less than High School Diploma) and long term resident (5 or more years in the United States). *Model specifications:* All model specifications include a constant term. In addition, specification (1) includes individual characteristics and other state welfare programs. Specification (2) includes area and time fixed effects. Specification (3) adds aggregate MSA-time controls, and Specification (4) further adds the MSA-specific time trend as in equation (2) in the text. Standard errors are in parentheses and are clustered at the MSA level. ***p<0.01, **p<0.05, *p<0.1.

Table 5: Robustness Check #2
Immigration Enforcement and Children's Living Arrangement Excluding Maricopa County

	Panel A	Panel B
Outcome:	**Probability of Living in a Household Singly Headed by a Mom whose Spouse is Absent**	**Probability of Living without Their Parents**
HH Head:	**Likely Undocumented Mother**	**Naturalized HH Head**
Enforcement Index	**0.008***	**0.023****
	(0.004)	**(0.009)**
Individual Characteristics	Yes	Yes
Welfare Programs	Yes	Yes
Area Characteristics	Yes	Yes
Years FE	Yes	Yes
MSA FE	Yes	Yes
MSA-trends	Yes	Yes
Observations	88,596	41,922
R-squared	0.022	0.077
Mean Dependent Variable	0.032	0.095

Notes: *Sample***:** Hispanic U.S. citizen between 0 and 15 years old in households headed by a low skilled (less than High School Diploma) and long-term resident (5 or more years in the United States). In Panel A, the sample is further restricted to married household heads who report on the absentee status of their partners. *Model specifications:* All model specifications include a constant term. In addition, specification (1) includes individual characteristics. Specification (2) includes area and time fixed effects and other state welfare programs. Specification (3) adds aggregate MSA-time controls, and Specification (4) further adds the MSA-specific time trend as in equation (2) in the text. Standard errors are in parentheses and are clustered at the MSA level. ***p<0.01, **p<0.05, *p<0.1.

Table 6: Identification Check #1
Testing for the Parallel Trends Assumption

	Panel A	Panel B
Outcome:	**Probability of Living with Mom whose Spouse is Absent**	**Probability of Living without Their Parents**
HH Head:	**Likely Undocumented Mother**	**Naturalized HH Head**
Years Prior to the EI>0:		
1 Year Prior	0.005	-0.006
	(0.006)	(0.009)
2 Years Prior	0.000	-0.002
	(0.006)	(0.012)
3 Years Prior	0.006	0.001
	(0.010)	(0.010)
4 Years Prior	0.003	0.011
	(0.009)	(0.015)
5 Years Prior	-0.001	-0.006
	(0.013)	(0.009)
6 Years Prior	-0.017	-0.002
	(0.017)	(0.012)
Enforcement Index	**0.006****	**0.015***
	(0.003)	**(0.008)**
Individual Characteristics	Yes	Yes
Welfare Programs	Yes	Yes
Area Characteristics	Yes	No
Years FE	Yes	Yes
MSA FE	Yes	Yes
MSA-trends	Yes	No
Observations	91,828	43,079
R-squared	0.017	0.072
Dependent Variable Mean	0.033	0.095

Notes: *Sample***:** Hispanic U.S. citizen between 0 and 15 years old in households headed by a low skilled (less than High School Diploma) and long-term resident (5 or more years in the United States). In Panel A, the sample is further restricted to married household heads who report on the absentee status of their partners. *Model specifications:* All model specifications include a constant term. In addition, all specifications include individual characteristics, other state welfare programs, area and time fixed effects, aggregate MSA-time controls, and MSA-specific time trend. Standard errors are in parentheses and are clustered at the MSA level. ***p<0.01, **p<0.05, *p<0.1.

Table 7: Identification Check #2
Assessing the Endogenous Timing of Immigration Enforcement

	Panel A	Panel B
Outcome:	**Probability of Living in a Household Singly Headed by a Mom whose Spouse is Absent**	**Probability of Living without Their Parents**
HH Head:	**Likely Undocumented Mother**	**Naturalized HH Head**
Average Dependent variable in MSA	0.077 (0.116)	-0.163 (0.397)
Individual controls	Yes	Yes
Area characteristics	Yes	Yes
State FE	Yes	Yes
Observations	133	118
R-squared	0.806	0.783

Notes: *Sample*: ALL MSAs. Robust standard errors are in parentheses and clustered at the state level. ***p<0.01, **p<0.05, *p<0.1.

Table 8: Identification Check #3
Addressing the Non-random Location of Immigrants

	Panel A	Panel B
Outcome:	**Probability of Living in a Household Singly Headed by a Mom whose Spouse is Absent**	**Probability of Living without Their Parents**
HH Head:	**Likely Undocumented Mother**	**Naturalized HH Head with Likely Undocumented Household Members**
Enforcement Index	**0.018****	**0.036****
	(0.008)	**(0.018)**
Individual Characteristics	Yes	Yes
Welfare Programs	Yes	Yes
Area Characteristics	Yes	Yes
Years FE	Yes	Yes
MSA FE	Yes	Yes
MSA-trends	Yes	Yes
Observations	91,828	25,844
R-squared	0.021	0.058
First Stage Results		
IV	3.473***	8.02***
	(1.286)	(1.655)
R-squared	0.886	0.80
F-statistic	35.55	23.49
Dependent Variable Mean	0.033	0.12

Notes: *Sample***:** Hispanic U.S. citizen between 0 and 15 years old in households headed by a low skilled (less than High School Diploma) and long-term resident (5 or more years in the United States). In Panel A, the sample is further restricted to married household heads who report on the absentee status of their partners. *Model specifications:* All model specifications include a constant term. In addition, all specifications include individual characteristics, other state welfare programs, area and time fixed effects, aggregate MSA-time controls, and MSA-specific time trend. Standard errors are in parentheses and are clustered at the MSA level. ***p<0.01, **p<0.05, *p<0.1.

Table 9: Channels for the Observed Impacts #1
Immigration Enforcement and Children's Living Arrangement Excluding States with a Trust Act

	Panel A	Panel B
Outcome:	**Probability of Living in a Household Singly Headed by a Mom whose Spouse is Absent**	**Probability of Living without Their Parents**
HH Head:	**Likely Undocumented Mother**	**Naturalized HH Head**
Enforcement Index	**0.006***	**0.022****
	(0.003)	**(0.009)**
Individual Characteristics	Yes	Yes
Welfare Programs	Yes	Yes
Area Characteristics	Yes	Yes
Years FE	Yes	Yes
MSA FE	Yes	Yes
MSA-trends	Yes	Yes
Observations	85,263	39,316
R-squared	0.022	0.078
Dependent Variable Mean	0.033	0.094

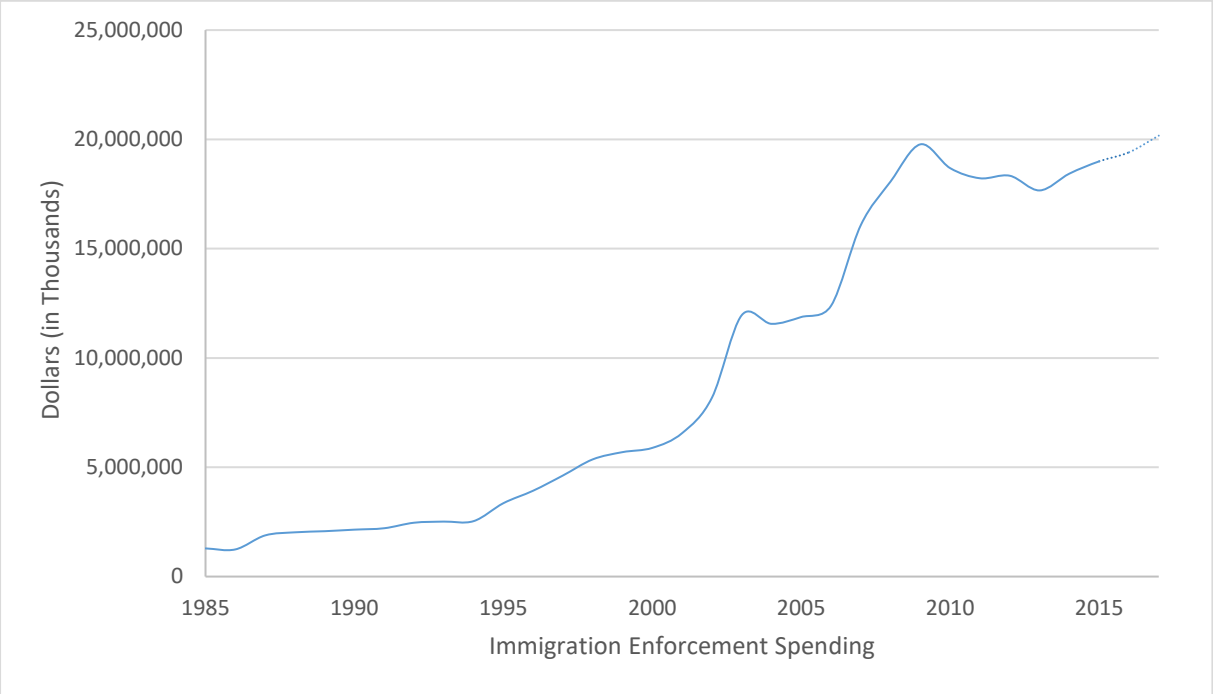
Notes: *Sample***:** Hispanic U.S. citizen between 0 and 15 years old in households headed by a low skilled (less than High School Diploma) and long-term resident (5 or more years in the United States), excluding states with a Trust Act (see: http://www.catrustact.org/text-of-trust-acts.html) . In Panel A, the sample is further restricted to married household heads who report on the absentee status of their partners. *Model specifications:* All model specifications include a constant term. In addition, specification (1) includes individual characteristics. Specification (2) includes area and time fixed effects and other state welfare programs. Specification (3) adds aggregate MSA-time controls, and Specification (4) further adds the MSA-specific time trend as in equation (2) in the text. Standard errors are in parentheses and are clustered at the MSA level. ***p<0.01, **p<0.05, *p<0.1.

Table 10: Channels for the Observed Impacts #2
Probability of Living Arrangement by Type of Immigration Enforcement

	Panel A	**Panel B**
Outcome:	**Probability of Living in a Household Singly Headed by a Mom whose Spouse is Absent**	**Probability of Living without Their Parents**
HH Head:	**Likely Undocumented Mother**	**Naturalized HH Head**
Police Based Enforcement	**0.011****	**0.019****
	(0.005)	**(0.009)**
Employment Enforcement	-0.003	0.024
	(0.008)	(0.023)
Individual Characteristics	Yes	Yes
Welfare Programs	Yes	Yes
Area Characteristics	Yes	Yes
Years FE	Yes	Yes
MSA FE	Yes	Yes
MSA-trends	Yes	Yes
Observations	91,828	39,845
R-squared	0.023	0.080
Dependent Variable Mean	0.033	0.095

Notes: *Sample***:** Hispanic U.S. citizen between 0 and 15 years old in households headed by a low skilled (less than High School Diploma) and long-term resident (5 or more years in the United States). In Panel A, the sample is further restricted to married household heads who report on the absentee status of their partners. *Model specifications:* All model specifications include a constant term. In addition, specification (1) includes individual characteristics. Specification (2) includes area and time fixed effects and other state welfare programs. Specification (3) adds aggregate MSA-time controls, and Specification (4) further adds the MSA-specific time trend as in equation (2) in the text. Standard errors are in parentheses and are clustered at the MSA level. ***p<0.01, **p<0.05, *p<0.1.

Figure 1: Department of Homeland Security (DHS) Spending in 2015 Dollars, 1985-2017



Notes: The data for the fiscal years between 1985-2002 is obtaining from the budgets of the U.S. Immigration and Naturalization Service (INS):
https://www.justice.gov/archive/jmd/1975_2002/2002/html/page104-108.htm.
The spending for the fiscal years 2003 to 2015 is obtaining from the budgets of its succesor agencies-US Customs and Border Protection (CBP), US Immigration and Customs Enforcement (ICE). We exclude the U.S. Visitor and Immigrant Status Indicator Tecnology (US-VISIT) program since it is not possible to identify consistenlty over the last time period). To obtain the most accurate statitics figures where taken from the Department of Homeland Security (DHS) Budgets in Brief two years after the application year. The figures for the years 2016 and 2017 are the enacted and budget amount from the last Budget in Brief available (2017). See:
https://www.dhs.gov/sites/default/files/publications/FY2017_BIB-MASTER.pdf

Figure 2: Aliens Removed by Criminal Status

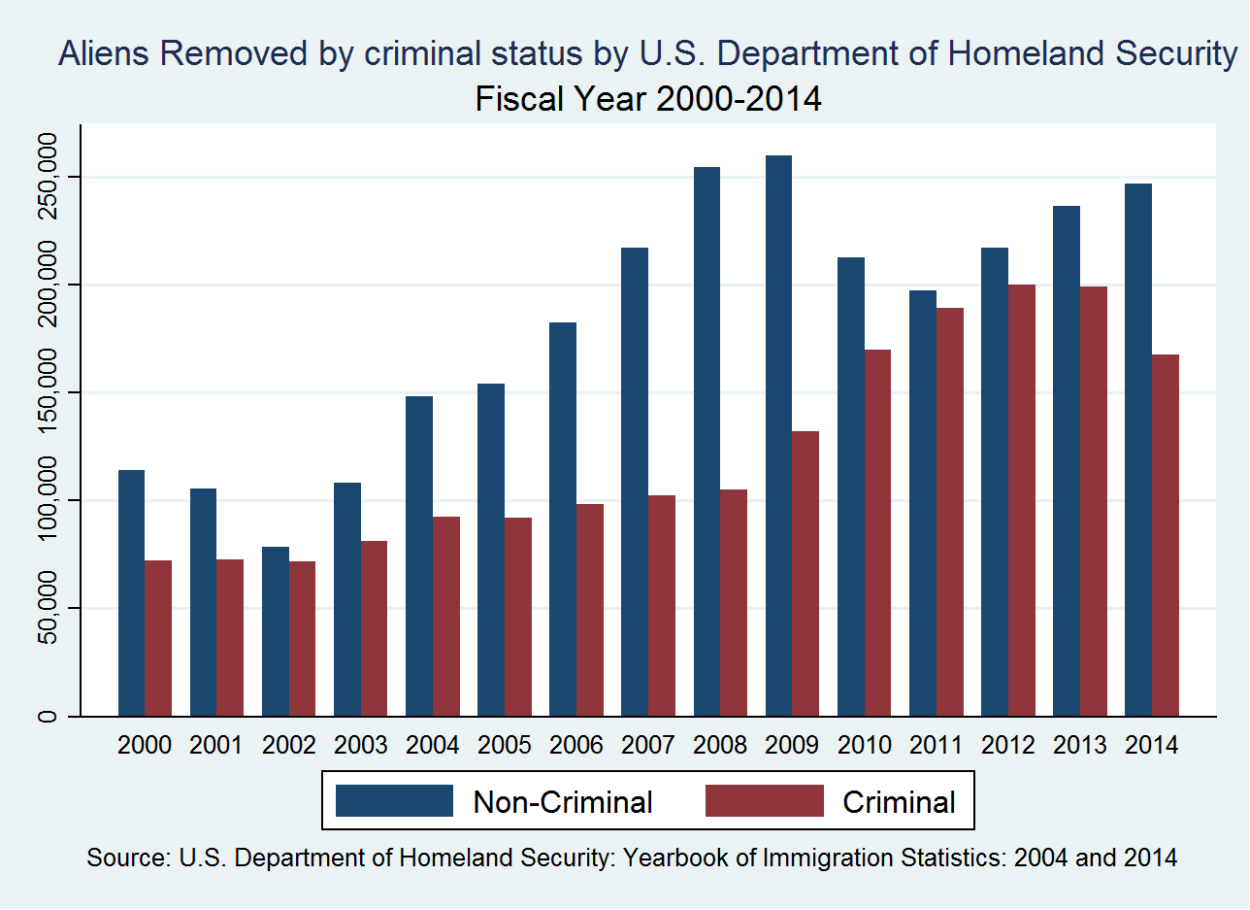
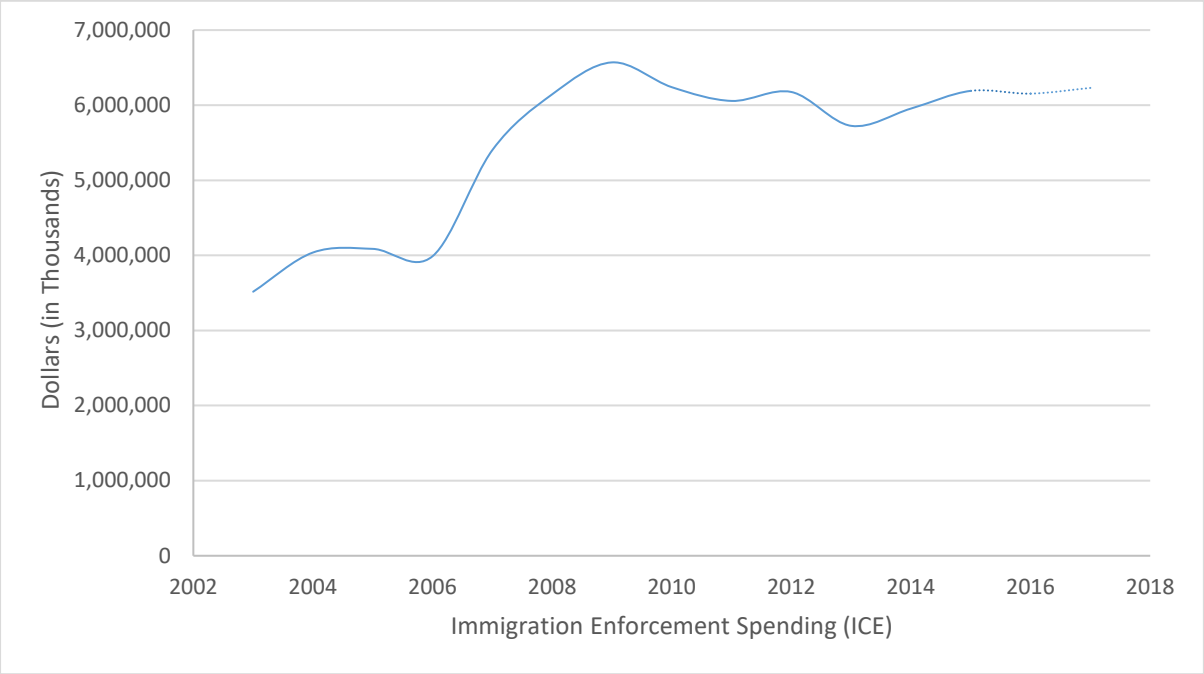
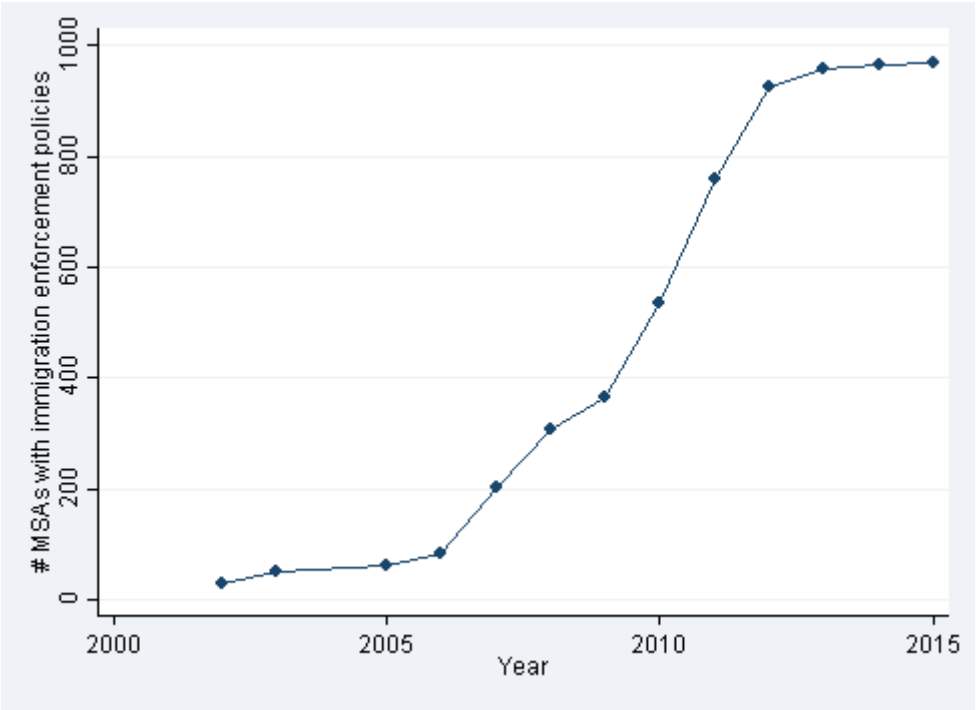


Figure 3: Immigration Customs Enforcement (ICE) Spending in 2015 Dollars, 2003 to 2017



Notes: The spending for the fiscal years 2003 to 2015 is obtaining from the budgets of US Immigration and Customs Enforcement (ICE). To obtain the most accurate statitics figures where taken from the Department of Homeland Security (DHS) Budgets in Brief two years after the application year. The figures for the years 2016 and 2017 are the enacted and budget amount from the last Budget in Brief available (2017). See: https://www.dhs.gov/sites/default/files/publications/FY2017_BIB-MASTER.pdf

Figure 4: Geographic and Temporal Rollout of Interior Immigration Enforcement



APPENDIX

Table A: Definition of Key Variables

Probability of Living in a Female-Headed Household with an Absentee Spouse	Dummy variable 1-Child is living in a household singly headed by a mom whose spouse is reported as absent 0-Child is living in a household with a mom and her spouse
Probability of Living without Neither Parent in a Household Headed by Relatives or Friends	Dummy variable 1-Child is living in a household without any parent present 0-Otherwise
Child's Age	Child's Age
Years of Education of HH Head	Number of years of education Household Head
Years in the U.S. of HH Head	Number of years of U.S. residency
TANF	Dummy variable: 1- State offered TANF for unqualified immigrants 0-Otherwise
Unemployment Rate in MSA in 2000	Unemployment rate by MSA in 2000
Share of Hispanics Immigrants in MSA in 2000	Share of Hispanics Immigrants by MSA in 2000
Share Voting Republican in the State in 2000	Share of votes going to Republican candidates for the U.S. House of Representatives by state and year. Source: Office of the Clerk, US House of Representatives, http://clerk. house.gov/member_info/electionInfo/index.aspx.

Table B: Citizenship Status of Parents of Hispanic Citizen Children in At-Risk Households

Both Likely Unauthorized parents	54,18%
Both Naturalized parents	7.30%
Both Native parents	8.63%
One likely unauthorized and one naturalized parent	16.20%
One likely unauthorized and on native parent	9.80%
One Naturalized and one native parent	3.16%

Sample: Hispanic U.S. citizen 0-15 years old residing in households headed by a low-skilled individual (someone with less than a high school diploma), who has resided in the United States for 5 years or more.