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Immigrant Fertility in the Midst of Intensified Enforcement[1]

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Abstract

This paper exploits the temporal and geographic variation in the implementation of local and state immigration enforcement measures to identify their impact on undocumented immigrants' fertility. Using data from the 2005 through 2014 American Community Survey, we find that a one standard deviation increase in the intensity of immigration enforcement lowers the childbearing likelihood of likely undocumented women by 6.3 percent. This effect appears driven by police-based measures and, the fact that is present among intact families, families headed by a likely undocumented couple, as well as among the poorest families, suggests the importance of limited income resources, along with increased uncertainty emanating from an intensified fear of deportation, on likely unauthorized women's fertility. Given immigrants' critical contribution to the sustainability of the welfare state and the spread-out embracement of a piece-meal approach to immigration enforcement, further exploration of this impact is warranted and recommended.

Keywords: Fertility, Immigration Enforcement, Undocumented Immigration, United States.
JEL codes: J13, J15, K37.

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1. Introduction

This paper examines how the intensification of immigration enforcement that has been taking place in the United States since 9/11 might be impacting fertility among undocumented immigrants. Immigration enforcement has been playing an increasingly important role in American politics. In light of Congress' inability to enact a comprehensive immigration reform, a number of states and localities across the United States have started to take immigration matters into their own hands. A variety of immigration enforcement programs and policies have been adopted at the local and state levels, ranging from 287(g) agreements to employment verification mandates (E-Verify), omnibus immigration laws (OILs) and the Secure Communities (SC) program –recently replaced by the Priority Enforcement Program (PEP). All these initiatives intended to curb the number of undocumented immigrants by discouraging their entry and, more importantly, by facilitating their identification, apprehension and, ultimately, deportation. More than 1.8 million undocumented immigrants have been deported under President Obama's Administration alone from an estimated total of approximately 11 to 12 million (Vaughan 2013).

At the same time, the Hispanic fertility rate has been declining. A report from the Pew Hispanic Center in 2012 noted the strong reduction in fertility rates among immigrants, especially Hispanics –a group that encompasses the vast majority of the undocumented population in the United States. Between 2007 and 2010, the birth rate for foreign-born women dropped by 14 percent, compared to 6 percent in the case of U.S.-born women. Mexican immigrant women experienced the largest decline –about 23 percent (Livingston and Cohn 2012).

Knowledge of how immigrant fertility responds to intensified enforcement is particularly important given the contribution of immigrants to the sustainability of the welfare state. Immigration increases the ratio of workers to retirees and the viability of Social Security

(Griswold 2012). The United States is one of the few countries with fertility rates close to replacement rates, thanks to immigrants and their offspring (Kotkin and Ozuna 2012).

Intensified immigration enforcement could impact immigrant fertility through various mechanisms. On one hand, the mere separation from a partner and the fragmentation of the family through the deportation of the household head, her/his partner or some of its members, can either end or place fertility on hold. But, even among intact households, a tougher climate might negatively impact family income (*e.g.* Bansak and Diego 2005; Orrenius and Zavodny 2009; Bohn and Lofstrom 2013), its access to important health care services and benefits (*e.g.* Watson 2014) and, overall, increase uncertainty about the future of the family unit –its ability to stay intact and raise children. Under the simple neoclassical approach to fertility (Becker 1960), the uncertain environment, as well as limited resources, make fertility a risky and costly choice. On the other hand, because of birth right citizenship, undocumented women might want to have their kids while still in the country to provide their children with better life opportunities. And, in a related vein, a popular claim in the press has been that undocumented women might be interested in having their children in the United States because, in the future, these children could sponsor their parents for citizenship (the so-called "anchor baby" hypothesis); even though this could only happen once the children reach adulthood and a host of other circumstances are met.

Our focus is on assessing the effect that the piecemeal approach to immigration enforcement might be having on the fertility of immigrant women most likely impacted by such policies –namely: undocumented women. To that end, we use a unique data set that combines data from the U.S. Census Bureau American Community Survey (ACS), with detailed information on the intensity of immigration enforcement at the local and state levels during the 2004 through 2013 period. The ACS is rich in demographic, geographic and immigration information about respondents and their household members. Data on the

intensity of immigration enforcement is derived from a variety of sources informing on the adoption of a number of enforcement initiatives at the local and state levels, including: 287(g) agreements signed by localities and states with the U.S. Immigration and Customs Enforcement (ICE), omnibus immigration laws (OILs) and employment verification mandates (E-Verify) implemented by a number of states, and the adoption of the Secure Communities program.

To identify the effects of tougher enforcement on the fertility of these women, we exploit the temporal and geographic variation across metropolitan areas (MSAs) in the adoption of these measures. Specifically, we use a quasi-experimental approach that compares changes in undocumented immigrant women's fertility patterns across MSAs that adopt immigration enforcement measures (*treated* MSAs) and MSAs that do not (*control* MSAs), *before* and *after* the rollout of tougher enforcement. Our findings show that the average yearly increase in interior immigration enforcement during the 2004-2013 period lowered the likelihood of childbearing among likely undocumented immigrant women by 6.25 percent. These results prove robust to a number of identification and robustness tests that show how our findings are, if anything, underestimates. We also explore the policy channels to better understand which policies are responsible for the found impacts. We find that the effects can be attributed to police-based measures (as opposed to employment restricting measures, like employment verification mandates), suggesting the importance of deportations and the fear of apprehension they instil in migrants –a factor not necessarily present with employment-based measures, in explaining our findings. Lastly, we look a bit more closely into the mechanisms through which the observed impacts are taking place. To that end, we perform a number of heterogeneity analyses, which reveal that the negative impact of intensified enforcement on the fertility of likely unauthorized women is even present in the case of intact households, suggesting that deportation of a partner is not the exclusive mechanism through which fertility might end or be placed on hold. In addition, we find evidence of the impact of intensified

immigration enforcement being concentrated among women in the lowest family income quartile, as well as among families where the couple is likely unauthorized, suggesting that, both, current and future economic resources –possibly more uncertain when both partners are likely unauthorized– also play an important role.

The contribution of this research is twofold. First, it adds to a rapidly growing literature concerned with the consequences of a fragmented and intensified approach to immigration enforcement. To our knowledge, this is the first study examining the impact of interior immigration enforcement on the fertility patterns of undocumented immigrant women. In so doing, it complements a number studies exploring the effects of intensified enforcement on undocumented immigrants' residential choices, employment, earnings, remitting and on their children's access to healthcare and schooling outcomes (*e.g.* Amuedo-Dorantes *et al*. 2013, Amuedo-Dorantes and Puttitanun 2014, Amuedo-Dorantes and Lopez 2015, Amuedo-Dorantes *et al*. 2016, Bohn and Lofstrom 2013, Kostandini *et al*. 2013, Watson 2013).

In addition, this study contributes to a fertility literature focused on examining how immigrant fertility responds to policy changes.[4] To our knowledge, there are two studies that focus, in particular, on the fertility of Hispanic immigrant women –more likely to be deemed undocumented. Falasco and Heer (1984) explore how legal status might affect fertility through its effects on male and female wages. Amuedo-Dorantes *et al*. (2016) study how welfare reform (the 1996 passage of PRWORA) lowered the fertility of foreign-born non-citizen women. Yet, to date, there is a lack of understanding of how the currently fragmented approach to immigration policy and enforcement is impacting undocumented immigrant women's fertility.

[4] For instance, focusing on Germany, Avitabile (2014) examines how changes to the German citizenship law impacted immigrants' fertility choices.

The paper is organized as follows. Section 2 delineates the institutional background with regards to immigration enforcement, and discusses its link to immigrant fertility. Section 3 describes the data and Section 4 the empirical methodology. Section 5 presents the main findings, whereas Section 6 assesses the policy channels and mechanisms through which the found impacts are likely taking place. Finally, Section 7 concludes the study.

2. Background on Immigration Enforcement and Immigrant Fertility

2.1. Interior Immigration Enforcement

Since 9/11, the United States has witnessed an escalation of immigration enforcement aimed at identifying undocumented immigrants for removal. The policies have ranged from worksite enforcement and work eligibility verification, to the engagement of local and state law enforcement personnel in the enforcement of immigration policy. As a result, more than 4.5 million undocumented immigrants have been removed following the passage of the Illegal Immigration Reform and Immigrant Responsibility Act of 1996 (IIRIRA) (Bergeron and Hipsman 2014). While the deportation of criminal aliens has always taken place under the U.S. immigration law, it was with the enactment of the 1996 IIRIRA and its implementation that removals increased from an average of 3 percent in the 1970-1996 period to 19 percent during 2003-2006, and to a record high of 65 percent in 2012 (Bergeron and Hipsman 2014).

In what follows, we describe the various local and state immigration enforcement policies we take into consideration in this analysis.

2.1.1. The 287(g) Agreements

The 287(g) agreements evolved from the 1996 Illegal Immigration Reform and Immigrant Responsibility Act (IIRIRA), which allowed state and local agencies to enforce immigration law. State and local law enforcement entities would sign an agreement with Immigration and Customs Enforcement (ICE) that detailed the extension and limitations of the authority to be delegated. The 287(g) agreements enabled state and local officers to interrogate

immigrants, arrest them without warrant and begin the process of their removal when appropriate. This was the only program that allowed state and local law enforcement officials to enforce federal immigration law directly. There were three types of 287(g) agreements: "task force", "jail enforcement" and a "hybrid". The "task force" allowed local and state officers to interrogate and arrest non-citizens during their regular duties of law enforcement operations. The number of agreements in place by 2012 was significantly cut down following the reduction in funding for the 287(g) program, and the almost universal adoption of the Secure Communities program. The "jail enforcement" model permitted local officers to interrogate immigrants who had been arrested on state and local charges about their immigration status. Under this program, 402,079 potentially removable aliens have been identified, mostly at local jails, between 2006 and 2015. Additionally, more than 1,675 state and local officers have been trained and certified by ICE to enforce immigration law (ICE 2016a).

2.1.2. Secure Communities

The Secure Communities (SC) program was designed to empower ICE to prioritize the use of enforcement resources to target non-citizens who have committed serious crimes. This was to be achieved by checking their fingerprints against the Federal Bureau of Investigation (FBI) dataset for criminal arrest and convictions, and the Department of Homeland Security (DHS) dataset that tracks their immigration history. The program expanded quickly since its initial implementation in 7 jurisdictions in 2008 to 3,181 jurisdictions in 2013. The Priority Enforcement Program (PEP) replaced SC in July 2015 (ICE 2016b). However, during the life of the SC program, the number of fingerprints submitted grew from 828,119 in 2009 to 6.9 million in 2011 (Meissner *et al*. 2013).

2.1.3. Omnibus Immigration Laws

In addition to the aforementioned initiatives sponsored through ICE, some states intensified immigration enforcement by legislating the state's ability to enforce immigration law in a number of daily life scenarios. For example, Arizona and Alabama enacted laws with provisions that allowed state and local enforcement officers to check an individual's immigration status during a "lawful stop, detention or arrest" if there was suspicion of the person being an undocumented immigrant –the "show me your papers" clause. In fact, Alabama even required schools to record students' immigration status. Arizona was the first state to enact this kind of law in 2010 (SB1070), but it was quickly followed by six other states in 2011, namely: Alabama (HB56), Georgia (HB87), Indiana (SB590), South Carolina (S20) and Utah (H116, H466, H469, and H497).

2.1.4. Employment Verification Systems

Lastly, a number of states mandated the use of electronic programs to check the work eligibility of new employees –also known as E-Verify mandates. E-verify allows employers to screen newly hired workers for work eligibility. The employer introduces the biographic information (name, social security number, date of birth, citizenship and alien registration number) of the new worker into an online computer system. The system examines the information in the dataset from the Social Security Administration (SSA) and from the Department of Homeland Security (DHS) and, subsequently, determines whether the worker is authorized to work in the United States. In the cases for which work eligibility is not confirmed, the employer receives a "tentative non-confirmation" and the worker needs to correct the problem within eight business days. E-Verify grew rapidly since it was first adopted. Specifically, enrolment in E-Verify increased by more 400 percent from 1,064 in 2001 to 482,692 by 2014 (Department of Homeland 2014).

2.2. Immigrant Fertility and Immigration Enforcement

In recent years, researchers have documented a reduction in fertility rates in the United States, with the main occurring among the foreign born population (Livingston and Cohn 2012). And, among immigrants, Hispanic women have exhibited the largest decline. As evidence of this pattern, Figure 1 displays the fertility rate trends of Hispanic native women and Hispanic foreign-born women. While some of this decline might be due to the slowdown of the economy during the Great Recession, it is also possible that the intensification of immigration enforcement might have played a role in the decision to bear children. In what follows, we address this possibility by considering the various policy channels and mechanisms through which such an impact might be taking place.

As noted in the Introduction, intensified enforcement might directly inhibit fertility through various, often overlapping, policy channels and mechanisms. In particular, the *deportation* of the household's head or her/his partner (with deportations being attributed to police-based enforcement) is likely to either end or place fertility on hold. Yet, even among intact households, fertility might decline in response to a *reduction in family income* and/or *uncertainty* about the future of the family unit and the ability to raise children. Both can occur as a result of more restrictive hiring practices (as in the case of employment-based policies like E-Verify mandates), or from the increased deportation risk and fear accompanying police-based enforcement. After all, prior work has shown how employment verification mandates curtail the job opportunities and, in turn, can impact earnings of likely undocumented immigrants (*e.g.* Amuedo-Dorantes and Bansak, 2012; Bohn and Lofstrom, 2012). Additionally, some authors have pointed out how tougher immigration laws can increase fear of apprehension and deportation, leading families to adopt a style of life that restricts their access to employment opportunties, as well as services –including food stamps or Medicaid, even if they qualify for the assistance (Amuedo-Dorantes *et al.* 2013, 2016; Watson 2014).

However, stepped-up enforcement could also motivate undocumented immigrants to have their children while still in the United States as a means to ensure they will get U.S. citizenship and gain access to a wide range of better life opportunities they would lack elsewhere.[5] This view is related to the so-called "anchor baby" hypothesis, according to which undocumented migrant parents might choose to have their children while in the United States with the hope of sponsoring them in the future.[6]

3. Data

We use two different datasets: (1) the American Community Survey (ACS) for the period 2004 through 2013 (provided by the Integrated Public Use Microdata Series (Ruggles et al. 2016)), for which we have detailed information on the Metropolitan Statistical Area (MSA) where respondents reside; and (2) gathered data on the adoption of a number of interior immigration enforcement measures that were popular during that time period –namely: local and state level 287(g) agreements, Secure Communities, employment verification mandates and omnibus immigration laws.

3.1. ACS Data

Our main source of data is the ACS, which provides rich demographic, social, economic and housing information about individuals and the households they belong to. Approximately 3.5 million randomly sampled households are interviewed on a yearly basis. In addition to its size, over the 2005 through 2014 period, the ACS allows us to exploit the temporal and local variation of the immigration policies being considered by consistently identifying the

[5] Following Becker and Lewis (1973) and Becker and Tomes (1976) "quality-quantity" trade-off hypothesis, Avitabile *et al*. (2014) find that the granting of birth right citizenship in Germany lowered the price of child "quality", leading parents to lower the number of children and invest in their "quality" instead. Note, however, that the choice for undocumented immigrants is not between living in the host country as non-citizens or as citizens. Rather, it is between living in the United States as citizens and returning to their home countries.
[6] Ignatow and Williams (2011) note how the main source of this term is partisan news websites.

metropolitan area (MSA) where women live.[7] Additionally, it gathers information about ethnicity and citizenship status –key traits, along with educational attainment and time in the United States, to proxy for the likely undocumented immigration status of respondents.

For the purpose of our analysis, we focus on Hispanic women, ages 16 to 45 years old living in the United States. One 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 proxy for individuals who are likely to be undocumented (Passel and Cohn 2009). We further restrict our analysis to Hispanic non-citizens women who have not completed high school and have lived in the United States for 5 years or more. In this manner, we address any concerns regarding the possibility that our sample might include college students or low-skilled women with non-immigrant visas.[8]

Our focus is on fertility. To that end, we use the ACS question: "*Had you given birth to any children in the past 12 months?*" to create a dummy variable that takes the value of 1 if the answer is 'yes' and 0 otherwise. Because the question is referred to the past 12 months, we appropriately adjust the rest of the variables in our analysis to reflect that lag. The other descriptors used in the analysis include: age, marital status, number of children less than 5 years of age, years in the United States and educational attainment.[9]

Table 1 provides summary statistics for the key characteristics of women in our sample. Our sample contains 106,033 likely undocumented women (namely, Hispanic non-citizen

[7] 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.

[8] A common concern, at this point, is whether focusing on that population yields a reasonable estimate of the likely unauthorized population in the United States. If we use the ACS person weights and the Hispanic non-citizen proxy for being likely unauthorized in 2013, we obtain an estimate of 12,791,033 immigrants. 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 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."

[9] See Appendix A for a greater detail of each variable.

women who have less than a high school diploma and have lived in the United States 5 years or more) living in the United States between 2004 and 2013. Approximately 9 percent of them report giving birth in the past 12 months. They are, on average, 32 years old. Sixty percent are married and the mean length of time they have been residing in the United States is 13 years. About 40 percent have children less than 5 years of age. Unemployment rates in their MSAs hovers around 5 percent. Other MSA characteristics shown in Table 1 include the share of the electorate voting for Republican candidates for the U.S. House of Representatives, which averaged 47 percent, as well as the share of women in the MSA receiving Temporary Assistance for Needy Families (TANF), participating in the Children's Health Insurance Program (CHIP) or in the Supplemental Nutrition Assistance Program (SNAP).[10,11]

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 period 2004 to 2013 from the ICEs 287(g) Fact Sheet website, Amuedo-Dorantes and Bansak (2014), and Kostandini *et al*. (2013).[12] Data on the rolling of the Secure Communities program at the county level is compiled from ICE's releases on activated jurisdictions.[13] Finally, data on state

[10] Undocumented immigrants have never qualified for federally funded assistance. The 1996 Personal Responsibility and Work Reconciliation Act (PRWORA) restricted access for lawfully present immigrants based on their immigration status, date of arrival and length of U.S. residency. PRWORA also set parameters for how states might administer public benefit programs. Some states have chosen to fund federal programs for immigrants. Further, under the Children's Health Insurance Program Reauthorization Act of 2009 (CHIPRA), states can receive federal funding to provide Medicaid and/or CHIP to lawfully residing youth less than 21 years of age, and to pregnant women. We create a set of dummy variables indicative of whether the states extended TANF, CHIP or Food Assistance to non-qualified immigrants.

[11] This program was formerly known as the Food Stamp program.

[12] 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 2004 to 2013. 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.

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

level omnibus immigration laws and employment verification mandates is gathered from the National Conference of State Legislatures.[14]

Our purpose is to gauge the impact that intensified immigration enforcement has had on the childbearing likelihood of likely undocumented women. Since the aforementioned enforcement initiatives differ at the geographic level, it might be the case that one policy is activated in only one county in the MSA, but not in others. As such, some women within that MSA are covered by the measure, whereas others are not. In addition, some of the measures might have been in place only a few months in a given year. To address all these issues, we construct a population weighted index that provides us with several advantages: (1) accounts for the share of individuals likely impacted by any given measure in each MSA, (2) addresses the length of time each measure was in place during any given year, (3) facilitates the assessment of the role that immigration enforcement, as a whole, is having on fertility by grouping the many enforcement measures that were in place into one index, and (4) addresses the overlapping nature of some of these measures, at times intended to substitute one another (as in the case of SC and the 287(g) agreements). Still, it is important to clarify that this is a *proxy* of the enforcement intensity to which a woman living in MSA *m* in year *t* might be exposed.[15] Specifically, we calculate the following enforcement index for each initiative *k*:

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

where $\mathbf{1}\left(E_{j,c}\right)$ is an indicator function that informs about the implementation of measure k in county c in month j during the year in question, $P_{c,2000}$ is the population of county c according to the 2000 Census –that is, prior to the rolling of the enforcement initiatives being considered;

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

[15] Ultimately, the same policy or enforcement measure is likely to be applied differently by two distinct entities or officials –these are idiosyncrasies that plague any policy analysis and that we capture in the regression analysis through a number of MSA fixed-effects and MSA-specific time trends.

and $N_{m,2000}$ is the total population in the MSA.[16] Hence, the overall enforcement to which a woman living in MSA *m* and time (year) *t* is exposed to is computed as the sum of the indices for each enforcement initiative at the (MSA, year) level:[17]

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

Overall, as indicated in Table 1, interior immigration enforcement averaged 0.82 and fluctuated significantly between 0 (*i.e.* no enforcement) and 5 (all local and state level initiatives) over the time period under consideration. Figure 2.1 exemplifies the geographic variation in interior immigration enforcement between 2000 and 2013, which resulted from an increasing number of MSAs joining in and adopting tougher immigration measures. In addition, Figure 2.2 illustrates the average growing intensity of our immigration enforcement index as more MSAs adopted multiple enforcement measures.

4. Empirical Strategy

Our main aim is to evaluate how fertility decisions of likely undocumented women living might have been affected by the intensification of the immigration enforcement. To that end, we exploit the temporal and geographic variation in the immigration enforcement index described above as follows:

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

$$+\gamma_m + \theta_t + \gamma_m t + \varepsilon_{i,m,t}$$

[16] For example, if an MSA is comprised of 2 counties, the index for each of the *k* enforcement measures being considered (for instance, Secure Communities) in MSA *m* in year *t* would be given by:

$$Secure\ Communities\ index_{mt} = \frac{Months\_Coverage}{12} * \frac{Cnty1Pop}{MSAPop} + \frac{Months\_Coverage}{12} * \frac{Cnty2Pop}{MSAPop}$$

[17] Where *k* refers to each policy, *i.e.*: 287(g) local, 287(g) state, secure communities, Omnibus immigration law and E-verify. In subsequent analysis, we also differentiate across measures by the type of entity involved in their application (i.e. police-based or employer-based measures), which is also appropriate given that many of these policies were designed to be the continuation of their predecessor, as in the case of the 287(g) and SC program.

where $y_{i,m,t}$ is a dummy variable that is equal to 1 if woman *i*, living in MSA *m* had a child in year *t*. $Total\ Enforcement_{m,t}$ is an index that serves as a proxy for the intensity of enforcement to which a woman living in the MSA *m* and year *t* might be exposed to.

The vector $X'_{i,m,t}$ includes a range of individual characteristics known to influence the fertility decisions, such as age, marital status, number of children, years in the United States and years of schooling. The literature has suggested that Mexican immigrants' higher fertility rates are attributable to some degree to the fact that many female Mexican immigrants would have entered the United States to reunite with their migrant husbands in response to favoured family reunification (Parrado 2011, Raley and Sweeney 2009). Hence, we control for marital status. In addition, we include the number of children less than 5 living with the mother (Falasco and Heer 1984), and for years in the United States, since those who have been in the United States longer might be more assimilated and have fertility patterns that look more like those of natives (see, for example, Goldstein and Goldstein 1981). Finally, we control for educational attainment given the inverse relationship between years of education and fertility among Hispanic women (Parrado and Morgan 2008). [18]

The vector $Z'_{m,t}$ contains specific MSA-time varying characteristics which might affect the decision of having a child, such as the generosity of welfare benefits. Specifically, since non-citizen women's childbearing could prove responsive to the generosity of welfare benefits (Amuedo-Dorantes *et al*. 2016), the vector includes time-varying vectors reflecting whether the following public assistance programs were offered by the state: Temporary Assistance for Needy Families (TANF), Children's Health Insurance Program and Supplemental Nutrition Assistance Program (SNAP).

[18] Income is not included due to its endogenous nature. Nevertheless, we control for other characteristics potentially correlated with family income, including educational attainment and aggregate MSA characteristics, like unemployment rates.

Additionally, in order to control for possible differences in trends across MSAs that are spuriously correlated with the MSA treatment effect, we add as controls interactions between pre-treatment MSAs characteristics (measured in the year 2000) and a time trend –namely: $(M'_{m,2000} * t)$. The vector: $M_{m,2000}$ includes the unemployment rate in the MSA and the share of Hispanics in the MSA, as well as the share of people voting republican in the state. All of them are referred to the year 2000 –that is, prior to $Total\ Enforcement_{m,t}$ turning positive.

To conclude, equation (3) also includes MSA fixed effects (γ_m) and year fixed effects (θ_t) to control for unobserved time-invariant MSA characteristics and aggregate level shocks potentially impacting immigrant fertility, such as residing in areas less welcoming to immigrants or the 2008-2009 recession. Likewise, we include MSA-specific time trends to account for differences in fertility trends rates across MSAs driven by factors other than enforcement laws, differences in unemployment rates or welfare generosity captured by $Z'_{m,t}$, and political or population trends captured by $M'_{m,2000}\, t$. Standard errors are clustered at the MSA level.

The coefficient of interest is β_1, which captures the relationship between the intensity of local and state-level immigration enforcement and the childbearing likelihood of likely undocumented women. A negative coefficient would be consistent with our prediction that tougher enforcement might curtail fertility among likely undocumented women as a result of the deportation of the household head or her/his partner or, even in the absence of a family deportation, as a consequence of lower family income and increased uncertainty about the family's future.

5. Main Findings

Table 2 displays the results from estimating equation (3) for the sample of likely undocumented women as captured by Hispanic non-citizen women with less than a high school education and at least 5 years of residency in the United States using ordinary least squares (OLS). We estimate a number of specifications that progressively add controls to assess the robustness of our findings to the inclusion of potentially endogenous controls, such as aggregate MSA characteristics like unemployment rates. Regardless of the model specification used, the intensification of immigration enforcement appears to have had a negative impact on the childbearing likelihood of likely undocumented women. Focusing on the most complete model specification, which includes MSA and year fixed-effects, as well as MSA-specific time trends, we find that a one standard deviation increase in the enforcement index (approximately equal to the mean immigration enforcement index during the time period under consideration) lowers the childbearing likelihood of likely undocumented women by 6.2 percent.[19]

The remaining coefficients in Table 2 have the expected signs. For example, there is an inverse relationship between the age of the mother and the likelihood of childbearing, whereas the opposite is true with regards to the number of children less than 5 years of age residing in the household. We also find that women who have been living longer in the United States and those who are married (both more likely assimilated) are less likely to have had a child during the past year.[20] In contrast, they display a higher (5 percentage points higher) childbearing likelihood if they reside in a state offering SCHIP.

[19] The standard deviation of the enforcement index is 0.93 and, on average, approximately 9 percent of likely undocumented women gave birth in the past year. Therefore: {[(-0.006)*0.93]/0.09}=0.062 or 6.2 percent.

[20] Table B1 in Appendix B sheds more light on these relationships. Because the typical age-at-migration is in the late teens-early twenties, and most childbearing takes place when women are in their twenties/thirties, it is not surprising to find the curtailing effect of immigration enforcement concentrated in women 25-34 years of age, who have typically been in the United States between 5-10 years and who are less likely to be married than their older counterparts.

Because interior immigration enforcement took off during the Great Recession years, one might be concerned that much of the impact attributed to the intensification of immigration enforcement was truly due to the recessionary economy. After all, poverty and unemployment grew more rapidly among Latinos (Livingston and Cohn 2012). Although the model specification in column (4) already includes year and MSA fixed-effects, as well as MSA-specific time trends and time-varying regressors addressing these concerns, we also experiment with re-estimating equation (3) using two other samples of also Hispanic low-skilled women, namely: naturalized and U.S.-born women. Given their citizenship status, they should not have been affected by the intensification of immigration enforcement to the same extent of their likely undocumented counterparts. Results from those estimations are displayed in Tables 3 and 4. If, indeed, the impacts found in Table 2 were the by-product of tougher economic times, we should be able to find an also negative and statistically significant impact of intensified enforcement on the childbearing likelihood of these two other samples of women. In contrast, the estimates in Tables 3 and 4 clearly reveal the lack of a statistical significant impact of intensified immigration enforcement on these women's childbearing likelihood. In sum, the impacts identified in Table 2 are unique to likely undocumented women.

5.1. Identification Tests and Robustness Checks

The main assumption underlying our empirical strategy is that differences in the outcome being examined across treated and control units did not predate treatment itself. To assess is that was the case, we estimate equation (3) including a full set of dummies spanning from four years prior to the adoption of any initiative in the MSA in question. In that manner, we are able to gauge if the reductions in fertility preceded the adoption of tougher enforcement measures in the MSA as follows:

$$(4) \quad y_{i,m,t} = \alpha + \sum_{b=-4}^{-1} \delta_b D_b + \beta_1 Total\ Enforcement_{m,t} + X'_{i,m,t}\ \beta_2 + Z'_{m,t}\beta_3 + (M'_{m,2000} * t)\ \beta_5 + \gamma_m + \theta_t + \gamma_m t + \varepsilon_{i,m,t}$$

where D_b is a dummy for b years prior to the enforcement index turning positive. Note that, because the adoption of these initiatives occurred at different points in time across MSAs, D_1 might be equal to 2006 for some MSAs, 2007 for others, and so on. Table 5 shows the results from estimating equation (4) via OLS. It is evident that reductions in fertility did not take place prior to the adoption of tougher immigration enforcement measures in the MSA, as none of the coefficients for the preceding years are statistically different from zero. Furthermore, the point estimate on our key regressor continues to be statistically different from zero and of similar magnitude to the one in column (4) of Table 2.

Another threat to identification is whether the adoption timing of stricter immigration enforcement by the MSA is somewhat correlated to fertility rates in the MSA prior to the beginning of our sample period, that is, in 2004.[21] To that end, we take the year 2004 and aggregate the data at the MSA level to estimate the following equation:

$$(5) \qquad EI\ Year_m = \alpha + X'^0_c\alpha + Z'^0_c\mu + \varepsilon_c$$

where $EI\ Year_m$ is the year in which MSA m enacted the first enforcement measure; X'^0_c is the average probability of giving birth for a likely unauthorized women between 15 and 44 years old in MSA m in 2004; and Z'^0_c contains the average MSA unemployment rate and average share of Hispanics in the MSA.[22] We estimate equation (5) with and without including state fixed effects, and we cluster standard errors at the state level. The results from this exercise are displayed in Table 6. Fertility rates at the MSA level prior to the adoption of stricter enforcement measures do not seem to play a significant role in the timing of tougher immigration enforcement by the MSA, even in the absence of state fixed effects.

Finally, one might be concerned about the self-selection of migrants into different levels of enforcement. One could imagine that undocumented women would be sensitive to

[21] We cannot identify consistently MSAs due changes in MSA delineations in 2000.
[22] We exclude from this analysis the 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.

immigration enforcement due to the risk of deportation. Because migrants, especially undocumented ones, are a relatively mobile population, they are likely to move in response to the adopted enforcement measures. As such, exposure to tougher immigration enforcement, in itself, is likely to be endogenous and our estimates are likely to be downward biased.[23] To assess the degree to which our estimates might be downward biased, we instrument for what the probable location of likely undocumented women in our sample would have been in the absence of tougher enforcement. To that end, we use information on the historical location of undocumented women from the same country of origin (Bartel 1989; Card 2001; Cortes and Tessada 2011, among many others). Specifically, we rely on data from the year 2000 ACS to construct the following share of the concentration of undocumented immigrants from the same country of origin in each MSA in order to gauge what their most probable location would have been:[24]

$$(5) \qquad Share\ of\ Undocumented\ Immigrant_{m,o,2000} = \frac{undocumented\ immigrants_{m,o,2000}}{undocumented\ immigrants_{o,2000}}$$

Subsequently, to derive an instrument of the enforcement to which each woman would have been exposed to had they followed the same settlement patterns as their countrymen prior to the rollout of stricter immigration enforcement measures, we interact the share of undocumented immigrants for each MSA *m* with the immigration enforcement for that MSA in each year in question. For the above instrument to be valid, it needs to be highly correlated to the likelihood of being exposed to treatment. This condition relies on location decisions remaining relatively the same over the past one and a half decades, as the instrument needs to be highly correlated with the likelihood of being exposed to treatment. In our case, that is the

[23] Another source of downward bias could be the fact that some of the women whose partners have been deported might have returned to Mexico. In which case, the impact or effect of tougher immigration enforcement we measure is, if anything, a lower bound of the true impact of intensified enforcement.

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

case given the entrenched tendency for immigrants to locate in areas with established networks of their countrymen (Bartel 1989; Massey *et al*. 1993; Munshi 2003; Card 2001; Cortés and Tessada 2010, among many others).

The results from this exercise are displayed in Table 7. The last rows confirm that the IV is a good instrument. The F-stat from the first stage regression is larger than the recommended size of 10 (Stock and Yogo 2005). The estimated coefficient from the first stage regression is positive and statistically significant, confirming the entrenched tendency for immigrants to locate in areas with established networks of their countrymen. Additionally, the estimate from the second stage regression reveals that the same one standard deviation increase in the enforcement index lowers the childbearing likelihood of likely undocumented women by close to 12 percent. Therefore, as we would expect, our prior estimate provides us, if anything, with a lower bound of the true impact of tougher immigration enforcement on the fertility of these women.

Yet, as a final robustness check, we also re-estimate our model in equation (3) using, exclusively, data on women who report not moving over the past year. As such, their location choice is less likely to be contaminated by immigrants' potential responsiveness to the toughening of immigration enforcement. Table B2 in Appendix B reports the results from this exercise. We find a similar estimate of the fertility impact of intensified immigration enforcement to the one reported in Table 2 –a further reassurance of the unbiasedness of the estimate in Table 2.

5.2. Additional Findings on the Impact of Intensified Enforcement on Childbearing

Did intensified immigration enforcement affect the childbearing decisions of likely unauthorized women of childless women, or only those of women who were already mothers? The estimates in Table 10 address this question with a distinction of the impact that intensified immigration enforcement had on the childbearing decisions of both groups of likely undocumented women in our sample. According to the estimates in Panels A and B, a one

standard deviation increase in immigration enforcement lowered the probability of childbearing among childless women by 7 percent, and that of their counterparts who were mothers by approximately 1 percentage point or 7.2 percent. In sum, the impact of intensified enforcement on likely undocumented women's childbearing was widespread.

Similarly, one might wonder whether the found fertility impacts are short-lived or long-lasting. To that end, in Table 11, we regress the average share of likely undocumented children who had a child in the prior year in each (MSA, year) on the level of immigration enforcement in that (MSA, year). According to the estimates in the most complete model specification in column (4), a one standard deviation increase in immigration enforcement lowers the average share of likely undocumented women having a child by 4.4 percent. The impact also lasts for up to 3 years later, thus hinting on the likely long-lived impact of this type of measures.[25]

6. Policy Channels and Enforcement Impact Mechanisms

Thus far, we have documented how the adoption of tougher immigration enforcement at the local and state levels has contributed to the lower childbearing likelihood among likely undocumented women. In this section, we further look into the type of policies not likely responsible for the found impacts, as well as into the mechanisms through which fertility cutbacks are likely taking place.

6.1. Policy Channels

Tougher immigration enforcement had a negative impact on undocumented women's fertility. Have all immigration enforcement measures contributed similarly to such an outcome? If not, can we identify which are the more unsettling immigration enforcement policies when it comes to its disturbance of regular fertility patterns? To that tend, we group alike policies, such as the ones that involve the local and state police in the implementation of

[25] In additional analyses, we also explore if the intensification of immigration enforcement led to fertility delays and find no statistically significant evidence of such a pattern. Results are available from the authors upon request.

immigration policy, and differentiate between policies that are clearly linked to apprehensions and deportations –what we refer to as *police-based* enforcement, and policies that are not –as in the case of employment verification mandates. Both policies are likely to, for example, curtail employment opportunities –one by directly restricting the hiring of likely undocumented workers, and the other one by probably inducing them to live in the shadows so as to evade apprehension. Yet, they also differ with regards to their link to deportations. Police-based enforcement is clearly linked to deportations and, consequently, to intensified apprehension fears. As such, the distinction between police-based and employment-based policies underscores the importance that fear of deportation –associated to police-based enforcement and its ensuing deportations. Indeed, not surprisingly, the estimates in Table 8 reveal how police-based policies are driving our results, underscoring the importance of deportation fear in shaping women's fertility.

6.2. Enforcement Impact Mechanisms

Identifying the policy channel is critical for isolating the importance that deportation fear, in addition to other factors, has in explaining the fertility of likely undocumented women in the midst of intensified immigration enforcement. What can we learn about the potentially overlapping mechanisms through which fertility cutbacks are taking place, such as deportations of partners, drops in family income and increased uncertainty about the family's ability to raise their offspring? To assess the extent to which all the aforementioned triggering mechanisms might be present, we address the following questions: Do fertility cutbacks solely occur when a partner is no longer present, or are they also observed among intact households? Are they observed across all families in the income distribution, or are they restricted to poorer families? Finally, do fertility reductions take place across all types of couples, or are they limited to couples of likely undocumented immigrants subject to greater uncertainty?

The estimates in Table 9 address the aforementioned questions. Starting with Panel A, we can see that the negative impact of intensified immigration enforcement on the fertility of likely undocumented women is present among intact households –our largest sample.[26] Therefore, the fertility impacts of intensified immigration enforcement cannot be solely attributed to the deportation of a partner, which can obviously place fertility on hold. Rather, other factors resulting from life in the shadows so as to evade apprehensions, such as lower income resources and/or increased uncertainty about the future, might be at play.

To further substantiate this conclusion, we distinguish among different types of couples: (a) likely undocumented women whose partners are also likely undocumented, (b) those whose partners are naturalized, and (c) the ones whose partners are natives in Panel B. As can be seen from the estimates in Panel B, the impact of intensified immigration enforcement is particularly concentrated among women whose partners are also likely undocumented, suggesting that they probably face greater income restrictions and uncertainty. Note that, to the extent that mothers in the second and third columns of Panel B are also likely undocumented, they are also likely to endure reductions in income and greater uncertainty. Yet, the fact that intensified enforcement is not significantly altering their childbearing suggests that significantly greater economic hardships and uncertainty, as we would expect to be greater among couples in which both partners are likely undocumented, are key factors in explaining their fertility choices.

To conclude, we try to distinguish the role played by current income restrictions, as opposed to increased uncertainty –supposedly endured by all likely undocumented women to some degree. Because of the endogenous nature of women's fertility with respect to family income, we take a descriptive approach and look into how the intensification of immigration

[26] We are somewhat limited in the ability to perform this analysis for families in which the partner is missing using the ACS, which does not allow us to identify if the partner is absent unless the couple is married. The resulting sample size of married women with absent spouses is too small to make reliable inferences.

enforcement appears to have impacted likely unauthorized women's childbearing depending on whether their family income falls in the bottom, middle or top quartiles of the distribution of family income. The results from this exercise are displayed in Panel C. According to the estimates in columns (1) through (4), the intensification of immigration enforcement primarily impacted the fertility patterns of likely unauthorized women in the bottom family income quartile. The fact that the impact is only recognizable among women in this group suggests that, in addition to increased uncertainty about the future of the family unit and its resources, lower family income resulting from living in the shadows might also play an important role on likely unauthorized women's fertility.

7. Summary and Policy Implications

We examine the effect that the progressive intensification of immigration enforcement in the United States over the past two decades has had on the childbearing patterns of likely undocumented women. The analysis exploits the temporal and geographical variation on the implementation of the interior immigration policies to identify the impact of tougher immigration enforcement on these women's fertility. Using ACS data from 2004 through 2013, we find that the average yearly increase in interior immigration enforcement during that time period lowered the likelihood of childbearing among likely undocumented immigrant women by 6.2 percent. This effect is driven by police-based measures and appears to be stronger among intact families, families headed by a likely undocumented couple, as well as among the poorest families in the bottom family income quartile. The findings are suggestive of the importance of limited income resources, along with increased uncertainty emanating from an intensified fear of deportation, can have on likely unauthorized women's fertility. Finally, to the extent that intensified immigration enforcement affect the childbearing decisions of women in intact households, the implications of this type of policy seem significantly broader.

The findings, which prove robust to a number of identification and robustness checks, have important policy implication for the United States. Aside from the damage inflicted on the families of mostly U.S. citizen children affected by these tougher immigration policies, it is worth emphasizing the importance of immigrant fertility –significantly higher than that of natives, in many developed nations. Because immigrants tend to be considerably younger than natives and have higher fertility rates, immigration increases the ratio of workers to retirees and the viability of Social Security (Griswold 2012). Currently, the United States is one of the few countries with fertility rates close to replacement rates, thanks to immigrants and their offspring (Kotkin and Ozuna 2012). Given immigrants' critical contribution to the sustainability of the welfare state and the contemporaneous spread-out embracement of a piece-meal approach to immigration enforcement, further exploration of this impact is warranted and recommended in order to better understand the unintended consequences of such a policy tactic. Gaining such an understanding will be crucial in shaping a still pending comprehensive immigration reform in the future.

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Table 1: Summary Statistics

Descriptive Statistic:	Mean	S.D	Min	Max	Observations
Panel A: Dependent Variable					
Probability of having a child	0.09	0.28	0	1	106,033
Panel B: Individual Characteristics					
Age	32.39	7.73	15	44	106,033
Married	0.57	0.49	0	1	106,033
Number of Own Children Under 5 in the Household	0.4	0.66	0	7	106,033
Years in the United States	13.41	6.31	5	45	106,033
Years of Education	2.77	1.57	0	6	106,033
Married with Spouse Absent	0.08	0.27	0	1	63,775
Likely Undocumented Partner	0.49	0.5	0	1	106,033
Naturalized Partner	0.07	0.26	0	1	106,033
Native Partner	0.04	0.19	0	1	106,033
Single Female Head	0.2	0.4	0	1	106,033
Panel C: Area Characteristics					
TANF	0.56	0.5	0	1	106,033
SCHIP	0.84	0.37	0	1	106,033
Food Stamp	0.44	0.5	0	1	106,033
Share Voting Republican in the State in 2000	0.47	0.08	0.09	0.67	106,033
Share of Hispanic Immigrants by MSA in 2000	0.28	0.17	0.005	0.94	106,033
Unemployment Rate by MSA in 2000	0.05	0.018	0.02	0.18	106,033
Panel C: Enforcement Index					
Enforcement Index	0.82	0.93	0	5	106,033
Enforcement Index using Historical Location	0.07	0.13	0	1.38	106,033

Notes: Sample: Hispanic non-citizen low skilled women living more than 4 years in the United States. Data from ACS 2005-2014.

Table 2: Probability of Childbearing of Likely Unauthorized Women

Regressors	Model Specification			
	(1)	(2)	(3)	(4)
Enforcement Index	-0.002*	-0.005***	-0.005***	-0.006**
	(0.001)	(0.002)	(0.002)	(0.003)
Age	-0.003***	-0.003***	-0.003***	-0.003***
	(0.000)	(0.000)	(0.000)	(0.000)
Married	-0.016***	-0.016***	-0.017***	-0.016***
	(0.002)	(0.002)	(0.002)	(0.002)
Number of Own Children under 5 in the Household	0.142***	0.141***	0.141***	0.141***
	(0.003)	(0.003)	(0.003)	(0.003)
Years in the U.S.	-0.001***	-0.000***	-0.000***	-0.000***
	(0.000)	(0.000)	(0.000)	(0.000)
Years of Education	-0.001	-0.000	-0.000	-0.001
	(0.001)	(0.001)	(0.001)	(0.001)
TANF	-0.000	-0.007	-0.009	-0.008
	(0.004)	(0.005)	(0.021)	(0.020)
SCHIP	-0.005	0.037***	0.050**	0.049**
	(0.004)	(0.009)	(0.023)	(0.021)
Food Stamp	0.001	-0.015	-0.012	-0.013
	(0.005)	(0.017)	(0.016)	(0.016)
Unemployment Rate in 2000			-0.073	-0.090
			(0.223)	(0.571)
Share Voting Republican in 2000			0.079	0.100
			(0.048)	(0.076)
Share of Hispanics in 2000			0.109	-0.157
			(0.253)	(0.397)
Unemployment Rate in 2000*Time Trend			0.026**	0.028
			(0.012)	(0.083)
Share Voting Republican in 2000*Time Trend			-0.004	-0.009
			(0.004)	(0.010)
Share of Hispanics in 2000*Time Trend			-0.002	0.045
			(0.003)	(0.039)
Constant	0.144***	0.121***	-0.020	-0.151
	(0.006)	(0.011)	(0.129)	(0.163)
D.V. Mean			0.09	
Observations	106,033	106,033	106,033	106,033
R-squared	0.120	0.125	0.125	0.129

Notes: Sample: Hispanic non-citizen low skilled women living in the United States in excess of 4 years. All model specifications include a constant term. In addition, specification (1) includes individual characteristics and other state welfare programs. Specification (2) includes area and time fixed effects. Specification (3) adds aggregate MSA-time controls, and Specification (4) further adds the MSA-specific time trend as in equation (2) in the text. Standard errors are in parentheses and are clustered at the MSA level. ***p<0.01, **p<0.05, *p<0.1.

Table 3: Probability of Childbearing of Naturalized Women

Regressors	Model Specification			
	(1)	(2)	(3)	(4)
Enforcement Index	-0.004**	-0.004	-0.004	0.001
	(0.002)	(0.004)	(0.005)	(0.005)
Individual Characteristics	Yes	Yes	Yes	Yes
Welfare Programs	Yes	Yes	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
D.V. Mean	0.06			
Observations	19,556	19,556	19,556	19,556
R-squared	0.145	0.164	0.164	0.178

Notes: Sample: Hispanic naturalized low skilled women living in the United States in excess of 4 years. All model specifications include a constant term. In addition, specification (1) includes individual characteristics and other state welfare programs. Specification (2) includes area and time fixed effects. Specification (3) adds aggregate MSA-time controls, and Specification (4) further adds the MSA-specific time trend as in equation (2) in the text. Standard errors are in parentheses and are clustered at the MSA level. ***p<0.01, **p<0.05, *p<0.1.

Table 4: Probability of Childbearing of Native Women

Regressors	Model Specification			
	(1)	(2)	(3)	(4)
Enforcement Index	-0.004***	-0.002	-0.002	-0.001
	(0.001)	(0.002)	(0.002)	(0.003)
Individual Characteristics	Yes	Yes	Yes	Yes
Welfare Programs	Yes	Yes	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
D.V. Mean			0.07	
Observations	98,467	98,467	98,467	98,467
R-squared	0.140	0.145	0.145	0.149

Notes: Sample: Hispanic native low skilled women. All model specifications include a constant term. In addition, specification (1) includes individual characteristics and other state welfare programs. Specification (2) includes area and time fixed effects. Specification (3) adds aggregate MSA-time controls, and Specification (4) further adds the MSA-specific time trend as in equation (2) in the text. Standard errors are in parentheses and are clustered at the MSA level. ***p<0.01, **p<0.05, *p<0.1.

Table 5: Assessing the Existence of Parallel Pre-trends

Regressors	Model Specification			
	(1)	**(2)**	**(3)**	**(4)**
Enforcement Index in Prior Years				
4 Years Prior to EI>0	0.002	0.006	0.003	-0.002
	(0.005)	(0.006)	(0.006)	(0.007)
3 Years Prior to EI>0	0.001	0.003	0.001	-0.003
	(0.004)	(0.005)	(0.005)	(0.005)
2 Years Prior to EI>0	-0.001	-0.004	-0.005	-0.007
	(0.004)	(0.004)	(0.004)	(0.005)
1 Year Prior to the EI>0	0.005	0.001	0.001	-0.002
	(0.003)	(0.003)	(0.003)	(0.003)
Enforcement Index	-0.001	-0.005***	-0.005***	-0.006**
	(0.001)	(0.002)	(0.002)	(0.003)
Individual Characteristics	Yes	Yes	Yes	Yes
Welfare Programs	Yes	Yes	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
D.V. Mean			0.09	
Observations	106,033	106,033	106,033	106,033
R-squared	0.120	0.125	0.125	0.129

Notes: Sample: Hispanic non-citizen low skilled women living in the United States in excess of 4 years. All model specifications include a constant term. In addition, specification (1) includes individual characteristics and other state welfare programs. Specification (2) includes area and time fixed effects. Specification (3) adds aggregate MSA-time controls, and Specification (4) further adds the MSA-specific time trend as in equation (2) in the text. Standard errors are in parentheses and are clustered at the MSA level. ***p<0.01, **p<0.05, *p<0.1.

Table 6: First Year the Enforcement Immigration Index Turns Positive

Regressors	Model Specification			
	(1)	(2)	(3)	(4)
Average Fertility in MSA	-0.846	-0.254	-0.696	-0.318
	(0.996)	(0.330)	(0.844)	(0.415)
Individual controls	No	No	Yes	Yes
Area characteristics	No	No	Yes	Yes
State FE	No	Yes	No	Yes
Observations	164	164	164	164
R-squared	0.007	0.780	0.177	0.803

Notes: Sample: MSAs. Standard errors are in parentheses and are clustered at the MSA level. ***p<0.01, **p<0.05, *p<0.1.

Table 7: Addressing the Non-random Location of Immigrants

Regressors	Model Specification			
	(1)	**(2)**	**(3)**	**(4)**
Enforcement Index	-0.001	-0.007	-0.008**	-0.012*
	(0.001)	(0.004)	(0.004)	(0.007)
Individual Characteristics	Yes	Yes	Yes	Yes
Welfare Programs	Yes	Yes	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
D.V. Mean			0.09	
Observations	106,033	106,033	106,033	106,033
R-squared	0.120	0.125	0.125	0.129
First Stage Results				
IV	4.001***	1.781**	2.243**	1.983*
	(0.749)	(0.761)	(0.911)	(1.153)
R-squared	0.386	0.768	0.790	0.878
F-statistics	10.53	133.1	191.0	16.67

Notes: Sample: Hispanic non-citizen low skilled women living in the United States in excess of 4 years. All model specifications include a constant term. In addition, specification (1) includes individual characteristics and other state welfare programs. Specification (2) includes area and time fixed effects. Specification (3) adds aggregate MSA-time controls, and Specification (4) further adds the MSA-specific time trend as in equation (2) in the text. Standard errors are in parentheses and are clustered at the MSA level. ***p<0.01, **p<0.05, *p<0.1.

Table 8: The Impact of Various Types of Enforcement on the Probability of Childbearing of Likely Unauthorized Women

Regressors	Model Specification			
	(1)	(2)	(3)	(4)
Police-based/Deportation Policies	-0.003**	-0.007**	-0.007***	-0.008**
	(0.001)	(0.003)	(0.003)	(0.004)
Employment Restrictive Policies	-0.002	-0.004	-0.002	-0.005
	(0.004)	(0.006)	(0.006)	(0.007)
Individual Characteristics	Yes	Yes	Yes	Yes
Welfare Programs	Yes	Yes	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
D.V. Mean			0.09	
Observations	106,033	106,033	106,033	106,033
R-squared	0.120	0.125	0.125	0.129

Notes: Sample: Hispanic non-citizen low skilled women living in the United States in excess of 4 years. All model specifications include a constant term. In addition, specification (1) includes individual characteristics and other state welfare programs. Specification (2) includes area and time fixed effects. Specification (3) adds aggregate MSA-time controls, and Specification (4) further adds the MSA-specific time trend as in equation (2) in the text. Standard errors are in parentheses and are clustered at the MSA level. ***p<0.01, **p<0.05, *p<0.1.

Table 9: Probability of Childbearing of Likely Unauthorized Women by Household Characteristics

Regressors	Panel A: By Spousal Presence	Panel B: By Partner Citizenship Status			Panel C: Family Income Quartile			
	Intact Couples	LU Partner	Naturalized Partner	Native Partner	1st Quartile	2nd Quartile	3rd Quartile	4th Quartile
Enforcement Index	-0.007**	-0.008**	-0.005	-0.006	-0.011*	-0.003	-0.006	-0.006
	(0.003)	(0.004)	(0.009)	(0.014)	(0.006)	(0.006)	(0.005)	(0.005)
Individual Characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Welfare programs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Area Characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Years FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MSA FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MSA-trends	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
D.V. Mean	0.08	0.10	0.07	0.11	0.11	0.09	0.08	0.07
Observations	56,511	53,787	9,628	4,326	25,442	25,442	25,442	25,442
R-squared	0.180	0.160	0.194	0.228	0.125	0.159	0.140	0.127

Notes: *Sample: Panel A:* Hispanic non-citizen low-skilled women living with a partner and with more than 4 years in the United States. *Panel B:* Hispanic non-citizen low-skilled married women with more than 4 years in the United States. Controls not listed include those in the most complete specification in Table 2. Standard errors are in parentheses and are clustered at the MSA level. ***p<0.01, **p<0.05, *p<0.1.

Table 10: Probability of Childbearing of Likely Unauthorized Childless Women and Mothers

Regressors	Model Specification			
	(1)	(2)	(3)	(4)
Panel A: LU Childless Women				
Enforcement Index	-0.002**	-0.005***	-0.005**	-0.006**
	(0.001)	(0.002)	(0.002)	(0.003)
Individual Characteristics	Yes	Yes	Yes	Yes
Welfare programs	Yes	Yes	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
D.V. Mean		0.08		
Observations	103,084	103,084	103,084	103,084
R-squared	0.022	0.027	0.027	0.030
Panel B: LU Mothers				
Enforcement Index	-0.002*	-0.005**	-0.006**	-0.007**
	(0.001)	(0.002)	(0.002)	(0.003)
Individual Characteristics	Yes	Yes	Yes	Yes
Welfare programs	Yes	Yes	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
D.V. Mean		0.09		
Observations	64,067	64,067	64,067	64,067
R-squared	0.169	0.176	0.176	0.180

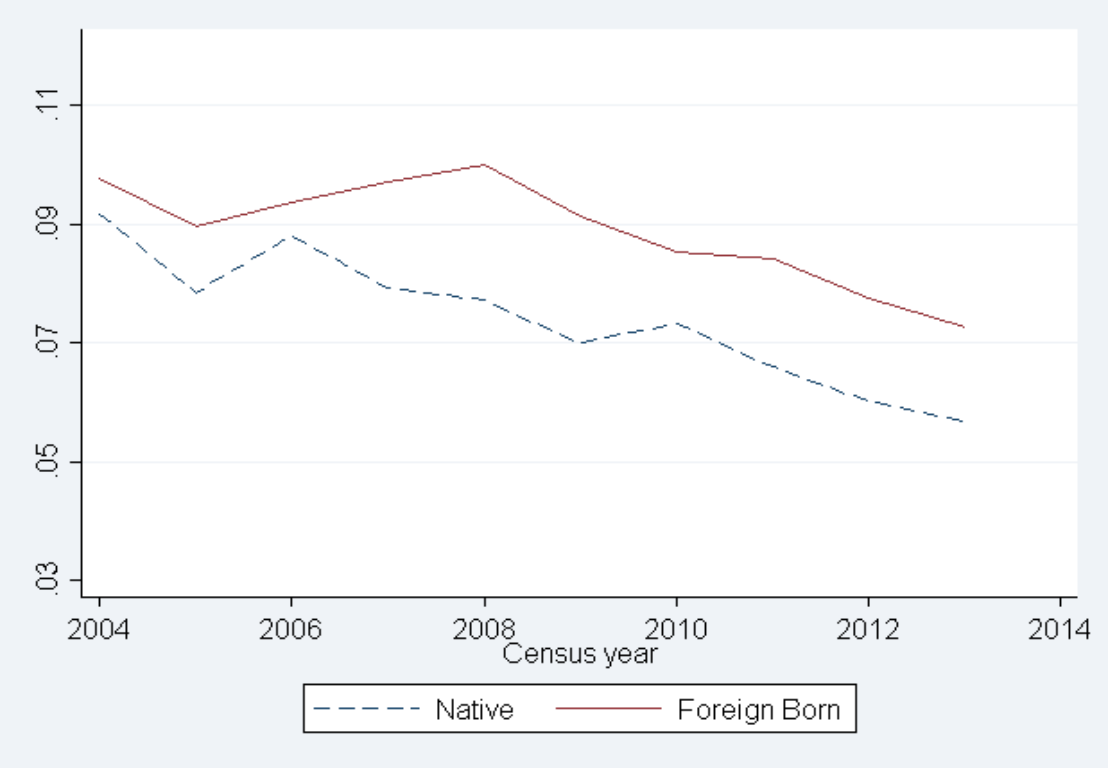
Notes: Sample: Hispanic non-citizen low skilled women living in the United States in excess of 4 years. All model specifications include a constant term. In addition, specification (1) includes individual characteristics and other state welfare programs. Specification (2) includes area and time fixed effects. Specification (3) adds aggregate MSA-time controls, and Specification (4) further adds the MSA-specific time trend as in equation (2) in the text. Standard errors are in parentheses and are clustered at the MSA level. ***p<0.01, **p<0.05, *p<0.1.

Table 11: Short and Long Run Impacts of Enforcement on the Share of Likely Unauthorized Women Having Children

Regressors	Model Specification			
	(1)	(2)	(3)	(4)
4 Years before enactment	-0.058	-0.063	-0.062	-0.122
	(0.076)	(0.109)	(0.107)	(0.136)
3 Years before enactment	-0.087	-0.122	-0.121	-0.229
	(0.082)	(0.134)	(0.131)	(0.164)
2 Years before enactment	0.016	-0.028	-0.029	-0.175
	(0.101)	(0.153)	(0.150)	(0.181)
1 Year before enactment	0.002	-0.031	-0.035	-0.210
	(0.080)	(0.115)	(0.111)	(0.177)
Year Enactment Immigration Policy	-0.022	-0.108	-0.111	-0.292*
	(0.077)	(0.099)	(0.097)	(0.171)
1 Year after enactment	-0.013	-0.076	-0.074	-0.232*
	(0.066)	(0.081)	(0.078)	(0.141)
2 Years after enactment	-0.123*	-0.177**	-0.175**	-0.323**
	(0.073)	(0.075)	(0.078)	(0.146)
3 Years after enactment	-0.081	-0.092	-0.084	-0.244*
	(0.089)	(0.080)	(0.085)	(0.143)
4 Year after enactment	-0.029	-0.017	-0.009	-0.122
	(0.102)	(0.085)	(0.087)	(0.131)
Welfare programs	Yes	Yes	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
D.V. Mean			6.20	
Observations	1,470	1,470	1,470	1,470
R-squared	0.009	0.200	0.203	0.321

Notes: Dependent Variable: General Fertility Rate which is the number of births per thousand women of childbearing age. We estimate the General Fertility Rate in year *t* and MSA *m* as the number of children born in year *t* and MSA *m* per thousand LU women aged from 16 to 45 in year *t* and living in MSA in 2000. In order to eliminate potential compositional effects, we restrict the sample to a balanced panel of MSAs. All model specifications include a constant term. In addition, specification (1) includes other state welfare programs. Specification (2) includes area and time fixed effects. Specification (3) adds aggregate MSA-time controls, and Specification (4) further adds the MSA-specific time trend as in equation (2) in the text. Standard errors are in parentheses and are clustered at the MSA level. ***p<0.01, **p<0.05, *p<0.1.

Figure 1
Probability of Childbearing by Citizenship Status



Notes: Sample: Foreign Born: Hispanic low skilled women living more than 4 years in the United States. Native: Hispanic low skilled women

Figure 2.1
Average Growth Rate in the Number of MSAs Activating Immigration Enforcement Measures

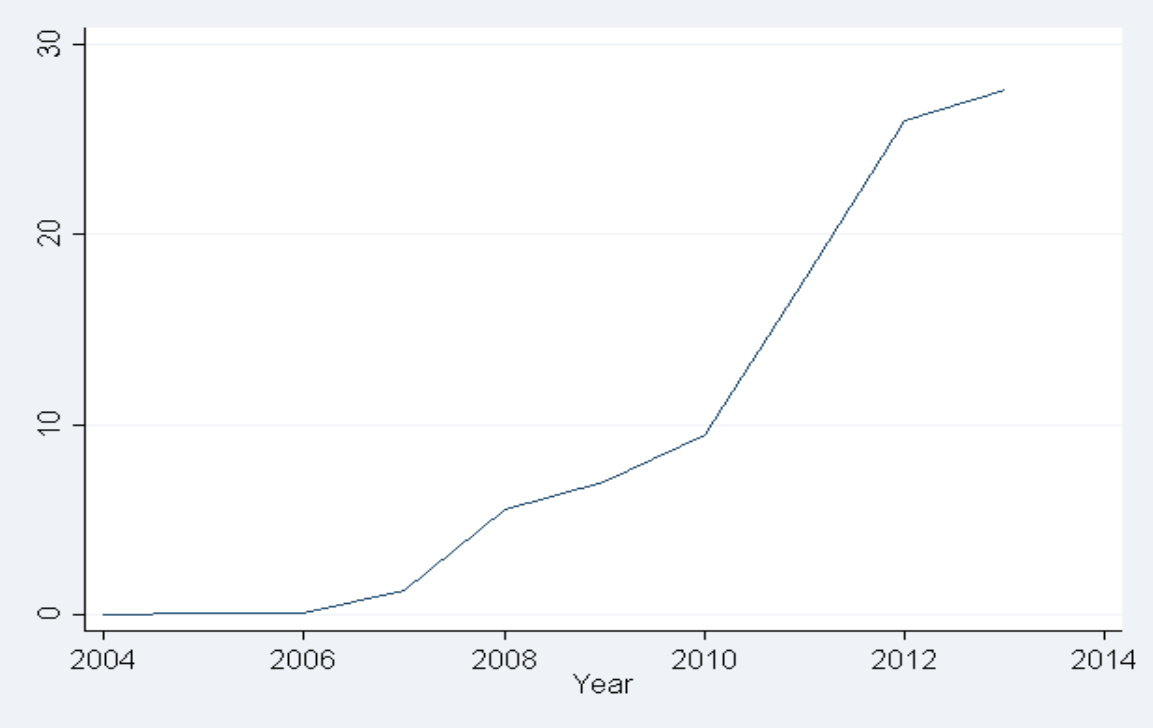
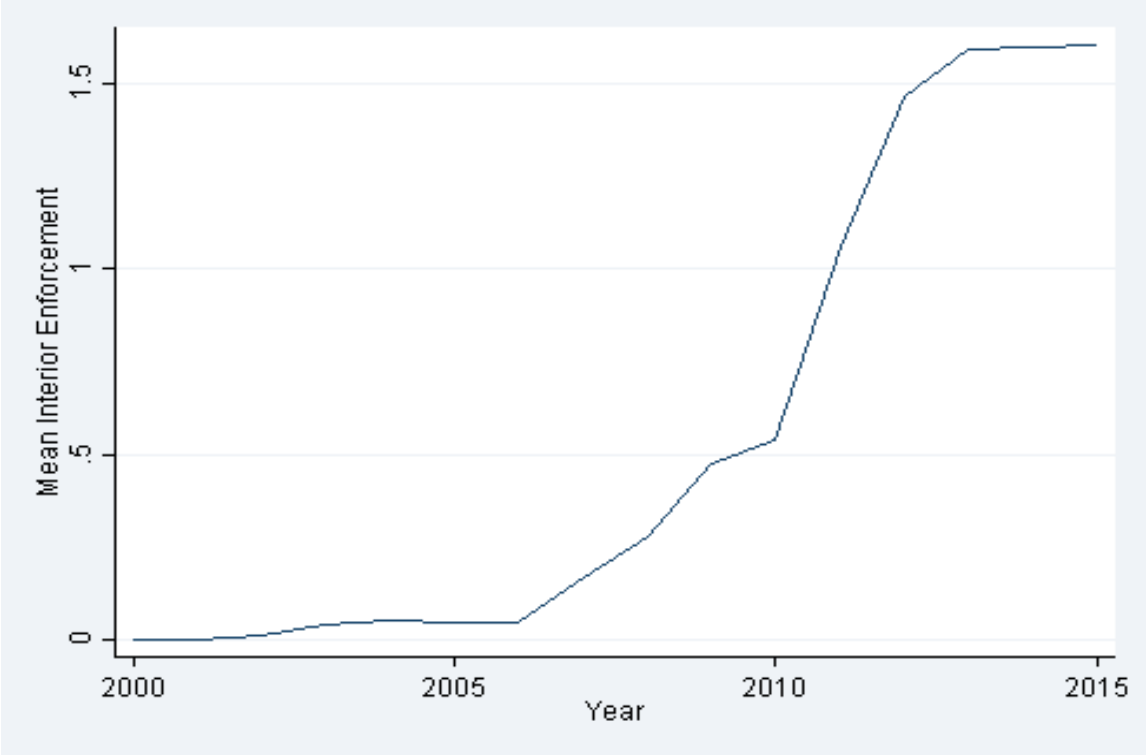


Figure 2.2
Average Immigration Enforcement Index



Notes: Average total enforcement index per year

APPENDIX A

Table A: Definition of Key Variables

Childbearing	Dummy variable 1-Woman reports to have a child during the last 12 months 0-Otherwise
Married	Dummy variable 1-Married woman 0-Otherwise
Number of Own Children Under 5	Number of own children ages 0 to 5 in the home
Years in the U.S.	Number of years of U.S. residency
Age	Woman's Age
Years of Education	Number of years of education
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.
TANF	Dummy variable: 1- State offered TANF for unqualified immigrants 0-Otherwise
SCHIP	Dummy Variable: 1- State offered CHIP benefits to lawfully present immigrant children and pregnant women 0-Otherwise
Food Stamp	Dummy Variable: 1- State offered food stamps to unqualified immigrants 0-Otherwise

APPENDIX B

Table B.1: Probability of Childbearing among Likely Unauthorized Women – Heterogeneous Impacts by Age and Years in the U.S.

Regressors	Years in the U.S.			Age Range		
	5-10 Years	11-15 Years	More 15	15-24	25-34	35-44
Enforcement Index	-0.015**	0.001	-0.005	-0.006	-0.016**	-0.001
	(0.006)	(0.005)	(0.004)	(0.010)	(0.007)	(0.003)
Individual Characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Welfare programs	Yes	Yes	Yes	Yes	Yes	Yes
Area Characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Years FE	Yes	Yes	Yes	Yes	Yes	Yes
MSA FE	Yes	Yes	Yes	Yes	Yes	Yes
MSA-trends	Yes	Yes	Yes	Yes	Yes	Yes
Observations	39,672	36,670	36,531	16,750	35,369	48,741
R-squared	0.132	0.132	0.14	0.148	0.119	0.128

Notes: Sample: Hispanic non-citizen low skilled women living in the United States in excess of 4 years. Controls not listed include those in column 4 Table 2. Standard errors are in parentheses and are clustered at the MSA level. ***p<0.01, **p<0.05, *p<0.1.

Table B.2: Probability of Childbearing of Likely Unauthorized Women 'Stayers'

Regressors	Model Specification			
	(1)	(2)	(3)	(4)
Enforcement Index	-0.001	-0.005**	-0.005**	-0.006**
	(0.001)	(0.002)	(0.002)	(0.003)
Individual Characteristics	Yes	Yes	Yes	Yes
Welfare Programs	Yes	Yes	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	91,519	91,519	91,519	91,519
R-squared	0.116	0.121	0.121	0.125

Notes: Sample: Hispanic non-citizen low skilled women living in the United States in excess of 4 years. Controls not listed include those in column 4 Table 2. Standard errors are in parentheses and are clustered at the MSA level. ***p<0.01, **p<0.05, *p<0.1.