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# Centre for Research & Analysis of Migration

## **Discussion Paper Series**

CPD 11/17

## The Changing Family Structure of American Children with Unauthorized Parents

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#### The Changing Family Structure of American Children with Unauthorized Parents<sup>1</sup>

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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 live without their parents in households headed by relatives or friends, or in households singly headed by their mothers with absentee spouses. Given the emotional, cognitive and long run socioeconomic costs of being raised without parents or in a single-headed household, 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, Unauthorized Immigration, Family Structure, United States.

**JEL Codes:** J13, J15, K37.

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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) –most of them fathers and heads of households with U.S.-born children. 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 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 United States (Capps *et al.* 2016), we subsequently zoom into, yet, another consequence of intensified enforcement –namely, its impact on 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 percent of American children –twice as many as in 2002 (Passel *et al.* 2014). In due course, they will become eligible voters and have a say on the nation's politics and immigration policy.<sup>4,</sup> Secondly, the piecemeal approach to immigration enforcement is unlikely to change any time soon. On the contrary, immigration enforcement has intensified under the new Administration (Sacchetti 2017).<sup>5</sup> Lastly, understanding how intensified immigration enforcement is affecting the family environment in which an estimated 4.5 million of 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 the school, experience teen-age 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>6,7</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 of U.S.-born children with a likely undocumented parent. Because information on the legal status of immigrants is not available in representative datasets, we construct a proxy for the likely

<sup>&</sup>lt;sup>4</sup> In 2016, second generation Latinos made up about one-third (32 percent) of Latino eligible voters, up from 27 percent in 2008 and 26 percent in 2000 (see: http://www.pewhispanic.org/2016/01/19/looking-forward-to-2016-the-changing-latino-electorate/).

<sup>&</sup>lt;sup>5</sup> See, for example: https://www.washingtonpost.com/local/immigration-arrests-up-during-

trump/2017/05/17/74399a04-3b12-11e7-9e48-c4f199710b69\_story.html

<sup>&</sup>lt;sup>6</sup>The budget for immigration enforcement planned for 2018, it is a 25 percent more than previous year.

<sup>&</sup>lt;sup>7</sup> Between January 22 and April 29, ICE conducted around 10,800 "non-criminal arrests," compared to just 4,200 in 2016—an increase of more than 150 percent(U.S. Immigration and Customs Enforcement (ICE) 2017a).

undocumented status of parents using traits found to be good predictors of such a status. The latter include being a non-citizen, low skilled (to exclude foreign-born students or high-skilled non-immigrant visa holders) and a long-term (five plus years to exclude non-immigrant visa holders) Hispanic resident. To have a similar sample of *treated* and *control* youth (namely, children with a likely undocumented parent and children without), we focus on Hispanic children ages 0-15 residing in households headed by low-skilled individuals with less than a high school education, and long-term U.S. residents with 5 or more years in the country.

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 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 deportation. Likewise, the same increase in immigration enforcement raises these children's propensity to live in households headed by a likely undocumented mother with an absentee spouse by 20 percent –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 to 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.

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).<sup>8</sup> 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 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 A1). 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>9</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

<sup>&</sup>lt;sup>8</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.

<sup>&</sup>lt;sup>9</sup> We include employment verification mandates in our analysis since they could impact family composition by placing financial constraints on the household.

program.<sup>10</sup> 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). Indeed, as shown by Figure A2, interior removals increased by roughly 520 percent between 2003 and 2011, while border removals rose by 76 percent over the same time span.

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 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-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.

<sup>&</sup>lt;sup>10</sup> See Appendix Table B1 for a description of each policy.

#### **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. 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.

#### 3.1 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 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>11</sup> Third, the 2005 ACS sample is the first yearly sample with a full one-percent sample of the United 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 swithout regard to legal status, using the near universe of U.S. addresses to derive its interview sample.<sup>12</sup>

<sup>&</sup>lt;sup>11</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>12</sup> See: https://www.census.gov/history/pdf/acsdesign-methodology2014.pdf

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.<sup>13</sup> 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 11,791,033 individuals – 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 (see Figure A3).<sup>14,15</sup>

<sup>&</sup>lt;sup>13</sup> 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.

<sup>&</sup>lt;sup>14</sup> 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."

<sup>&</sup>lt;sup>15</sup> 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.

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 by looking at the incidence of two events: (1) their propensity to reside without their parents in a household headed by relatives or friends, and (2) their likelihood of residing in a singly headed household with mothers who report 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 households 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 they all live in households headed by low skilled and longterm Hispanic residents.

Table 1 shows the summary statistics for our samples of children. Specifically, Panel A of Table 1 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. 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. Children are, on average, 7 years old.

In Panel B of Table 1, 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 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 naturalized mom with an absentee spouse is 10.5 percent. The children are, on average, closet to 8 years old.

Given our focus on children residing in households headed by low skilled and longterm 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 1 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 electorate voting for Republican candidates for the U.S. House of Representatives in the state or 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 percent. Unemployment rates and the share of Hispanics averaged 5 percent and 29 percent, respectively, and the share of children in our sample receiving Temporary Assistance for Needy Families (TANF) in the MSAA averaged 55 percent.

#### **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) 2017b). 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 American children with likely undocumented parents through the deportation of mainly fathers; thus raising these children's likelihood of: (1) 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 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) 
$$EI^{k}_{mt} = \frac{1}{N_{2000}} \sum_{a \in m}^{m} \frac{1}{12} \sum_{t=1}^{12} \mathbf{1} (E_{t,a}) P_{a,2000}$$

where  $\mathbf{1}(E_{t,a})$  is an indicator function that informs about the implementation of a particular policy in county *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 counties 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 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 (now: year) t are exposed to is computed as the sum of the indices for each enforcement initiative at the (MSA, year) level:<sup>16</sup>

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

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.<sup>17</sup> 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. 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

<sup>&</sup>lt;sup>16</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>17</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 construct indices that distinguish according to the scope (local vs. state-level) of the policies. Results corroborate those found using a single index.

benchmark model specification, which exploits the aforementioned temporal and geographic variation in the enforcement index, as follows:

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

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<sub>m,t</sub> 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>18</sup> 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).<sup>19</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.<sup>20</sup>

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: (1) children living without parents, and (2) children living in singly headed households with mothers who report having an absentee spouse following the breaking up of the family unit through parental deportations.

<sup>&</sup>lt;sup>18</sup> In the case of natives, this term equals their age.

<sup>&</sup>lt;sup>19</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.

<sup>&</sup>lt;sup>20</sup> Table B2 in the appendix describes the variables used in the analysis.

#### 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 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 comprehensive 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 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 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 and, as such, not at risk of deportation.

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

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singly headed by their 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 since. 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 singly headed by their 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 households singly headed by their likely undocumented mothers with absentee spouses by 20 percent.<sup>21</sup> However, it does not appear to raise their propensity to reside in households singly headed by naturalized or U.S.-born mothers with absent spouses –a smaller share of whom are likely married to unauthorized men. Indeed, 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

<sup>&</sup>lt;sup>21</sup> 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:  $\{[(0.007)*0.94]/0.033\}=0.20 \text{ or } 20 \text{ percent.}\}$ 

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 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. Furthermore, by focusing on white children, we exclude Black children traditionally exhibiting a higher likelihood of living in split households.<sup>22</sup>

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 to live in a female-headed household with an absentee spouse. 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.

<sup>&</sup>lt;sup>22</sup> 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.

#### 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: (1) without any parent in a household headed by naturalized relatives or friends, or (2) in a household headed by a likely undocumented mother who is singly heading the household in the absence of her spouse. We have also shown how these findings are unique to 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. The validity of our identification approach and findings relies on a number of assumptions we address in what follows.

#### 6.1 Parallel Trends Assumption

A first assumption is that the measured impact of intensified enforcement did not predate 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) 
$$y_{i,m,t} = \alpha + \alpha + \sum_{b=-6}^{-1} \delta_b D_{m,b} + \beta_1 Total Enforcement_{m,t} + X'_{i,m,t} \beta_2 + Z'_{m,t} \beta_3 + \gamma_m + \theta_t + \gamma_m t + \varepsilon_{i,m,t}$$

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,  $D_I$  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 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. 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 non-endogenous to our outcome of interest –in our case, the family arrangements of children in our samples. 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) 
$$EI Year_m = \alpha + X_m^0 \alpha + Z_m^0 \mu + \gamma_s + \varepsilon_m$$

where *EI Year<sub>m</sub>* is the year in which MSA *m* enacted its first enforcement measure. The vector  $X_m^0$  represents either: (1) 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 singly headed by a likely undocumented mom whose spouse is reported absent, in MSA *m* prior to the adoption of any enforcement. The next vector,  $Z_m^0$ , 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,<sup>23</sup> 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) 
$$EI_m = \alpha + X_m^0 \alpha + Z_m^0 \mu + \gamma_s + \varepsilon_m$$

where  $EI_m$  stands for the value of the immigration enforcement in MSA *m* when tougher enforcement was first implemented.

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 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 by the MSA or on 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. In other words, our estimates might be downward biased.

<sup>&</sup>lt;sup>23</sup> 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.

Note, as well, that this bias is likely to have particularly altered the likelihood of residing in a household headed singly by a likely undocumented mom, since she would be the target of intensified immigration enforcement. This is not the case for children living in households headed by naturalized individuals, unless such households are mixed-status households with other likely undocumented individuals. 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 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 can focus on the non-random nature of immigrants' residential choices instead. Specifically, we construct a *shift-share* instrument. 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 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 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>24</sup>

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

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 highly correlated to the non-instrumented exposure to tougher

 $<sup>^{24}</sup>$  We are using the population in 2000 given that we cannot consistently identify MSAs in 1980 or 1990 with those in 2000 onwards.

immigration enforcement, which, as we shall show, it is 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 confirm that the IV is a good The F-stats from the first stage regressions are equal to 35.55 and 23.49, instrument. 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, 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 propensity of living without any parent in a household headed by a naturalized relative or friend by 28 percent (as opposed to approximately 19 percent in Table 2, Panel B). Similarly, tougher immigration enforcement substantially raises the probability of living in a household singly headed by a likely undocumented mom with a spouse reported as absent. Specifically, a one standard deviation increase in immigration enforcement raises the likelihood of this living arrangement by 51 percent, as opposed to 20 percent in Table 3. While the IV estimates are, certainly, more imprecisely estimated, they serve to confirm that, if anything, our OLS estimates are probably 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 American children with a likely undocumented parent: (1) living without any parent in households headed by naturalized relatives or friends, and (2) living in households singly headed by likely undocumented mothers with absentee spouses. The rationale behind these findings, which appear to be unique to children with a likely undocumented parent, not solely driven by Maricopa County and survive a number of identification checks, is that via the deportation 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 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 percent. Likewise, the same increase in immigration enforcement raises the children's likelihood of residing in households singly headed by their likely undocumented mothers with absentee spouses by 17 percent. 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>25</sup>

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, and (2) *police-based* enforcement. The former

<sup>&</sup>lt;sup>25</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.

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 percent. Likewise, the same increase in police-based immigration enforcement raises the children's likelihood of residing in households singly headed by likely undocumented mothers with absent spouses by 38 percent. 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.

#### 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 households singly headed by likely undocumented mothers with absent spouses.

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 households singly headed by their likely undocumented mothers with absentee spouses. The first results 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. The second finding further points to 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, and reveal that the observed impacts originate from immigration enforcement more directly linked to deportations, as is the case with policebased 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 inequities associated to their parents' immigration statuses. 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 –an enforcement level approximately equal to its average level over the period under analysis.<sup>26</sup> Likewise, approximately 9,018 children would start living without their parents in households headed by a naturalized relative or friend.<sup>27</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.

 $<sup>^{26}</sup>$  In 2005, an estimated 39,112 children in our sample 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).

 $<sup>^{27}</sup>$  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 percent increase).

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Descriptive Statistics:	Mean	S.D
First 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.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 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	0.058	0.181
Share Voting Republican in the State in 2000	0.476	0.079
MSA Share of Hispanics in 2000	0.293	0.177
Observations	19	95,874
Second Outcome: Children's Likelihood of Living in Households Singly Headed by th	eir Married Moms with Absent Spouse	es
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.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 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	0.052	0.181
Share Voting Republican in the State in 2000	0.476	0.080
MSA Share of Hispanics in 2000	0.292	0.177
Observations	9	1,828

 Table 1: Summary Statistics

**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 United States). In Panel B, the sample is further restricted to married household heads who report on the absentee status of their partners.

	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 (0.002)	0.001 (0.002)	0.001 (0.002)	0.001 (0.002)	0.006 (0.005)	0.010 (0.007)	0.013* (0.008)	0.019** (0.009)	0.005 (0.007)	-0.004 (0.006)	-0.002 (0.007)	-0.008 (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
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			0.0	)95			0.	18	

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

**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 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 (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.

	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 (0.002)	0.005* (0.003)	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
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			0.0	)52			0.1	04	

Table 3: Probability of Living in Households Singly Headed by their Married Moms with Absent Spouses

**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 United States). 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.

D		Model	Specification	
Regressors	(1)	(2)	(3)	(4)
Panel A: Probability of Living without Any Parent in a	a Household Headed by R	elatives or Frien	ds	
Enforcement Index	0.009*** (0.003)	0.001 (0.004)	-0.003 (0.005)	-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	0.121	
Panel B: Probability of Living in a Female-Headed Ho	usehold with an Absentee	Spouse		
Enforcement Index	0.003*** (0.001)	0.002** (0.001)	0.002 (0.001)	0.002 (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	0.017	

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

**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 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 (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.

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

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

**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 United States). 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.

	Panel A	Panel B
Outcome:	Probability of Living without Their Parents	Probability of Living in a Household Singly Headed by a Mom whose Spouse is Absent
HH Head:	Naturalized HH Head	Likely Undocumented Mother
Years Prior to the EI>0:		
1 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 (0.009)	-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 Welfare Programs Area Characteristics Years FE MSA FE MSA-trends	Yes Yes No Yes Yes No	Yes Yes Yes Yes Yes Yes
Observations R-squared	43,079 0.072	91,828 0.017
Dependent Variable Mean	0.095	0.033

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

**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 United States). 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.

Part 1 – Assessing the Endogeneity of the Adoption Timing				
	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 Singly Headed by a Mom whose Spouse is Absent in the MSA		-0.163 (0.397)		
Individual controls	Yes	Yes		
Area characteristics	Yes	Yes		
State FE	Yes	Yes		
Observations	118	133		
R-squared	0.783	0.806		
Part 2 – Assessing the Endogeneity of the	IE			
	Panel A	Panel B		
Outcome:	EI Value First Year IE>0	EI Value First Year IE>0		
HH Head:	Naturalized HH Head	Likely Undocumented Mother		

Average Share of Children Living

without Their Parents in the MSA

Average Share of Children Living in a Household Singly Headed by a Mom

whose Spouse is Absent in the MSA

Individual controls

Area characteristics

State FE

Observations

R-squared

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

**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.

0.001

(0.114)

Yes

Yes

Yes

118

0.55

-0.097

(0.300)

Yes

Yes

Yes

133

0.415

	Panel A	Panel B
Outcome:	<b>Probability of Living</b> without Their Parents	Probability of Living in a Household Singly Headed by a Mom 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	Yes	Yes
Welfare Programs	Yes	Yes
Area Characteristics	Yes	Yes
Years FE	Yes	Yes
MSA FE	Yes	Yes
MSA-trends	Yes	Yes
Observations	25,844	91,828
R-squared	0.058	0.021
First Stage Results		
IV	8.02***	3.473***
	(1.655)	(1.286)
R-squared	0.80	0.886
F-statistic	23.49	35.55
Dependent Variable Mean	0.12	0.033

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

**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 United States). 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.

	Panel A	Panel B
Outcome:	Probability of Living without Their Parents	Probability of Living in a Household Singly Headed by a Mom whose Spouse is Absent
HH Head:	Head:         Naturalized HH Head         Likely Undocumente	
Enforcement Index	0.022*** (0.009)	0.006* (0.003)
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	39,316	85,263
R-squared	0.078	0.022
Dependent Variable Mean	0.094	0.033

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

**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 United States), 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.

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

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

**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 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





**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 consistently 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



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



Figure A3: Unauthorized Immigrant Population in the United States in Recent Years

Note: Shading surrounding line indicates low and high points of the estimated 90% confidence interval. The 2009-2014 change is not statistically significant at 90% confidence interval. Data labels are for 1990, 1995, 2000, 2001, 2003, 2005, 2007, 2009, 2011, 2013 and 2014.

Source: Pew Research Center estimates for 2005-2014 based on augmented American Community Survey data (IPUMS); for 1995-2004 based on March Supplements of the Current Population Survey. Estimates for 1990 from Warren and Warren (2013). "Overall Number of U.S. Unauthorized Immigrants Holds Steady Since 2009"

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Source: http://www.pewhispanic.org/interactives/unauthorized-trends/



Figure A4: 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 A5: Trends in Immigration Enforcement, Overall and By Policy Type

Notes: Average enforcement index per year.



Figure A6: Rollout of Interior Immigration Enforcement

Nature of the Law	Law	Years	Where?	Objective	Who implements it?	Scope	Signed by	What it Consists of:
	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: <b>Task Force</b> : allows local and state officers interrogate and arrest noncitizens during their regular duties on law enforcement operations. <b>Jail enforcement</b> permits local officers to question immigrant who have been arrested on state and local charges about their immigration status. <b>Hybrid model:</b> which allow participate in both types of programs.
Police-Based Measures         SC         2009-201 2017-           OILs         2010-	2009-2014 2017-	Nation's jail and prisons	Identify noncitizens who have committed serious crime using biometric information	Police	Local	Jurisdictions	The program allows for the submission of biometric information on detainees that is contrasted against records in FBI and DHS databases.	
	OILs	2010-	Street/Jail	Identification noncitizen	State and local law enforcement entities	State	State governor	<ul> <li>Comprehensive laws that may include:</li> <li>A "show me your papers" clause, enabling the police to request proper identification documentation during a lawful stop.</li> <li>Require that schools report students' legal 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 B1: Description of Enforcement Laws

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 C: 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 on 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 United States).