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## Immigrant enforcement and children's living arrangements

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### **Abstract**

Tougher immigration enforcement was responsible for 1.8 million deportations between 2009 and 2013 alone. We exploit the geographic and temporal variation in intensified enforcement to gauge its impact on children's propensity to live without their parents, or in households headed by single mothers with absentee spouses. Given the negative consequences of being raised without parents or in a single-headed household and the parallel increase in immigration enforcement in the United States, gaining a better understanding of the collateral damage of heightened enforcement on the families to which these children belong is well warranted.

### **Keywords**

Immigration Enforcement, Undocumented Immigrants, Children's Living Arrangements, Family Structure, United States.

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"In 2015, Trujillo's daughter Alexa wrote a letter to Senator Sherrod Brown, of Ohio, begging him to help her mother. 'It is not fair what you are doing to my mom. Why does she have to go to Mexico? She is not a criminal or a bad person', Alexa wrote." The New Yorker, July 22, 2017

### I. Introduction

Since 9/11, the United States (U.S.) has expanded the number of programs aimed at curbing the number of undocumented immigrants by discouraging their entry and, more importantly, facilitating their apprehension and deportation. Altogether, the various programs were responsible for 1.8 million deportations between 2009 and 2013 (Vaughan 2013) — most of them fathers and heads of households with U.S.-born children (Capps et al. 2016). 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. However, the gravity of deportations has only resurfaced with the change in the enforcement priorities under President Trump's Administration. Many immigrants picked up under President Obama's Administration who qualified for temporary legal relief are now facing swift removal.

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 impacted the structure of the families to which 4.5 million American children with an undocumented parent belong. Our primary focus is on whether intensified enforcement has contributed to raising the prevalence of children living without their parents in households headed by relatives or friends. Because parental deportations are known to result in children being left behind with relatives or friends not at risk of removal (Capps et al. 2007), gaining a better understanding of the extent to which the current piecemeal approach to immigration enforcement is impacting the likelihood of parentless children seems vital. In addition, given that many of those deported are married fathers whose spouses remain in the U.S. (Capps et al. 2016), we subsequently explore how intensified enforcement may have impacted the incidence of children living in female-headed households with an absentee spouse.

Understanding the consequences of intensified immigration enforcement on the family structure of American children with a likely undocumented parent is important for a number of

reasons. First, the sheer size of this demographic makes this question extremely relevant. These children represent approximately 8 per cent of American children - twice as many as in 2002 (see Figure A1). In due course, they will become eligible voters and have a say on the nation's politics and immigration policy.\(^{1}\) Secondly, immigration enforcement has intensified under the current Administration. Between January 22 and April 29, 2017, Immigration Customs Enforcement (ICE) conducted around 10,800 "non-criminal arrests," compared to just 4,200 in 2016—an increase of more than 150 per cent (U.S. Immigration and Customs Enforcement, 2017a). Additionally, removal priorities have been expanded and enforcement operations targeting individuals without criminal records are now being implemented (Pierce and Selee 2017). Lastly, understanding how intensified immigration enforcement is affecting the family environment in which an estimated 4.5 million American children grow up is vital, given what we know about the importance of the family context early in life on numerous outcomes later on. An established literature on parental incarceration has found that the absence of a parent can strain important protective factors, such as parental involvement, and create risk factors, such as financial hardship (Murray et al. 2012). Children growing up in single-parent households or without parents are more likely to drop out of school, experience teenage pregnancies, and have lower earnings in the future (see for example, McLanahan 2004, Adda et al. 2011). Thus, gaining a better understanding of the impacts of intensified immigration enforcement on the families in which they grow up is well warranted.<sup>2</sup>

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 children most likely impacted by parental deportations, as would be the case with U.S.-born children with a likely undocumented parent. Because information on the legal status of immigrants is not available in representative datasets, we proxy for the likely undocumented status of parents using

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<sup>&</sup>lt;sup>1</sup> In 2016, second generation Latinos made up about one-third (32 per cent) of Latino eligible voters, up from 27 per cent in 2008 and 26 per cent in 2000 (see: http://www.pewhispanic.org/2016/01/19/looking-forward-to-2016-the-changing-latino-electorate/).

<sup>&</sup>lt;sup>2</sup> The budget for immigration enforcement planned for 2018, it is a 25 per cent more than previous year.

traits found to be good predictors of such a status, like citizenship, ethnicity, educational attainment and time of residency in the U.S..<sup>3</sup>

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 increase in immigration enforcement during the 2005-2015 period raises the children's likelihood of residing without any of their parents in households headed by naturalized relatives or friends by 19 per cent – a result suggesting the intention of both parents to leave the children in the care of a relative or friend unthreatened by deportation. Likewise, the same increase in immigration enforcement raises the likelihood of these children living in a household headed by a single, likely undocumented mother with an absentee spouse by 20 per cent – a finding that supports statistics showing that most children with a likely undocumented father have undocumented mothers, as we shall show. Finally, we are able to confirm that the impacts emanate from police-based immigration enforcement policies directly associated with deportations, as opposed to employment verification mandates that could also influence the household structure through work and financial constraints. The findings prove robust to a number of identification and falsification checks.

The findings contribute 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).<sup>4</sup> Additionally, a more recent literature has explored how it has impacted household poverty, the schooling of children, or the civic engagement of its members (Amuedo-Dorantes et al. 2018; Amuedo-Dorantes and Lopez 2015, 2017). 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 U.S. is still lacking. In addition, by examining the impact of immigration policies on the families to which 4.5 million children reside, we

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<sup>&</sup>lt;sup>3</sup> As we detail in the data section, we experiment with alternative proxies of this population.

<sup>&</sup>lt;sup>4</sup> 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.

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 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 U.S. has witnessed an unprecedented increase in spending on immigration enforcement, which more than quadrupled during that period of time (see Figure A2). 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)<sup>5</sup> 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).<sup>6</sup> All these initiatives aimed to curb the number of undocumented immigrants by discouraging their entry and, more importantly, facilitating their identification, apprehension and, ultimately, deportation. Between 2003 and 2011, accompanying the rollout of all the aforementioned immigration enforcement measures, interior removals increased by roughly 520 per cent – by way of comparison, border removals rose by 76 per cent over the same time span (see Figure A3). Altogether, the various programs have been responsible for approximately 1.8 million deportations between 2009 and 2013 alone (Vaughan 2013).

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

<sup>&</sup>lt;sup>5</sup> We include employment verification mandates in our analysis since they could influence family living arrangements by placing financial constraints on the household.

<sup>&</sup>lt;sup>6</sup> See Appendix Table A for a description of each policy.

household (Capps et al. 2016). Deportations often result in single-headed households struggling to make ends meet (Dreby 2012), abandoned children and, overall, families ripped apart. Specifically, prior reports discuss how children are often left in the U.S. residing in a household headed by a single mother (often an undocumented immigrant like their deported father) or, if both parents are deported or leave the country, 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-term 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: (I) the American Community Survey (ACS) provided by the Integrated Public Use Microdata Series (Ruggles et al. 2015), 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. I 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 sufficiently large and 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.<sup>7</sup> Third, the 2005 ACS sample is the first yearly sample with a full one per cent sample of the U.S.. Fourth, the ACS gathers information about ethnicity and citizenship status – key traits, along with educational attainment and length of stay in the U.S., 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 the study of this population. It conducts interviews without regard to legal status, using the near universe of U.S. addresses to derive its interview sample.<sup>8</sup>

One limitation of representative datasets, such as the ACS, is the lack of information about the legal status of migrants and the representativeness of the potentially undocumented population being surveyed. With regards to the former, the Census Bureau and the Department of Homeland Security estimate that nearly 40 per cent of non-citizens are authorized immigrants (Acosta et al. 2014; Baker and Rytin 2013). In addition, more than two thirds of unauthorized immigrants in the U.S. are from Mexico and Central America, with most unauthorized immigrants having low educational attainment (see Bohn and Lofstrom (2013), Orrenius and Zavodny (2016), Passel and Cohn 2009), for example). Hence, following the prior literature (Passel and Cohn 2009; Bohn and Pugatch 2013; Pope 2016; Orrenius and Zavodny 2016), we start 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. Additionally, to address any concerns regarding the possibility that this proxy of likely unauthorized household heads might include college students with non-immigrant visas (i.e. F1 or J1) or low-skilled immigrants with relatively short-lived visas (i.e. H-2A or H-2B), we further restrict our proxy to Hispanic non-citizens

<sup>&</sup>lt;sup>7</sup> 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.

<sup>&</sup>lt;sup>8</sup> As pointed out by Pope (2016), undocumented individuals should not be more or less likely to be interviewed by the ACS based on its sample design. After all, the ACS relies on the Census Bureau's official inventory of known housing units in the United States to generate its sample frame. A subsample of addresses is drawn from the sample frame; therefore, respondents have the same probability of being selected regardless of their citizenship status. Furthermore, survey non-response rates are rather low. This is because the data is gathered in various ways –via internet, mail, telephone, and personal visit. First, the household receives a mailed request to respond via internet, with an option to complete a paper questionnaire and return by mail. If there is no response after one month, the Census Bureau follows up with computer-assisted telephone interviews. If there is still non-response, the address is selected for computed-assisted personal interviewing. As a result, the Census Bureau reports response rates above 95 per cent.

without high school and with 5 or more years in the country. When we use all these traits, along with the weights of the ACS, we obtain an estimated unauthorized immigrant population in the U.S. of 11,791,033 individuals – a figure that is very close to the estimated population of 11 to 12 million undocumented immigrants in the U.S. using the residual method. This suggests, a priori, that the ACS does a decent job in representing the population we are interested in. At any rate, we also experiment with a residual approach to proxy for the likely unauthorized status of the parents. Results prove robust to the use of this alternative measure.9

Our interest is in examining the implications of intensified immigration enforcement on the structure of families to which American children with a likely undocumented parent belong. To that end, we look at the incidence of two events: (I) their propensity to reside without their parents in a household headed by relatives or friends, and (2) their likelihood of residing in a household headed by a mother who reports having an absentee spouse. We focus on U.S.-born children 15 years old and younger to avoid including potential teen parents as children. To have a sample of children that are comparable to those with a likely undocumented parent, we make children living in a household headed by naturalized and U.S.-born Hispanics with less than a high school diploma our control group. In that manner, we retain a sample of children who are alike in the sense that they all live in households headed by low skilled and long-term Hispanic residents.

Table I shows the summary statistics for our samples of children. Specifically, Panel A of Table I provides information on the sample of children used to gauge the impact of intensified immigration enforcement on their likelihood of residing without any parents in a household headed by a relative or friend. Approximately 7.6 per cent of these children reside in households headed by likely undocumented individuals, 9.5 per cent reside in households headed by naturalized immigrants, and 18 per cent live in household headed by natives. Children are, on average, 7 years old.

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Other methods to proxy for the likely undocumented status of immigrants used in the literature include the use of out-of-sample predictions using a dataset containing information on the legal status of immigrants (*i.e.* a donor dataset). Unfortunately, the representativeness of the immigrant population in such data sets is often questionable. An exception appears to be the Survey of Income and Program Participation (SIPP). However, its representativeness of the undocumented immigrant population is doubtful, especially since the last module containing information on immigrants' legal status dates back to 2008. Furthermore, as noted by Van Hook *et al.* (2015), the SIPP is not valid for doing inferences of policy impacts at the state level and, therefore, at the MSA level we focus on herein.

In Panel B of Table I, we display the descriptive statistics for a subsample of children with married mothers for whom the ACS gathers information on the absentee status of the spouse. Approximately 3.3 per cent report living in a household headed by a likely undocumented mother whose spouse is absent. The share living in a household headed by a naturalized mother whose spouse is reported as absent is 5.2 per cent, and the share living in a household headed by a native mother with an absentee spouse is 10.5 per cent. The children are, on average, close to 8 years old.

Given our focus on children residing in households headed by low skilled and long-term residents in both Panels A and B, it is not surprising to find that household heads have, on average, close to 7 years of education and have resided in the country for approximately 16 years. Finally, Table I displays some local traits, including past MSA characteristics and the share of children receiving Temporary Assistance for Needy Families (TANF). The former include the share of the state's electorate voting for Republican candidates for the U.S. House of Representatives, as well as the share of Hispanics and the unemployment rate at the MSA level. The share of the electorate voting for Republican candidates for the U.S. House of Representatives in the states to which the MSAs belonged averaged 47 per cent. Unemployment rates and the share of Hispanics in the MSA averaged 5 per cent and 29 per cent, respectively, and the share of children receiving Temporary Assistance for Needy Families (TANF) in the MSA averaged 55 per cent.

### 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 since 2008 using ICE's Activated Jurisdictions document (U.S. Immigration and Customs Enforcement (ICE) 2017b). Data on state level initiatives, such as omnibus immigration laws (OlLs) and employment verification (E-Verify) mandates, is gathered from the National Conference of State Legislature's website (Legislatures 2017). These sources allow us identify the date, state and type of OlLs or E-verify mandates signed.

Our purpose is to gauge how tougher enforcement might break up families of American children with likely undocumented parents through the deportation of mainly fathers; thus raising these children's likelihood of: (I) living without their parents in households headed by relatives or friends, or (2) living in female-headed households with an absentee spouse. 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 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 in the 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) 
$$EI^{k}_{mt} = \frac{1}{N_{2000}} \sum_{a \in m}^{m} \frac{1}{12} \sum_{t=1}^{12} \mathbf{1}(E_{t,a}) P_{a,2000}$$

where  $\mathbf{1}(E_{t,a})$  is an indicator function that captures the implementation of a particular policy in county a at time (month) t. Note that the above index takes into account: (I) 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 counties in question. Specifically, the summation over the I2 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 county 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 t are exposed to is computed as the sum of the indices for each enforcement initiative at the (MSA, year) level:<sup>10</sup>

(2) Total Enforcement<sub>m,t</sub> = 
$$\sum_{k \in K}^{K} EI_{m,t}^{k}$$

As shown in Table I, the immigration enforcement index, which varies between 0 and 5, averaged between 0.94 and I for the samples and time period under consideration. Figure A4 illustrates the growing funding of Immigration Customs Enforcement (ICE) – typically in charge of interior immigration enforcement. The *temporal* variation in interior immigration enforcement is also evident from the trends in the various immigration enforcement indexes we work with – all plotted in Figure A5. The intensification of immigration enforcement parallels the drastic increase in removals from the interior of the U.S. displayed earlier on in Figure A3. In addition, Figure A6 shows the *geographic* variation in immigration enforcement, by displaying the progressive rollout of tougher immigration enforcement across MSAs in the country between 2005 and 2015. Together, all three graphs underscore the ample *temporal* and *geographic* variation 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) 
$$y_{i,m,t} = \alpha + \beta_1 Total Enforcement_{m,t} + X'_{i,m,t} \beta_2 + Z'_{m,t} \beta_3 + \gamma_m + \theta_t + \gamma_m t + \varepsilon_{i,m,t}$$

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<sup>&</sup>lt;sup>10</sup> Where *k* refers to each policy, *i.e.*: 287(g) local, 287(g) state, secure communities, Omnibus immigration law and E-verify.

<sup>&</sup>lt;sup>11</sup> 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 verification mandates that involve employers and are not directly linked to deportation orders). In addition, in separate analyses, we further separate all the various immigration enforcement initiatives considered when constructing the overall index to identify the specific policy channels. Results corroborate those found using a single index.

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.<sup>12</sup> The vector Z contains information on the welfare generosity at the state level,<sup>13</sup> which is known to affect child living arrangements (Bitler et  $al.\ 2006$ ).<sup>14</sup> 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.

The coefficient of interest is  $\beta_1$ , 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: (I) children living without parents, and (2) children living in households headed by single mothers who report having an absentee spouse following the break-up of the family unit through parental deportations.

# 5. Intensified Immigration Enforcement and Children's Living Arrangements

### 5. I 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

<sup>&</sup>lt;sup>12</sup> In the case of natives, this term equals their age.

<sup>&</sup>lt;sup>13</sup> A dummy variable that equals 1 if the state allowed previously eligible immigrants to continue to receive benefits similar to those before the 1996 welfare reform, which imposed strict restrictions on eligibility for noncitizens. The dummy equals 0, otherwise.

<sup>&</sup>lt;sup>14</sup> Additionally, in an intermediate model specification (shown as specification 3 in Tables 2-4), we experiment with controlling for potentially endogenous MSA characteristics. We do this by adding as controls *pre*-treatment MSAs' characteristics (all measured in the year 2000, thus prior to the implementation of any of the immigration enforcement measures at hand), all of which are interacted with a time trend, *e.g.* ( $M'_{m,2000} *t$ ). 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. By interacting those MSA traits with a time trend, we allow for their variation over time. The vector ( $M'_{m,2000} *t$ ) later on drops from specification (4) as it is collinear with MSA-specific time trends.

of U.S.-born children with an undocumented parent belong. To that end, Table 2 reports on our main 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. We distinguish according to whether the household head is a likely undocumented immigrant, a naturalized immigrant or a U.S. native, since parents might prefer leaving their children in a household unthreatened by further deportations (Capps et al. 2007). As noted earlier, equation (3) is estimated on a sample of U.S.-born children in households headed by low skilled and long-term Hispanic residents using Ordinary Least Squares (OLS). We estimate a number of specifications that progressively add controls to assess the robustness of our findings to the estimation of more saturated models.

Focusing on the most complete model specification, we find that a one standard deviation increase in the enforcement index (equal to the average level of immigration enforcement for the period under consideration) raises the children's propensity to reside without their parents in a household headed by naturalized relatives or friends by 18.8 per cent. 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 a 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.

Since most deportees are men, many of them fathers, Table 3 further looks at the impact of intensified immigration enforcement on the children's propensity to reside in households headed by single mothers with absentee husbands. Because the ACS only gathers information on the absentee status of spouses, the sample used to learn about this outcome is somewhat smaller. We continue to distinguish children according to the likely immigration status of the household head. As shown in Table C in the appendix, the majority of children with a likely undocumented parent have parents who are both likely undocumented. Hence, immigration enforcement should particularly raise the likelihood that children with a likely undocumented parent might reside in households headed by single, likely undocumented mothers.

As in Table 2, we estimate a number of specifications that progressively add controls to assess the robustness of our findings. Focusing, once more, on the most complete model specifications, we find that a one standard deviation increase in the enforcement index increases the children's likelihood of living in a household headed by their single, likely undocumented mothers with absentee spouses by 20 per cent.<sup>15</sup> However, it does not appear to raise their propensity to reside in households headed by single naturalized or U.S.-born mothers with absent spouses – a smaller share of whom are likely married to unauthorized men. These results are easily understood in light of the fact that most undocumented fathers are married to likely undocumented women (see Table C in the appendix). 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.

### 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) and MSA-specific time trends. To address that concern, we re-estimate equation (3) using another sample of children who, despite being similar in terms of residing in households headed by low-skilled and 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 have Hispanic parents – one of the various identifying traits of likely undocumented immigrants.

Table 4 displays the results from estimating these children's propensity to reside without any of the parents in a household headed by a relative or friend, as well as their likelihood of living in a female-headed household with an absentee spouse. As we would expect from this falsification test,

<sup>&</sup>lt;sup>15</sup> The standard deviation of the enforcement index is 0.94 and, on average, 3.3 per cent of Hispanic children live in a single-headed household with mothers who report their spouses as being absent. Therefore:  $\{[(0.007)*0.94]/0.033\}=0.20$  or 20 per cent.

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 severely hit by the economic downturn. In fact, the estimates are statistically different from those in Table 2 and 3.16

Subsequently, we assess the robustness of our findings to the use of an alternative proxy of the likely undocumented status of one of the parents, as well as to the exclusion of potential outliers from our sample. Specifically, in Panel A of Table 5, we display our main results using, instead, a proxy for the likely undocumented status of the parents constructed following the residual method initially proposed by Passel et al. (2014) and subsequently applied by others (e.g. Borjas 2017). We continue to find evidence of tougher immigration enforcement being associated to a higher likelihood of residing without parents or in a household headed by a single mother whose spouse is absent. In particular, the same one standard deviation increase in immigration enforcement from earlier would raise the children's propensity to live without their parents by 28 per cent and their probability of residing in a household headed by a single mother by 14 per cent. These impacts are in line with those found in Tables 2 and 3, respectively.

Additionally, we explore the possibility that our findings might be driven by the harsher implementation of immigration enforcement in 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". Hence, in Panel B of 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

Thus far, we have shown how the intensification of immigration enforcement can raise the propensity of Hispanic U.S.-born children to reside: (I) without any parent in a household headed by naturalized relatives or friends, or (2) in a household headed by a single, likely undocumented mother in the absence of her spouse. We have also shown how these findings are unique to

<sup>&</sup>lt;sup>16</sup> With: Prob > Chi2= 0.0431 for Table 2's estimates and Prob > Chi2=0.0716 for Table 3's estimates.

children with a likely undocumented parent, 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. Yet, the validity of our identification approach and findings relies on a number of assumptions we address in what follows.

### 6. I Anticipated or Pre-Existing Impacts

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 six 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) 
$$y_{i,m,t} = \alpha + \sum_{b=-6}^{-1} \delta_b D_{m,b} + \beta_1 Total Enforcement_{m,t} + X'_{i,m,t} \beta_2 + Z'_{m,t}\beta_3 + \gamma_m + \theta_t + \gamma_m t + \varepsilon_{i,m,t}$$

where  $D_{m,b}$  is a dummy for b years prior to the enforcement index turning positive in a particular MSA. 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 higher likelihood of living without either parent in a household headed by naturalized relatives or friends did not precede the implementation of tougher immigration enforcement, 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 increased likelihood of living in a household headed by a single, likely undocumented mother whose spouse is absent did not pre-date the adoption of tougher immigration enforcement measures at the MSA level. 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 B, and Table 3, Panel A.

#### 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 exogenous to our outcome of interest - the children's living arrangements. 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 children's living arrangements prior to the adoption of any enforcement. To that end, we aggregate the data at the MSA level and estimate the following regression:

(5) 
$$EI Year_m = \alpha + X_m^0 \beta + Z_m^0 \mu + \gamma_s + \varepsilon_m$$

where El Year<sub>m</sub> is the year in which MSA m enacted its first enforcement measure. The vector  $X_m^0$ represents either: (I) the share of children living without a parent in a household headed by a naturalized relative or friend, or (2) the share of children residing in a household headed by a single, likely undocumented mother whose spouse is reported absent, in MSA m prior to the adoption of any enforcement. The next vector,  $\mathbb{Z}_m^0$ , contains aggregate MSA level characteristics, such as the average unemployment rate and share of Hispanics in the MSA, also prior to the adoption of any of the enforcement measures. Equation (5) can be estimated using data from the beginning of our sample period, i.e. from 2005, 17 including state fixed effects ( $\gamma_s$ ), and clustering standard errors at the state level.

Alternatively, one can estimate an equation similar to equation (5) where, instead of predicting the timing of the adoption of tougher immigration enforcement itself, we predict the initial level of immigration enforcement at the MSA. That is:

(6) 
$$EI_m = \alpha + X_m^0 \beta + Z_m^0 \mu + \gamma_s + \varepsilon_m$$

where  $EI_m$  stands for the value of the immigration enforcement in MSA m when tougher enforcement was first implemented. In both instances, when  $\beta = 0$ , children's living arrangements in the MSA did not help predict the enactment date or initial level of interior immigration enforcement in the MSA.

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.

<sup>&</sup>lt;sup>17</sup> We exclude from this analysis MSAs in the state of Florida, which were the only ones that had already

The results from both of these exercises are displayed in Table 7. Regardless of the outcome in question, we find that none of the incidence rates of the children's living arrangements in the MSA *prior* to the adoption of stricter enforcement measures seems to have played a significant role in the adoption timing or in the initial level of immigration enforcement at the MSA. As such, while not random, the timing of adoption of tougher immigration enforcement or the initial level of immigration enforcement do not appear to be explained by changes in the outcomes of interest to us in this study.

### 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 might 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. Note, as well, that the downward bias described above is likely to have been greater with respect to the likelihood of residing in a household headed by a single, likely undocumented mother, since she would be the target of intensified immigration enforcement. This is not the case for children living in a household headed by naturalized individuals, unless such households are mixed-status households with other likely undocumented individuals.

To assess if the aforementioned biases are substantial, we use instrumental variable (IV) methods to instrument for the children's likely exposure to tougher immigration enforcement. Because we have already shown that the adoption of tougher immigration enforcement by the MSA does not appear to have been driven by our outcomes of interest, we construct a *shift-share* instrument in which the *shift* is the level of immigration enforcement adopted by each MSA in any given year (the policy itself). The *share* is the likely location of children in our sample based on information on past residential choices of likely undocumented immigrants from the same countries of origin prior to the enactment of the enforcement measures being examined (in the spirit of Bartel 1989; Card 2001; Cortes and Tessada 2011, among many others). Specifically, we use data from the

year 2000 ACS to construct a share capturing what the most probably location of undocumented immigrants from the same country of origin would have been in each MSA in the absence of interior immigration enforcement:<sup>18</sup>

(6) Share of Undocumented Immigrant<sub>m,0,2000</sub> = 
$$\frac{undocumented\ immigrants_{m,0,2000}}{undocumented\ immigrants_{0,2000}}$$

Subsequently, we interact the *share* in equation (6) with the *shift* – namely, the level of immigration enforcement for each MSA in question in any given year. For this instrument to be valid, it needs to be strongly correlated with the non-instrumented exposure to tougher immigration enforcement. This might be the case due to the entrenched tendency for immigrants to locate in areas with established networks of their compatriots (Bartel 1989; Card 2001; Cortes and Tessada 2011, among many others).

Table 8 shows the IV estimates for both outcomes. When examining our first outcome, 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 sample for the second outcome is the same as in Table 3, Panel A. The last rows of Table 8 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 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. Additionally, the same one standard deviation increase in immigration enforcement (equivalent to 0.94) increases the propensity of living without parents in a household headed by a naturalized relative or friend by 28 per cent (as opposed to approximately 19 per cent in Table 2, Panel B). Similarly, tougher immigration enforcement substantially raises the probability of living in a household headed by a single, likely undocumented mother with a spouse reported as absent. Specifically, a one standard deviation increase in immigration enforcement raises the likelihood of this living arrangement by 51 per cent, as opposed to 20 per cent in Table 3. While the IV estimates

<sup>&</sup>lt;sup>18</sup> We are using the population in 2000 given that we cannot consistently identify MSAs in 1980 or 1990 with those in 2000 onwards.

are without doubt less precisely estimated, they serve to confirm that, if anything, our OLS estimates are probably lower bound estimates of the true impact of intensified enforcement.

### 7. Policy Channels

We have so far documented how the intensification of immigration enforcement appears to raise the propensity of two types of living arrangements among American children with a likely undocumented parent: (I) living without any parent in households headed by naturalized relatives or friends, and (2) living in a household headed by a single, likely undocumented mothers with absentee spouses. The rationale behind these findings, which appear to be unique to children with a likely undocumented parent, are not solely driven by Maricopa County and survive a number of identification checks, is that intensified immigration enforcement splits the families of these children via the deportation of family members.

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 those areas. The results in Table 9 suggest that a one standard deviation 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 per cent. Likewise, the same increase in immigration enforcement raises the children's likelihood of residing in a household headed by a single undocumented mother with an absentee spouse by 17 per cent. Both impacts are not statistically different from the estimated impacts in Tables 2, Panel B, and Table 3, Panel A, suggesting that the impacts being measured therein are indeed originating from states without a Trust Act.<sup>19</sup>

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<sup>&</sup>lt;sup>19</sup> We also perform the analysis for states with a Trust Act and are unable to find a statistically significant impact of immigration enforcement in those instances.

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:

(I) employment-based enforcement, and (2) police-based enforcement. The former consist of employment verification mandates checking the work eligibility of immigrants. The latter involve the local and state police and are directly linked to the apprehension and deportation of undocumented immigrants. If the measured impacts of intensified enforcement in Table 2, Panel B, and Table 3, Panel A, were indeed capturing the impact of deportations, we would only expect police-based enforcement, which is responsible for deportations from the interior, 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 without their parents in a household headed by a naturalized relative or friend by 19 per cent. Likewise, the same increase in police-based immigration enforcement raises the children's likelihood of residing in a household headed by a single, undocumented mother with absent spouses by 38 per cent. However, employment-based measures, which could indirectly impact family composition by placing severe financial constraints on the household, do not seem to have a statically significant impact on the children's living arrangements.

To further identify the policy channels, we split our immigration enforcement index to create an index for each individual policy. The results from re-estimating our models using the various policy indexes are displayed in Table 11. Supporting the results in Table 10, we find that local, police-based immigration enforcement measures appear to drive the found impacts. Specifically, a one standard deviation increase in immigration enforcement through Secure Communities raises the children's likelihood of residing without their parents in a household headed by a naturalized relative or friend by 16 per cent.<sup>20</sup> Likewise, a one standard deviation increase in immigration enforcement through 287(g) agreements signed by the local police with ICE raises the

<sup>&</sup>lt;sup>20</sup> The standard deviation of the secure communities, displayed in Table C in the appendix, is 0.47. On average, 9.5 per cent of Hispanic children live without parents. Hence, the estimated impact is given by: [(0.032\*0.47)/0.0954]=0.16 or 16 per cent.

children's likelihood of residing in a household headed by a single, undocumented mother with an absent spouse by 17 per cent.<sup>21</sup>

### 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 American children with an undocumented parent belong by raising the prevalence of two specific types of arrangements: (1) living without parents, and (2) living in a household headed by a single, likely undocumented mother with an absent spouse.

We find that the piecemeal approach to immigration enforcement has raised the exposure of these children to living without any of their parents in a household headed by a naturalized immigrant, as well as their propensity to live in a household headed by a single, undocumented mother with an absentee spouses. The first results point 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. The second finding further suggests the possibility that, 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. Our findings prove robust to a number of identification and robustness checks addressing the many challenges researchers face when working with this population, including its difficult identification and their endogenous sorting across MSAs. Overall, the various checks reveal that the observed impacts originate from immigration enforcement more directly linked to deportations, as is the case with police-based enforcement involving local and state police – specifically, Secure Communities and local 287(g) agreements between the local police and Immigration Customs Enforcement (ICE).

The standard deviation of the local 287(g) agreements, also displayed in Table C in the Appendix, is 0.47. On average, 3.3 per cent of Hispanic children live in a household with single mothers who report their spouses as being absent. Therefore, the estimated impact is given by:  $\{[(0.013)*0.47]/0.033\}=0.17$  or 14 per cent.

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 inequities associated to their parents' immigration statuses. An estimated 7,823 additional children would start living in a household headed by a single, likely undocumented mother with an absentee spouse if immigration enforcement were to intensify by one standard deviation – an enforcement level approximately equal to its average level over the period under analysis.<sup>22</sup> Likewise, approximately 9,018 children would start living without their parents in households headed by a naturalized relative or friend.<sup>23</sup> 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 in 2017. Further research addressing the many challenges faced by this population, especially as they grow older, is warranted.

<sup>&</sup>lt;sup>22</sup> In 2005, an estimated 39,112 children in our sample were living in a household headed by a single, likely undocumented mother with an absentee spouse. Hence, a one standard deviation increase in immigration enforcement would add 7,823 children to that pool (*i.e.* the estimated 20 per cent increase).

<sup>&</sup>lt;sup>23</sup> 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 per cent increase).

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**Table I: Summary Statistics** 

Descriptive Statistics	Mean	S.D	
Outcome I: 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.Sborn	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 U.S. of HH head	18.177	7.899	
Share of children receiving TANF in MSA	0.552	0.497	
Observations	195,874		
Outcome 2: Children's likelihood of living in households	headed by single married mo	thers with absent spouses	
Probability of living with a mother 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.Sborn	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 U.S. of HH head	15.606	6.394	
Share of children receiving TANF in MSA	0.550	0.497	
Observations		,828	

**Notes:** <u>Sample</u>: U.S.-born children ages 0-15 residing in households headed by a low skilled (with less than a high school diploma) and long-term Hispanic resident (with 5+ years of residency in the U.S.). In Panel B, the sample is further restricted to married household heads who report on the absentee status of their partners.

**Table 2: Probability of Children Living without Their Parents** 

Panel A: Likely undocumented HH head			Panel B: Naturalized HH head		Panel C: U.Sborn HH head							
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	(I)	(2)	(3)	(4)
Enforcement index								0.019*				
	0.002	0.001	0.001	0.001	0.006	0.010	0.013*	*	0.005	-0.004	-0.002	-0.008
	(0.002)	(0.002)	(0.002)	(0.002)	(0.005)	(0.007)	(800.0)	(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	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			0.0	095			0.	18	

**Notes**: Sample: U.S.-born children ages 0-15 residing in households headed by a low skilled (with less than a high school diploma) and long-term Hispanic resident (with 5+ years of residency in the U.S.). 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 (3) 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 in households headed by single married mothers with absent spouses

Panel A: Likely undocumented HH head			Panel I	3: Natur	alized H	H head	Panel	C: U.S	born Hi	l head		
	(1)	(2)	(3)	(4)	<b>(I)</b>	(2)	(3)	(4)	<b>(I)</b>	(2)	(3)	(4)
Enforcement index	0.001 (0.002)		0.005** (0.003)	0.007** (0.003)	-0.006 (0.006)	-0.007 (0.008)	-0.010 (0.009)	-0.001 (0.011)	-0.007 (0.006)	-0.007 (0.006)	-0.009 (0.006)	-0.015 (0.011)
Individual characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Welfare programs	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			0.0	052			0.1	04	

**Notes**: Sample: U.S.-born children ages 0-15 residing in households headed by a low skilled (with less than a high school diploma) and long-term Hispanic resident (with 5+ years of residency in the U.S.). Table 3 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 4: Robustness Check #I
Falsification test: Probability of living arrangement among White non-Hispanic children

B	Model Specification					
Regressors	<u> </u>	(2)	(3)	(4)		
Panel A: Probability of living withou	it any parent in a househ	old headed b	y relatives or f	riends		
Enforcement index	0.007	0.003	0.003	0.002		
	(0.005)	(0.008)	(0.008)	(0.011)		
Individual characteristics Welfare P	Yes	Yes	Yes	Yes		
	No	No	Yes	Yes		
Years FE	No	Yes	Yes	Yes		
MSA FE	No	Yes	Yes	Yes		
MSA-trends	No	No	No	Yes		
Observations	8,186	8,186	8,186	8,186		
R-squared	0.041	0.104	0.104	0.135		
Dependent variable mean			0.04			
Panel B: Probability of living in a fer	male-headed household v	with an absen	tee spouse			
Enforcement index	0.002	0.003	0.003	0.004		
	(0.002)	(0.003)	(0.003)	(0.004)		
Individual characteristics Welfare programs	Yes	Yes	Yes	Yes		
	No	No	Yes	Yes		
Years FE	No	Yes	Yes	Yes		
MSA FE	No	Yes	Yes	Yes		
MSA-trends	No	No	No	Yes		
Observations	75,335	75,335	75,335	75,335		
R-squared	0.004	0.018	0.018	0.026		
Dependent variable mean			0.03			

**Notes**: Sample: White non-Hispanic U.S.-born children ages 0-15 residing in households headed by a low skilled (with less than a high school diploma) and long-term U.S. resident (with 5+ years of residency in the U.S.). 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 (3) 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

Column:	(1)	(2)			
Outcome	Probability of living without their parents	Probability of living in a household headed by a single mother whose spouse is absent			
HH head	Naturalized HH head	Likely undocumented mother			
Panel A: Using an a	alternative definition of like	ly undocumented parents			
Enforcement					
index	0.024** (0.011)	0.004* (0.002)			
Individual					
characteristics	Yes	Yes			
Welfare programs	Yes	Yes			
Years FE	Yes	Yes			
MSA FE	Yes	Yes			
MSA-trends	Yes	Yes			
Observations	26,914	118,852			
R-squared	0.118	0.025			
Mean Dependent					
Variable	0.08	0.027			
Panel B: Excluding	Maricopa County	1			
Enforcement					
index	0.023**	0.008*			
	(0.009)	(0.004)			
Individual					
characteristics	Yes	Yes			
Area characteristics	Yes	Yes			
Years FE	Yes	Yes			
MSA FE	Yes	Yes			
MSA-trends	Yes	Yes			
Observations	41,922	88,596			
R-squared	0.077	0.022			
Mean Dependent					
Variable	0.095	0.032			

**Notes:** Sample: U.S.-born children ages 0-15 residing in households headed by a low skilled (with less than a high school diploma) and long-term Hispanic resident (with 5+ years of residency in the U.S.). In Panel B, 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 (3) 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 #I
Testing for the parallel trends assumption

	Panel A	Panel B		
Outcome	Probability of living without their parents	Probability of living in a household headed by a single mother whose spouse is absent		
HH head	Naturalized HH head	Likely undocumented mother		
Years Prior to the EI>0:				
I year prior	-0.006 (0.009)	0.005 (0.006)		
2 years prior	-0.002 (0.012)	0.000 (0.006)		
3 years prior	0.001 (0.010)	0.006 (0.010)		
4 years prior	0.011 (0.015)	0.003 (0.009)		
5 years prior	-0.006 (0.00 <del>9</del> )	-0.001 (0.013)		
6 years prior	-0.002 (0.012)	-0.017 (0.017)		
Enforcement index	0.015* (0.008)	0.006** (0.003)		
Individual characteristics Area characteristics Years FE MSA FE MSA-trends	Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes		
Observations R-squared	43,079 0.072	91,828 0.017		
Dependent variable mean	0.095	0.033		

**Notes**: Sample: U.S.-born children ages 0-15 residing in households headed by a low skilled (with less than a high school diploma) and long-term Hispanic resident (with 5+ years of residency in the U.S.). In Panel B, 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 adoption of immigration enforcement

Part I - Assessing the endoge	neity of the adoption timin	g
	Panel A	Panel B
Outcome	First Year IE>0	First Year IE>0
HH head	Naturalized HH head	Likely undocumented mother
Average share of children living without their parents in the MSA	0.077 (0.116)	
Average share of children living in a household headed by a single mother whose spouse is absent in the MSA		-0.163 (0.397)
Individual controls Area characteristics State FE	Yes Yes Yes	Yes Yes Yes
Observations R-squared	118 0.783	133 0.806
Part 2 – Assessing the endoge	neity of the IE	
	Panel A	Panel B
Outcome	El Value First Year IE>0	El Value First Year IE>0
HH head	Naturalized HH head	Likely undocumented mother
Average share of children living without their parents in the MSA	0.001 (0.114)	
Average share of children living in a household headed by a single mother whose spouse is absent in the MSA		-0.097 (0.300)
Individual controls Area characteristics State FE	Yes Yes Yes	Yes Yes Yes
Observations R-squared	118 0.55	133 0.415

**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 without their parents	Probability of living in a household headed by a single mother whose spouse is absent		
HH head	Naturalized HH head with likely undocumented household members	Likely undocumented mother		
Enforcement index	0.036** (0.018)	0.018** (0.008)		
Individual characteristics Welfare programs Years FE MSA FE MSA-trends	Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes		
Observations R-squared	25,844 0.058	91,828 0.021		
First Stage Results				
IV	8.02*** (1.655)	3.473*** (1.286)		
R-squared F-statistic	0.80 23.49	0.886 35.55		
Dependent variable mean	0.12	0.033		

**Notes**: Sample: U.S.-born children ages 0-15 residing in households headed by a low skilled (with less than a high school diploma) and long-term Hispanic resident (with 5+ years of residency in the U.S.). In Panel B, 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 #I
Immigration enforcement and children's living arrangement excluding states
with a trust act

	Panel A	Panel B		
Outcome	Probability of living without their parents	Probability of living in a household headed by a single mother whose spouse is absent		
HH head	Naturalized HH head	Likely undocumented mother		
Enforcement index	0.022** (0.009)	0.006* (0.003)		
Individual characteristics	Yes Yes	Yes Yes		
Welfare programs Years FE	Yes	Yes		
MSA FE	Yes	Yes		
MSA-trends	Yes	Yes		
Observations R-squared	39,316 0.078	85,263 0.022		
Dependent variable mean	0.094	0.033		

**Notes:** Sample: U.S.-born children ages 0-15 residing in households headed by a low skilled (with less than a high school diploma) and long-term Hispanic resident (with 5+ years of residency in the U.S.), excluding states with a Trust Act (see: http://www.catrustact.org/text-of-trust-acts.html). In Panel B, 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 (3) 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 without their parents	Probability of living in a household headed by a single mother whose spouse is absent Likely undocumented mother		
HH head	Naturalized HH head			
Police-based enforcement	0.019** (0.009)	0.011** (0.005)		
Employment enforcement	0.024 (0.023)	-0.003 (0.008)		
Individual characteristics Area characteristics Years FE MSA FE MSA-trends	Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes		
Observations R-squared Dependent variable mean	39,845 0.080 0.095	91,828 0.023 0.033		

**Notes:** Sample: Hispanic U.S. citizens between 0 and 15 years old in households headed by a low skilled (less than High School Diploma) and resident long-term (5+ years) in the U.S. In Panel B, 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 (3) in the text. Standard errors are in parentheses and are clustered at the MSA level. \*\*\*p<0.01, \*\*p<0.05, \*p<0.1.

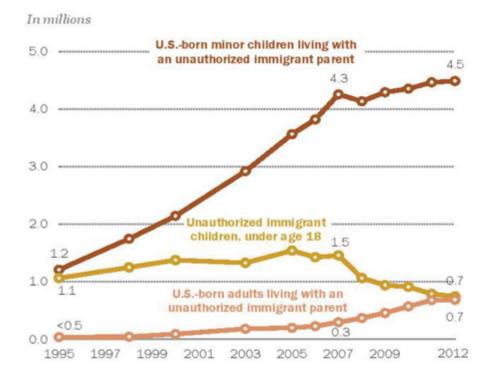
Table II: Channels for the Observed Impacts #2
Probability of living arrangement by type of immigration enforcement

	Panel A	Panel B		
Outcome	Probability of living without their parents	Probability of living in a household headed by a single mother whose spouse is absent		
HH head	Naturalized HH head	Likely undocumented mother		
Secure Communities	0.032** (0.014)	0.011 (0.010)		
E-verify	0.006 (0.016)	-0.004 (0.010)		
OIL mandates	-0.038 (0.027)	0.000 (0.019)		
Local 287g	-0.009 (0.010)	0.013** (0.006)		
State 287g	0.025 (0.024)	0.011 (0.010)		
Individual characteristics	Yes	Yes		
Area characteristics	Yes	Yes		
Years FE	Yes	Yes		
MSA FE	Yes	Yes		
MSA-trends	Yes	Yes		
Observations R-squared	43,079 0.077	91,828 0.023		
Dependent variable mean	0.095	0.033		

**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+ years in the U.S.). In Panel B, 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 (3) in the text. Standard errors are in parentheses and are clustered at the MSA level. \*\*\*p<0.01, \*\*p<0.05, \*p<0.1.

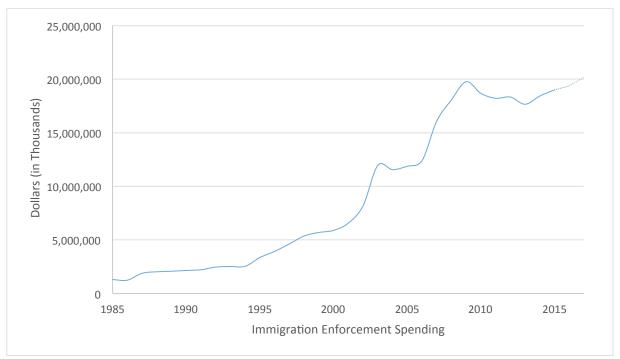
## **APPENDIX**

Figure AI: Population of Children by Citizen Status



Notes: Source Pew Research Center (Passel et al. 2014)





**Notes:** The data for the fiscal years between 1985-2002 is obtained 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 obtained from the budgets of its successor agencies: US Customs and Border Protection (CBP), US Immigration and Customs Enforcement (ICE). We exclude the U.S. Visitor and Immigrant Status Indicator Technology (US-VISIT) program since it is not possible to identify consistency over the last time period. To obtain the most accurate statistics, figures were 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

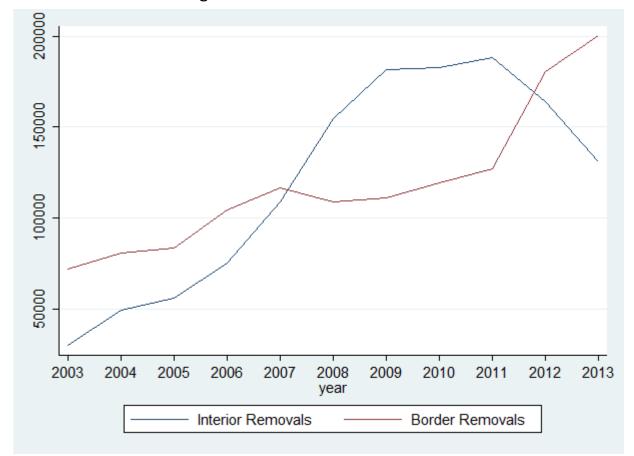
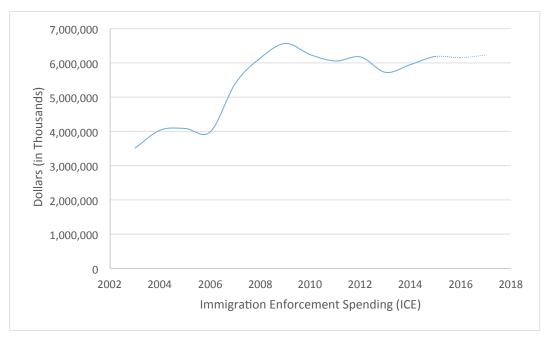


Figure A3: Interior and Border Removals

**Source:** DHS OIS, Yearbook of Immigration Statistics, FY 2010-2013.

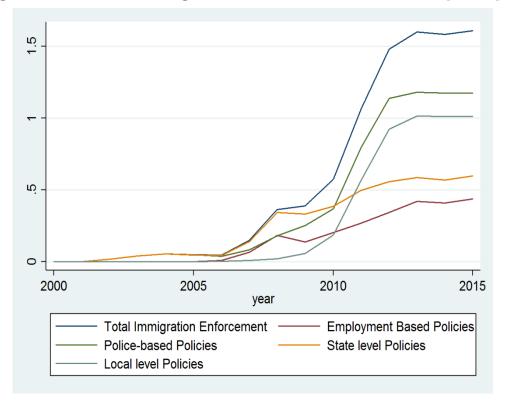
Figure A4: Immigration Customs Enforcement (ICE) Spending in 2015 Dollars, 2003 to 2017



**Notes:** The spending for the fiscal years 2003 to 2015 is obtained from the budgets of US Immigration and Customs Enforcement (ICE). To obtain the most accurate statistics, figures were 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 budgeted amount from the last Budget in Brief available (2017). See:

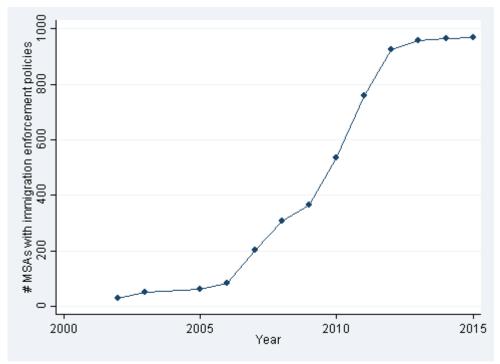
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**Notes:** Average enforcement index per year.





**Table A: Description of Enforcement Laws** 

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	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 to interrogate and arrest noncitizens during their regular duties on law enforcement operations.  Jail enforcement: permits local officers to question immigrants who have been arrested on state and local charges about their immigration status.  Hybrid model: allows participation in both types of program.
	sc	2009-2014 2017-	Nation's jail and prisons	Identify noncitizens who have committed serious crime using biometric information	Police	Local	The prog the submi biometric Jurisdictions detainees contraste records ir	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	ldentification 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

								<ul> <li>identification</li> <li>documentation during</li> <li>a lawful stop.</li> <li>Require that schools</li> <li>report students' legal</li> <li>status.</li> </ul>
Employment- Based Measures	E- Verify	2006-	Firms	Deter the hiring of unauthorized immigrants.	Employer	State	State governor	Electronic program that allows employers to screen newly hired workers for work eligibility.

Table B: Citizenship Status of Parents of Children in Our Sample

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 one native parent	9.80%
One naturalized and one native parent	3.16%

**Sample:** U.S.-born children ages 0-15 residing in households headed by a low skilled (with less than a high school diploma) and long-term Hispanic resident (with 5+ years of residency in the U.S.).

Table C: Descriptive Statistics on the Individual Immigration Enforcement Program Indexes

Individual Policy							
Index	Observations	Mean	Std. Dev.	Min	Max		
Panel A: Sample u	sed to examine the	probability o	of living without the	eir parents			
SC index	43,079	0.49	0.47	0	I		
Local 287(g) index	43,079	0.29	0.41	0	1		
E-Verify index	43,079	0.09	0.28	0	1		
OIL index	43,079	0.04	0.19	0	I		
State 287(g) index	43,079	0.05	0.20	0	1		
Panel B: Sample u	sed to examine the	probability o	f living in a househ	old headed by	a single		
mother whose spo	ouse is absent						
SC index	91,836	0.52	0.47	0	I		
Local 287(g) index	91,836	0.28	0.40	0	1		
E-Verify index	91,836	0.11	0.31	0	1		
OIL index	91,836	0.05	0.22	0	1		
State 287(g) index	91,836	0.05	0.22	0	I		