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DISCUSSION PAPER SERIES

IZA DP No. 13908

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ABSTRACT

Immigration Enforcement and Infant Health

The past two decades have been characterized by an unprecedented increase in interior immigration enforcement and heightened stress due to fears of family separation and loss of income among undocumented immigrants. Using vital statistics on infant births from the National Center of Health Statistics for the 2003 through 2016 period and a difference-in-differences design, we compare the health outcomes of infants with likely undocumented mothers before and after the intensification of immigration enforcement within U.S. counties. We find that intensified enforcement, especially during the third trimester, increases the likelihood of low birth weight (<2500 grams). We also present suggestive evidence that the effect could be driven by heightened stress and fears associated to police-based enforcement during pregnancy. The findings underscore the importance of current immigration policies in shaping the birth outcomes of many American children.

JEL Classification: I10, I12, K37

Keywords: immigration enforcement, undocumented immigrants, infant health

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1. Introduction

> "…doctors and public health officials say that many undocumented women are convinced nonetheless that their chances of legalization will be diminished, and they worry that immigration officers, who are often seen at hospitals along the border, could target them for deportation. The result, they say, is an escalating climate of fear that is having disastrous consequences for the health of pregnant women and their babies."
>
> Dickerson (2020) *The New York Times*

The past two decades have witnessed an unprecedented increase in interior immigration enforcement at the local, state, and federal levels, leading to the deportation of millions of undocumented immigrants. Between 2008 and 2018, more than 3.6 million immigrants were removed from the United States (U.S. Immigration and Customs Enforcement, 2015, 2018). Deportations led to the separation of numerous families with an estimated 272,000 parents of American children removed between 2010 and 2013 (Cantor, 2014; Immigration Policy Center, 2012). Fear of deportation and separation, along with the financial burdens related to evading such threats, have resulted in high levels of psychological distress caused by the vulnerability of oneself, family and community members (Szkupinski Quiroga, Medina, and Glick, 2014). These stresses may, in turn, prove harmful to infant health. Maternal stress is associated with a higher risk of low infant birth weight (Williamson, LeFevre and Hector, 1989; Wadhwa *et al*., 1993; Carmichael and Shaw, 2000; Coussons-Read, 2013). In turn, poor birth outcomes, such as low birth weight, have been linked to long-lasting developmental deficiencies requiring treatment through adulthood, including asthma, allergies, and increased susceptibility to affective disorders (Davis and Sandman, 2012; Field, 2011).

In this paper, we explore *how intensified interior immigration enforcement might have affected birth weight among children with likely undocumented migrant mothers*. The literature on interior immigration enforcement has emphasized its damaging effects on the well-being of likely undocumented immigrants, their families, and the communities where they reside (Debry, 2012). Immigration enforcement has been linked to higher poverty exposure (Amuedo-Dorantes, Arenas-Arroyo, and Sevilla-Sanz, 2018), a forcibly altered household structure (Amuedo-Dorantes and Arenas-Arroyo, 2018, 2019), deteriorating mental and physical health (Shu-Huah Wang and Kaushal, 2019), curtailed fertility (Amuedo-Dorantes and Arenas-Arroyo, 2019), and overall worsened well-being (Potochnick and Perreira, 2010), to cite a few. We contribute to this literature by examining any subsequent impacts of intensified immigration enforcement on birth weight. To that end, we merge administrative vital statistics on infant births from the 2003-2016 National Center of Health Statistics to data on various interior immigration enforcement initiatives adopted over that period. We exploit the county and year-month level variation in the adoption of tougher measures over the 14-year period to assess how intensified interior immigration enforcement might have impacted birth weight among likely undocumented mothers. We find that a one standard deviation increase in immigration enforcement raises the probability of low birth weight by 0.42 percentage points or around 6 percent of the sample mean. This result proves robust to changes in sample restrictions, model specifications, and placebo tests using infants born to non-Hispanic

white highly educated mothers. Because these infants are U.S.-born, our findings uncover a statistically and economically significant spillover of immigration policies onto American citizens.

We also investigate the channels through which these impacts might be taking place. First, given the documented impact of intensified immigration enforcement on *anxiety and stress* caused by deportation fears and, in turn, the recognized role of maternal stress on birth weight, we examine the incidence of immigration enforcement on alternative medical conditions correlated to maternal stress, such as gestational diabetes, hypertension, pre-eclampsia, and preterm birth (Coussons-Read, 2013). Second, we explore the possibility that worse birth outcomes might be related to the *lack of proper use of health care services* under intensified immigration enforcement, from prenatal care to the use of a hospital for delivery. While we do not find evidence of either channel at conventional levels of statistical significance after correcting for multiple hypothesis testing, event study results suggest that both channels could be at play. Specifically, the incidence of gestational hypertension, a typical symptom associated with maternal stress, seems to have increased with exposure to enforcement, and likely undocumented mothers appear more likely to have had a midwife instead of a doctor at delivery, consistent with the anecdotal evidence by Dickerson (2020). Moreover, policy wise, we find evidence of police-based immigration enforcement, which is directly linked to deportations, significantly lowering birth weight.

2. In-Utero Shocks, Birth Outcomes, and the Role of Immigration Enforcement

A sizable literature within economics, public health, and medicine has linked in-utero shocks to poorer birth outcomes (Currie, 2011). In addition, studies have documented the long-lasting impacts of early-life health on adult health, human capital, and labor market outcomes (Barker, 1990; Aizer and Currie, 2014; Almond *et al*., 2018)—effects that may show up later in life without altering birth outcomes. For instance, Aizer, Stroud, and Buka (2016) use a maternal fixed effects approach to compare siblings exposed to different levels of cortisol during the third trimester. While the authors find that elevated cortisol levels negatively affected schooling, cognition, and later health, they do not detect significant changes in birth weight or gestational age.

With the hope of cleanly identifying the impact of in-utero shocks on birth outcomes, some of this literature has relied on quasi-experimental variation generated from natural disasters (Simeonova, 2017), including earthquakes (Torche, 2011; Kim, Carruthers, and Harris, 2017) and hurricanes (Currie and Rossin-Slater, 2013). For instance, Currie and Rossin-Slater (2013) show that in-utero exposure to a hurricane is associated with an increased likelihood of abnormal conditions of the newborn, even though they do not find consistent changes in infant gestational age or birth weight. More recently, Kim, Carruthers, and Harris (2017) use the 1997 Northridge earthquake—which had a low injury rate and quick recovery—to test the relationship between maternal stress and birth outcomes. They find that infants born near the epicenter of the earthquake were 0.2 percentage points more likely to be born low birth weight. This effect was more pronounced (0.5 percentage points) for first-time single mothers.

Another set of studies has examined the effects of in-utero exposure to manmade events on infant health, such as armed conflict (Mansour and Rees, 2012), landmine explosions (Camacho, 2008), drug wars in Mexico (Brown, 2018), the September 11th terrorist attacks (Brown, 2020), parental job loss (Lindo, 2011), economic collapse (Bozzoli and Quintana-Domeque, 2014),

blackouts (Burlando, 2014), and assault (Currie, Mueller-Smith, and Rossin-Slater, 2018). Camacho (2008) examines the impact of residing near landmine explosions on birth outcomes, documenting birth weight reductions of 7 percent. Mansour and Rees (2011) examine the birth weight impacts of exposure to conflict. They find that the number of conflict-related deaths in the West Bank and Gaza increased the incidence of low birth weight. And, in a recent study, Currie, Mueller-Smith, and Rossin-Slater (Forthcoming) find that in-utero exposure to assault increases the probability of very low weight birth (< 1500 grams) and a low 1-minute Apgar score.[1]

Focusing on *non-violent*, yet stressing, manmade decisions, Carlson (2015) shows that announcements of impending mass layoffs and plant closures can also adversely affect birth weight and gestational age. Of special interest to us are the impacts of policy adoptions focused on curbing migrants' access to care. For instance, the 1996 Personal Responsibility and Work Opportunity Reconciliation Act limited many immigrants' access to the Food Stamps program, though state-level legislation restored access from 1998-2003. Leveraging this spatial and temporal variation, East (2020) finds that program restrictions reduced both program participation and average benefits received, with an additional year of parental eligibility improving medium-run health outcomes.

In this paper, we focus on the spillover impact of another set of policies also aimed at immigrants—namely, interior immigration enforcement. Since the beginning of the 21st century, the United States has witnessed an unprecedented increase in interior immigration enforcement. The 9/11 attacks, along with the U.S. Congress's inability to pass a comprehensive immigration reform, paved the way for states and, eventually, small localities to play a larger role in immigration enforcement. Starting with the adoption of 287(g) agreements by the state of Florida in 2002, and followed by the adoption of employment verification mandates, the Secure Communities program, and omnibus immigration laws, immigration enforcement quickly intensified, creating an increasingly difficult environment for undocumented immigrants and their families intended to deter future flows and promote the voluntary return of those in the United States.

These policies affected migrants' lives in a variety of ways. Key to our study are the documented impacts of intensified immigration enforcement on *immigrants' health* and *adequate access to care*—both stemming from increased deportation fears and/or reductions in earning opportunities. Prior studies have provided either direct or indirect evidence of adverse impacts of immigration enforcement by showing its effect on likely undocumented migrants' employment and earnings (Amuedo-Dorantes and Bansak, 2012, 2014; Bohn, Lofstrom and Steven, 2015; Kostandini, Mykerezi, and Escalante, 2013; Orrenius and Zavodny, 2015), access to employer-sponsored health insurance (Churchill, 2020), housing and food security (Potochnick, Chen and Perreira, 2017; Rugh and Hall, 2016), ability to keep their families intact (Amuedo-Dorantes and Arenas-Arroyo, 2018, 2019) and, ultimately, physical and mental health (Shu-Huah Wang and Kaushal, 2019). In addition, since very early on, ethnographers have documented how increased border enforcement reduced undocumented migrants' willingness to seek health care when needed (Nuñez and Heyman, 2007; Heyman, Nuñez and Talavera, 2009). These difficulties have been

[1] An Apgar score is a summary measure the ability of a newborn infant to respond to resuscitation that takes values between 0 and 10 (American Academy of Pediatrics; Committee on Fetus and Newborn; American College of Obstetricians and Gynecologists; Committee on Obstetric Practice, 2006).

confirmed by several studies focusing on both undocumented immigrants, as well as on their frequently U.S. citizen children. For instance, Watson (2014) shows how immigration enforcement, as captured by the number of deportations, had a chilling effect on Medicaid take-up rates of eligible low-SES citizen children with non-citizen mothers. In a similar vein, follow-up studies have reinforced how tougher immigration policies interfere with migrants' proper access to health care (Allen and McNeely, 2017; Allen, 2018; Perreira and Pedroza, 2019). Through its documented impact on migrants' health and access to care, intensified interior immigration enforcement may, in turn, result in poor birth outcomes and have long lasting damaging impacts on these children.

There is a growing interest in public health, epidemiology, and economics on how immigration enforcement may affect birth outcomes. Novak *et al*. (2017) document a positive relationship between a large workplace raid conducted by Immigration and Customs Enforcement and the likelihood of low birth weight for infants born to Hispanic mothers. They do not uncover evidence of a change for infants born to non-Hispanic white mothers. Similarly, Torche and Sirois (2019) find that Arizona's SB 1070—considered at the time the strictest immigration enforcement measure in the country—increased the likelihood of low birth weight for infants born to Hispanic immigrant mothers. They do not uncover any statistically significant change for infants with U.S. -born mothers. Finally, in a working paper, Vu (2020) documents a positive relationship between the Secure Communities program and very low birth weight for infants with Hispanic mothers.

Our goal is to examine how exposure to intensified immigration enforcement might negatively affect birth weight, while gaining a better understanding of the timing and potential mechanisms at play. Our paper differs from these other studies in several important ways. First, while the other papers are concerned with specific enforcement-related events or single policy changes, we estimate the relationship between birth weight and a more comprehensive measure of immigration enforcement. As a result, our estimates may be more easily generalized to future immigration enforcement policy decisions. Notably, Arizona's SB 1070 was largely struck down by the Supreme Court in 2012, and the Secure Communities program achieved nationwide coverage by the end of 2013. In contrast, our independent variable of interest captures the local enforcement-related climate experienced by likely undocumented women. Second, we distinguish among the impacts of exposure to intensified immigration enforcement at various stages of the gestational process. This enables us to pinpoint the timing of the effects and hypothesize about the channels potentially at play. We explore two of them—namely, health care access and birth complications related to maternal stress or malnutrition during pregnancy. Third, we look at the policy channels to better understand the triggering mechanism.

3. Data

3.1 National Vital Statistics Linked Birth/Infant Death Cohort Data

We obtain information on birth outcomes, prenatal health care utilization, mothers' health complications and birth complications, as well as infant mortality, from the 2003-2016 National Center for Health Statistics Vital Statistics Period Linked Birth/Infant Death datasets. These data contain the universe of births occurring in the United States, as well as a near census of infant deaths occurring each year linked to their corresponding birth certificates.[2] In addition, the data

[2] The Period Linked Births/ Infant Deaths dataset links deaths occurring each year to their corresponding birth

include information on both parents' age, education, and place of birth, as well as information on mother's health prior to pregnancy.

Unfortunately, as with many other datasets, the National Vital Statistics do not include information on parental immigration status. Therefore, we rely on mothers' ethnicity, birthplace, and educational attainment to proxy for their likely undocumented status.[3] Previous research has pointed out that most undocumented immigrants have relatively low educational levels (Bohn and Pugatch, 2013; Orrenius and Zavodny, 2016). Furthermore, due to the closeness and the presence of a large migrant network, more than seventy percent of undocumented immigrants in the United States are from Central America (Migration Policy Institute, 2020). Hence, we classify an infant as having a likely undocumented mother if she was of Hispanic descent, born in Mexico or Central America, and had at most 12 years of education.

3.2 Data on Interior Immigration Enforcement

Our aim is to gauge how the hostile environment created by an array of interior immigration enforcement policies adopted over the 14-year period under consideration might have impacted infant health when mothers are likely undocumented. To quantify the intensity of interior immigration enforcement, we gather information on several immigration enforcement policies, including interior immigration enforcement initiatives at the local and state levels, *i.e.* 287(g) agreements between local and state law enforcement with Immigration Customs Enforcement (ICE), Secure Communities, employment verification mandates, and omnibus immigration laws. Appendix Table A1 contains a detailed description of the various policies, as well as their sources.

Although we have the information on the adoption of each policy at the county and year-month level, examining them separately may not be the best approach for understanding how the policy environment affects infant health, which may be more likely to be affected by the overall climate created by the various measures than to one single policy. Instead, we use the policy information to construct a simple index capturing the number of initiatives in place in each county during each month in our sample. As noted by prior work (Amuedo-Dorantes *et al*., 2018), using an index offers two advantages. *First*, it serves as a proxy for the overall *intensity* of immigration enforcement and, in turn, the climate to which individuals are exposed. *Second*, it addresses the overlapping nature and correlation among the various measures, many of which were designed to replace one another (as in the case of Secure Communities and the 287(g) agreements) or rely on the same local and state police resources.

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certificates, regardless of the year of birth. In contrast, the Cohort Linked dataset includes all deaths for infants born each year. Unfortunately, the Cohort Linked data are only available until 2013 and cannot account for the later years' substantial policy variation. While nearly all deaths are successfully linked to their corresponding birth certificates, sometimes this is impossible. In 2003, one percent of infant death records could not be linked to their corresponding birth certificates. Because these unlinked observations will artificially drive down infant mortality weights, the Period Linked Birth/Infant Deaths datasets contain weights to correct for potential biases associated with poor linkages.

[3] From 2003-2011, our data contain observations where the information is obtained from the 1989 Revision of the U.S. Standard Certificate of Live Birth and the 2003 revision. By 2010, 76 percent of all births were recorded on the 2003 revised certificates. From 2012-2016, mother's educational attainment is not available for observations using the unrevised birth certificate forms. As such, we are only able to identify likely undocumented women in states using the revised form. To assure that our results are not driven by counties entering and exiting the sample, we restrict our analysis to counties observed in each month over the sample period, though we show that our estimates are robust to dropping this restriction.

Figure 1 depicts the evolution of the enforcement index across the United States over our sample period. The top left map shows the enforcement index in 2006. At that time, most of the counties had zero or low levels of immigration enforcement. Enforcement grew rapidly with the implementation of Secure Communities, which started to rollout in 2008 and reached nationwide coverage by the end of 2013. The heat maps reveal the geographic and temporal variation in the interior immigration enforcement index that we rely upon for identification purposes. In Figure 2A, we show how each policy contributes to the index over time, and in Figure 2B we plot the immigration enforcement index over time. Over the course of our sample period, the average enforcement index value was 0.82 with a standard deviation of 0.79.

3.3 Summary Statistics

Table 1 presents descriptive statistics for various birth outcomes for the main sample and by the average level of immigration enforcement experienced during pregnancy. Approximately 7 percent of infants with likely undocumented mothers weighted less than 2500 grams at birth, and 1.3 percent weighted less than 1500 grams.[4] Moreover, these shares appear positively related to the immigration enforcement exposure. Among those unexposed to immigration enforcement measures, 6.9 percent of infants born to likely undocumented mothers were low weight. Meanwhile, 8.2 percent of infants exposed to more than two policies were low weight. Additionally, the likelihood of preterm and very preterm, along with the likelihood of having low or very low Apgar scores, also increase as we move to the columns to the right with greater immigration enforcement. While the relationship is not always monotonic, the summary statistics generally suggest that infants exposed to more intense immigration enforcement in-utero had worse birth outcomes.

In the lower part of Table 1, we present summary statistics of additional birth outcomes, including various measures of health care access. The general patterns suggest that likely undocumented women in counties with relatively high levels of immigration enforcement (*i.e.* an immigration enforcement index between 3 and 4) were more likely to use a midwife instead a physician. Similarly, likely undocumented pregnant women in those areas were more likely to report receiving no prenatal care, or inadequate levels of prenatal care, relative to their counterparts residing in counties with relatively low immigration enforcement (*i.e.* an immigration enforcement index between 1 and 2).

4. Methodology

Our primary goal is to assess how the intensification of interior immigration enforcement might have impacted birth weight among babies with likely undocumented mothers. We start by

[4] As a comparison, for all singleton births in the United States between 2006 and 2016, the percentage of low birth weight (<2500 grams) ranges from 6.24 to 6.49 percent, and the percentage of very low birth weight (<1500 grams) ranges from 1.07 to 1.14 percent (Womack *et al.*, 2018). These are lower than the percentages among infants with likely undocumented parents. In our paper, we compare our effect sizes with the average among infants with likely undocumented; if we were to compare these with the average among all infants, our relative effect sizes would be larger.

estimating the following benchmark model, which adopts a quasi-experimental approach to estimate the intent to treat effect of intensified interior immigration enforcement:

$$(1) \qquad y_{ict} = \alpha + \beta_1 IE_{ct}^{1st\ Trim} + \beta_2 IE_{ct}^{2nd\ Trim} + \beta_3 IE_{ct}^{3rd\ Trim} + X'_{ist}\gamma + Z'_{ct}\delta + \theta_c + \theta_t + \varepsilon_{ict}$$

where y_{ict} denotes the probability of being low birth weight for birth *i* in county *c* during month-year *t*. Our key regressors are the enforcement indices capturing the level of interior immigration enforcement to which mothers giving birth in county *c* during month-year *t* were exposed during the first, second and third trimester of their pregnancies. Because the literature has found that the consequences of in-utero stress depend on the stage of fetal development (Gluckman and Hanson, 2009), we separately consider the immigration enforcement index at the start of each trimester, which allows us to hypothesize about the likely channels at play.[5]

Equation (1) includes a vector X_{ist}, which contains several traits potentially affecting birth outcomes, such as indicators for maternal and paternal age (<20, 20-24, 25-34, 35+, and missing), for whether the mother had at most an 8th grade education, for paternal ethnicity (Hispanic, non-Hispanic, and missing), for whether the mother was married, for the infant's sex, birth order (1st, 2nd, 3rd or more, and missing), and for singleton births. We control for a range of time-varying county-level changes in Z_{ct}. First, to address the possibility that counties might enact tougher interior immigration enforcement measures during worse economic times, we include the county's unemployment rate during the year of birth. Second, we control for whether the county was in a state offering Medicaid to unauthorized pregnant women or public insurance to unauthorized children during the year in question. Additionally, because lawful permanent residents are generally barred from public assistance during their first 5-years in the United States, the vector Z_{ct} includes indicators for whether the state offered public insurance to lawful permanent resident adults, Medicaid to lawful permanent resident pregnant women, and food assistance to lawful permanent residents (Urban Institute, 2017), as well as whether the state had expanded Medicaid as part of the Affordable Care Act. We also include a full set of county fixed effects, θ_c, to account for time-invariant difference in counties. Similarly, a full set of month-by-birth year fixed effects, θ_t, addresses secular changes in behaviors and birth outcomes. In additional specifications, we explore various ways to model state-specific time varying factors, including adding state-by-birth year fixed effects, county-specific linear time trends, and county-specific quadratic time trends.

Altogether, we estimate 12 different specifications for low birth weight. We also run our preferred specification for an additional 21 outcomes—some are alternative infant health measures, whereas others are indicators of maternal health and health care usage to explore potential mechanisms at play. For each of these 33 specifications, we estimate 3 parameters of interest, yielding 99 coefficients. In all instances, standard errors are clustered at the county level (Bertrand *et al.*, 2004), and we use the Bonferroni correction to adjust for multiple hypothesis testing. This requires an initial p-value < 0.001 to reject the null hypothesis at the 10 percent level.[6] Bonferroni corrected p-values are reported in brackets under the standard errors in parentheses.

[5] Our findings prove robust to using a summary measure that average the level of interior immigration enforcement over the entire pregnancy. Results are presented in Appendix Table A2.
[6] This value is obtained from 0.10/99 = 0.0010101.

The coefficients of interest, β_1, β_2, and β_3 capture the impact of various levels of interior immigration enforcement to which mothers living in county *c*, month-year *t* were exposed during the first, second and third trimester of their pregnancies. After adjusting for the full set of covariates, our identifying assumption is that, in the absence of intensified interior immigration enforcement, birth outcomes in counties with more stringent policies would have been similar to those in counties offering a more benign environment. While this assumption is ultimately untestable, we conduct an event study that enables us to test for the existence of differential pre-trends in birth outcomes across counties prior to the adoption of stricter enforcement, and to evaluate the dynamics of immigration enforcement once implemented. In contrast to the specification in equation (1), which relies on the changes in the *intensity* of enforcement across counties at different time periods (a continuous treatment measure), the independent variables in our event-study model are indicator variables capturing how the outcome of interest evolves in a window around the first enforcement measure. Specifically, the event-study model takes the following form:

$$(2) \qquad y_{ict} = \alpha + \sum_{j=-15, j\neq -1}^{30} \beta_j I_{ct}^{j} + X'_{ist}\gamma + Z'_{ct}\delta + \theta_c + \theta_t + \varepsilon_{ict}$$

where I_{ct}^{j} are indicators for each of the *j* periods preceding or following the first policy change in county *c*. The coefficients β_j capture the dynamics of the enforcement effects up to 15 periods before and 30 periods after the index first turns positive, enabling us to test any pre-existing differential impacts of interior immigration enforcement, as well as the lasting nature of its impacts.[7]

5. Interior Immigration Enforcement and Infant Birth Weight

Our main aim is to assess if the intensification of interior immigration enforcement witnessed over the past two decades—shown to have had deleterious impacts on the incomes, housing, employment, ability to keep families intact, health and access to health care of likely undocumented migrants by prior studies—has contributed to lowering the birth weight of children born to likely undocumented mothers.

5.1 Main Findings

Figure 3 displays the relationship between the level of interior immigration enforcement in the county of birth and the likelihood of low birth weight (birth weight < 2500 grams). The sample is restricted to firstborns with a mother born in Mexico or Central America with, at most, 12 years of education. There is a clearly positive relationship between the average level of immigration enforcement throughout pregnancy and the probability of weighing less than 2500 grams at birth. While noteworthy, the relationship depicted by Figure 3 fails to account for key factors influencing birth weight that could be correlated with immigration enforcement. Hence, we estimate the effect of interior immigration enforcement on the likelihood of having a low birth weight baby among likely undocumented mothers using variants of equation (1).

[7] To ensure that identification is not being driven by counties entering and exiting the sample throughout the event study window, we limit the sample to a balanced panel of counties. Our estimates are not sensitive to this restriction.

Our main results are presented in Table 2, where the dependent variable is an indicator for low birth weight (<2500 grams) and the independent variables of interest capture the immigration policy environment, taking values that range between 0 and 4 depending on the number of policies implemented in the county at the relevant time. *Enforcement – Conception* measures the policy environment at conception, *Enforcement – 2nd Trimester* measures the policy environment at the start of the second trimester, and *Enforcement – 3rd Trimester* measures the policy environment at the start of the third trimester.

We, first, estimate the bivariate relationship and show in column (1) that a one standard deviation increase in enforcement during the third trimester was associated with 0.55 percentage points higher likelihood of low birth weight, a 7.7 percent increase relative to the mean.[8] We then progressively include county and birth timing fixed effects in column (2), demographic characteristics in column (3), and various economic and policy controls in column (4). Regardless of the model specification, we consistently find evidence of a positive relationship between the intensity of interior immigration enforcement during the third trimester of the pregnancy and the chances that likely undocumented mothers deliver a low birth weight baby. Specifically, focusing on the most complete model specification in column (4), a one standard deviation increase in interior immigration enforcement during the third trimester of the pregnancy—roughly equivalent to a one-unit increase in the index indicative of the adoption of one more initiative—raises the propensity of having a low birth weight baby by a non-negligible 0.42 percentage points, or 6 percent relative to the mean. The fact that it is the exposure to enforcement during the third trimester of the pregnancy that matters, a period when babies gain most weight (American Pregnancy Association, 2020), supports the notion that enforcement interferes with critical fetal growth.

5.2 Event Study

A main concern with leveraging quasi-experimental variation is the possibility of pre-existing trend differences in birth weight across babies from likely undocumented mothers in counties adopting immigration enforcement policies. To gauge if that was the case, we conduct an event study analysis. The specification measures the change in the probability of low birth weight attributed to the first enforcement measure, which might be a different one across counties. Additionally, unlike the estimates in Table 2, the event study fails to capture the fact that the intensity of immigration enforcement varies over time, as counties adopt additional enforcement measures. Despite these caveats, the event study allows us to broadly uncover differential pre-trends in birth weight in treated versus control counties.

Figure 4 displays the coefficients from the event study, along with their 95 percent confidence intervals. We choose the period prior to the change in enforcement as our reference month because these infants would not have been exposed to the policy. Babies born within the first 9 months of the enforcement change would have been partially exposed to the policy, while those born 10 or more months later would have been exposed throughout the entire pregnancy. There is no evidence that the likelihood of low birth weight was evolving differently in the periods leading up to the adoption of an immigration enforcement policy. Indeed, we cannot reject the

[8] The third trimester enforcement index standard deviation for the sample of likely undocumented women in Table 2 is 0.8475719. So, we have 0. 8475719*0.00644, approximately 0.55 percentage point increase in likelihood, or 0.545836/0.07130, approximately 7.7 percent increase relative to the mean.

null hypothesis that the pre-period coefficients are jointly equal to zero (p=0.876). In contrast, we document a slight increase in the likelihood of low birth weight for infants partially exposed to the enforcement measure, while infants fully exposed see a consistent increase in the probability of low birth weight. The post-period coefficients are jointly different from zero (p=0.042).

5.3 Robustness Checks

The estimates in Table 2, along with the event study in Figure 4, suggest that interior immigration enforcement increased the propensity of low birth weight among infants with likely undocumented mothers. To gauge the robustness of our estimates, we test whether the relationship was driven by states with large shares of unauthorized immigrants or by those adopting high profile measures targeting unauthorized immigrants. Most notably, the 2008 Legal Arizona Workers Act mandated that all employers check the work eligibility of their new hires, and Arizona's SB 1070 required law enforcement officials to verify an individual's authorization status during a stop, detention, or arrest if there was "reasonable suspicion" that the person was an unauthorized immigrant.[9] Hence, we replicate the analysis in Table 2 column (4), this time iteratively excluding one state at a time. As can be seen in Figure 5, estimates prove robust in both size (Panel A) and statistical significance (Panel B) to dropping any single state.

Next, we explore if our results are sensitive to controlling for time-varying spatial heterogeneity. In column (1) of Table 3, we augment our preferred specification with state-by-birth year fixed effects. In column (2), instead of state-by-birth year fixed effects, we control for county-specific linear time trends. We then include both state-by-birth year fixed effects and county-specific linear time trends in column (3) and county-specific quadratic time trends in column (4). Our estimate proves robust to adding these covariates. Across all specifications, a one standard deviation increase in immigration enforcement during the third trimester is associated with a 6.8-14.2 percent increase in the likelihood of low birth weight relative to the mean. In the most complete specification in column (4), we find that a one standard deviation increase in enforcement at conception was associated with a 14.2 percent increase in the likelihood of low birth weight.

In Table 4, we further test the robustness of our estimate to several alternative sample specifications, including placebo tests on births less likely to have been affected by immigration enforcement. Specifically, in column (1), we explore what happens if we do not restrict our sample to a balanced panel of counties throughout the sample period. As shown therein, the estimate increases in both magnitude and as a percentage change from the sample mean. Next, in column (2), we experiment with expanding the sample of first births to include *all* infants born to likely undocumented mothers while controlling for birth order. We continue to find that a one standard deviation increase in enforcement was associated with a 5.5 percent increase in the likelihood of low birth weight.[10] We also explore how our result holds up to infant samples born to different groups of mothers who might be more or less likely to be undocumented and, therefore, affected by the intensification of interior immigration enforcement. In columns (3) and (4), we distinguish between infants with Hispanic fathers and infants with non-Hispanic or missing fathers. The

[9] The 2008 Legal Arizona Workers Act can be found at: https://www.azag.gov/civil-rights/legal-az-workers-act), and Arizona's SB 1070 can be located at: https://www.azleg.gov/legtext/49leg/2r/summary/s.1070pshs.doc.htm).

[10] The third trimester enforcement standard deviation for this sample is 0.89056, yielding: (0.89056*0.00380/0.06138) or 5.5 percent.

estimate in column (3) shows that it is infants whose parents are both Hispanic who are harmed by tougher enforcement policies during the third trimester, while the point estimate for infants without Hispanic fathers in column (4) is less than half as large and statistically insignificant. Finally, we test whether intensified immigration enforcement was related to the likelihood of low birth weight for infants with native-born, college-educated, white non-Hispanic mothers and non-Hispanic fathers. The point estimate in column (5) is two-thirds smaller than the estimate for infants with likely unauthorized mothers and is statistically indistinguishable from zero.[11]

5.4 Additional Birth Outcomes

In Table 5, we examine whether intensified immigration enforcement led to changes in other birth outcomes for infants with likely undocumented mothers. We show in column (1) that a one standard deviation increase in immigration enforcement during the third trimester was associated with an 11 percent increase in the likelihood of being born very low birth weight (< 1500 grams) relative to the mean. This relationship is consistent with our prior findings on the probability of low birth weight and would typically be statistically significant (original p=0.00375). However, it does not survive our conservative Bonferroni correction for multiple hypothesis testing. Similarly, there is suggestive evidence in column (2) that a one standard deviation increase in enforcement at conception is associated with a 4.6 percent increase in the probability of preterm delivery relative to the mean. Again, the estimate would be statistically significant (original p=0.00394) but does not survive adjusting for multiple hypothesis testing. In columns (4) and (5), we explore the impact of intensified immigration enforcement on the likelihood of a low or very low Apgar score. We fail to find much evidence of an adverse impact, except for enforcement at conception increasing the likelihood of very low Apgar score without Bonferroni correction.[12] In sum, the estimates in Table 5 suggest that immigration enforcement's most deleterious effect on infants with likely undocumented mothers is an increased risk of low birth weight.[13,14]

6. Potential Mechanisms at Play

Why would intensified interior immigration enforcement increase the incidence of low birth weight among infants with likely undocumented mothers? As discussed above, a rapidly expanding literature has documented the negative impacts of interior immigration enforcement on undocumented migrants and the households in which they reside, reducing their employment likelihoods and incomes; increasing their exposure to poverty, housing and food insecurity; restricting their access to health care and needed services; as well as leading to family separations

[11] In Appendix Table A3, we show that immigration enforcement was not statistically related to changes in maternal or paternal characteristics, such as age, marital status, education, ethnicity, as well as the probability that paternal age and ethnicity information were not reported.

[12] It is worth noting that the American Academy of Pediatrics, the Committee on Fetus and Newborn, the American College of Obstetricians and Gynecologists, and the Committee on Obstetric Practice state that the Apgar score been inappropriately used to predict neurologic well-being in infants (American Academy of Pediatrics, Committee on Fetus and Newborn, American College of Obstetricians and Gynecologists, and Committee on Obstetric Practice, 2006).

[13] Table A4 in the Appendix displays the results from estimating these additional birth outcomes for children with native, white, non-Hispanic parents as a placebo. There is no clear pattern of a relationship. The estimates are smaller in magnitude and statistically insignificant.

[14] We also explored whether immigration enforcement was related to changes in infant mortality. We did not detect a statistically significant relationship.

(Allen and McNeely, 2017; Allen, 2018; Amuedo-Dorantes and Arenas-Arroyo, 2018, 2019; Amuedo-Dorantes and Bansak, 2012, 2014; Bohn, Lofstrom and Steven, 2015; Churchill, 2020; Heyman, Nuñez and Talavera, 2009; Kostandini, Mykerezi, and Escalante, 2013; Nuñez and Heyman, 2007; Orrenius and Zavodny, 2015; Perreira and Pedroza, 2019; Potochnick, Chen and Perreira, 2017; Rugh and Hall, 2016; Watson, 2014). Any one of these circumstances can increase anxiety and stress levels affecting migrants' and their families' health and overall well-being, as documented by Shu-Huah Wang and Kaushal (2019) and Szkupinski Quiroga, Medina, and Glick (2014), among others. In addition, an extensive medical literature has documented the negative impacts of *maternal stress* on birth outcomes by disrupting adaptations in the maternal immune, endocrine and nervous system intended to support a health pregnancy (Coussons-Read, 2012; Wadhwa *et al*., 2011). Similarly, medical research has emphasized the relevance of *access to adequate health care*, especially prenatal care, on birth outcomes (Baldwin *et al*., 1998; Gallagher, Botsko, and Schwalberg, 2004). In sum, interior immigration enforcement could be endangering birth outcomes among likely undocumented mothers through limited access to proper health care or increased stress, among other channels. While our data do not allow us to fully identify channels like stress, we can indirectly gauge their prevalence by examining other maternal conditions at birth affected by stress.

We start by considering if immigration enforcement is related to likely undocumented *women's access to health care*. Figure 6 displays event study estimates for the likelihood that a physician was present at birth. Because women who are midway through their pregnancy are likely already connected to the health care system, we only expect to see an effect for infants who were fully exposed to intensified immigration enforcement. Hence, we use 9 months after an interior immigration enforcement policy enactment as our reference period. As can be seen in Figure 6, there is a clear reduction in the likelihood that physicians (MD or DO) are present at birth (Panel A). Instead, likely undocumented women appear more likely to have a midwife present during birth if they were fully exposed to interior immigration enforcement (Panel B).[15] Despite the event study patterns, the regression estimates in columns (1) and (2) of Table 6 do not provide evidence of immigration enforcement significantly altering the probability of having a physician or midwife present at birth. However, as pointed out by Goodman-Bacon (2018), difference-in-differences estimates are biased towards zero when the treatment effect grows over time as previously treated counties serve as a control for later treated counties. This, along with the increasing treatment effect shown in the event studies, may explain why we do not find statistically significant changes in physician presence in Table 6. Nor do we find statistically significant evidence in columns (3)-(5) that enforcement changes the likelihood of a hospital birth or prenatal care.[16]

Secondly, we explore the relevance of *maternal stress* –another potential channel for the observed impacts of intensified immigration enforcement on birth weight. As mentioned previously, prior work has also documented a positive relationship between immigration enforcement and stress (Becerra *et al*., 2020; Cardoso *et al*., 2020; Potochnick and Perreira, 2010). To indirectly get at this channel, we examine the link between immigration enforcement and the prevalence of maternal conditions related to increased anxiety and stress, such as gestational

[15] In Appendix Figure A1, we show that this pattern is not present for infants born to white non-Hispanic college educated mothers and non-Hispanic fathers.

[16] We also do not find evidence of a change in these three outcomes in corresponding event studies.

hypertension (Zhang *et al*., 2013; Mako *et al*., 2014; Turpin *et al*., 2015). Figure 7 presents the event study results for gestational hypertension. Because it is relatively rare, we show the estimates for our preferred sample of first births (Panel A), as well as for all births (Panel B). We take Figure 7 as suggestive evidence of an increase in the likelihood of gestational hypertension following the adoption of interior immigration enforcement. Indeed, in Panel (B) we cannot reject the null hypothesis that the pre-period coefficients are jointly different from zero (p=0.558), but we can reject the hypothesis that the post-period coefficients are different from zero (p=0.001). However, as with access to health care, the estimates in Table 7 do not uncover a consistent statistical relationship between immigration enforcement and maternal conditions correlated to increased stress.

In sum, event studies provide suggestive evidence of health care access and maternal stress as potential mechanisms at play, even though difference-in-difference estimates correcting for multiple hypotheses testing do not allow us to make definite conclusions. Hence, we consider yet another approach to assessing the channels possibly at play by focusing on likely triggers. We distinguish between what we refer to as *police-based* policies vs. *employment-based* enforcement initiatives. The distinction is relevant because of the distinct implications of each set of initiatives. Police-based measures, such as 287(g) agreements, Secure Communities, or omnibus immigration laws, involve local and state level police and are responsible for most removals from the interior of the country (Guo, 2020). In contrast, employment-based immigration enforcement, as is the case with employment verification mandates, are mainly used by employers to check the work eligibility of new and existing hires through the electronic E-Verify program and are not directly linked to removals. For that reason, while both programs can effectively curtail employment opportunities, earnings, housing and food security, deportation fears will undoubtedly be more salient under police-based immigration enforcement initiatives.

To assess the potential role of deportation fear as a trigger, we construct separate indices for police-based and employment-based interior immigration enforcement measures and re-estimate equation (1) using these measures. Results, presented in Table 8, show that a one standard deviation increase in the level of police-based interior immigration enforcement during the third trimester raises the likelihood of low birth weight by a statistically significant 4.9 percent.[17] While employment-based enforcement exhibits a similarly sized impact, its impact is less precisely estimated.[18] As such, the results are, overall, suggestive of deportation fears as a potential trigger of low birth weight.

7. Summary and Conclusion

The United States has sharply increased its interior immigration enforcement in the past two decades. In this study, we document the adverse effects of such climate created by a multiplicity of interior immigration enforcement measures on birth weight among children born to likely undocumented women, using administrative data covering all births in the United States between 2003 and 2016. Using a generalized difference-in-differences design, we find that infants with a likely undocumented mother exposed to heightened immigration enforcement are more

[17] The average police-based index for our sample is 0.55837 with a standard deviation of 0.70218.

[18] The coefficients for police-based enforcement and those for employment-based enforcement do not differ statistically significantly (p=0.85).

likely to be born with low birth weight (< 2500 grams), which could in turn have lasting impacts on their health, human capital, and earnings. Specifically, exposure to higher immigration enforcement during the third trimester has the most salient impact, compared with the exposure to enforcement at conception and during the second trimester. Our findings prove robust to inclusion of various policy controls, location-specific trend specifications, sample restrictions, and placebo tests using population unlikely affected by the immigration enforcement policies. In addition, the impacts appear to be stemming from police-based immigration enforcement responsible for most deportations, underscoring the relevance of deportation fears as a trigger.

Of course, our study is not without limitations. As with most datasets, vital statistics data do not contain information on authorization status, so we must instead follow the literature by employing a proxy based on citizenship, birthplace, ethnicity, and education. Next, while the reduced form relationship between immigration enforcement and birth weight is itself important, we are unable to precisely identify the mechanisms driving this pattern. Instead, we present suggestive evidence that interior immigration enforcement measures increased stress for likely undocumented pregnant women, a pathway in line with the prior literature on the fear and stress induced by immigration enforcement (Becerra *et al*., 2020; Cardoso *et al*., 2020; Potochnick and Perreira, 2010). We also present suggestive evidence on access to care, such as inadequate prenatal care visits and having a midwife instead of a doctor present at delivery. Finally, while we detect a meaningful increase in the likelihood of low birth weight, we are unable to fully measure how in-utero exposure to immigration enforcement may affect these infants throughout their lives (Barker, 1990; Aizer and Currie, 2014; Almond *et al*., 2018).

Overall, the results suggest that moving to a more targeted approach to immigration enforcement could meaningfully reduce enforcement's negative health externalities on U.S. citizen children. Policymakers, medical practitioners, and the public need to weigh these potential costs against any perceived benefits of stringent enforcement to curb irregular immigration.

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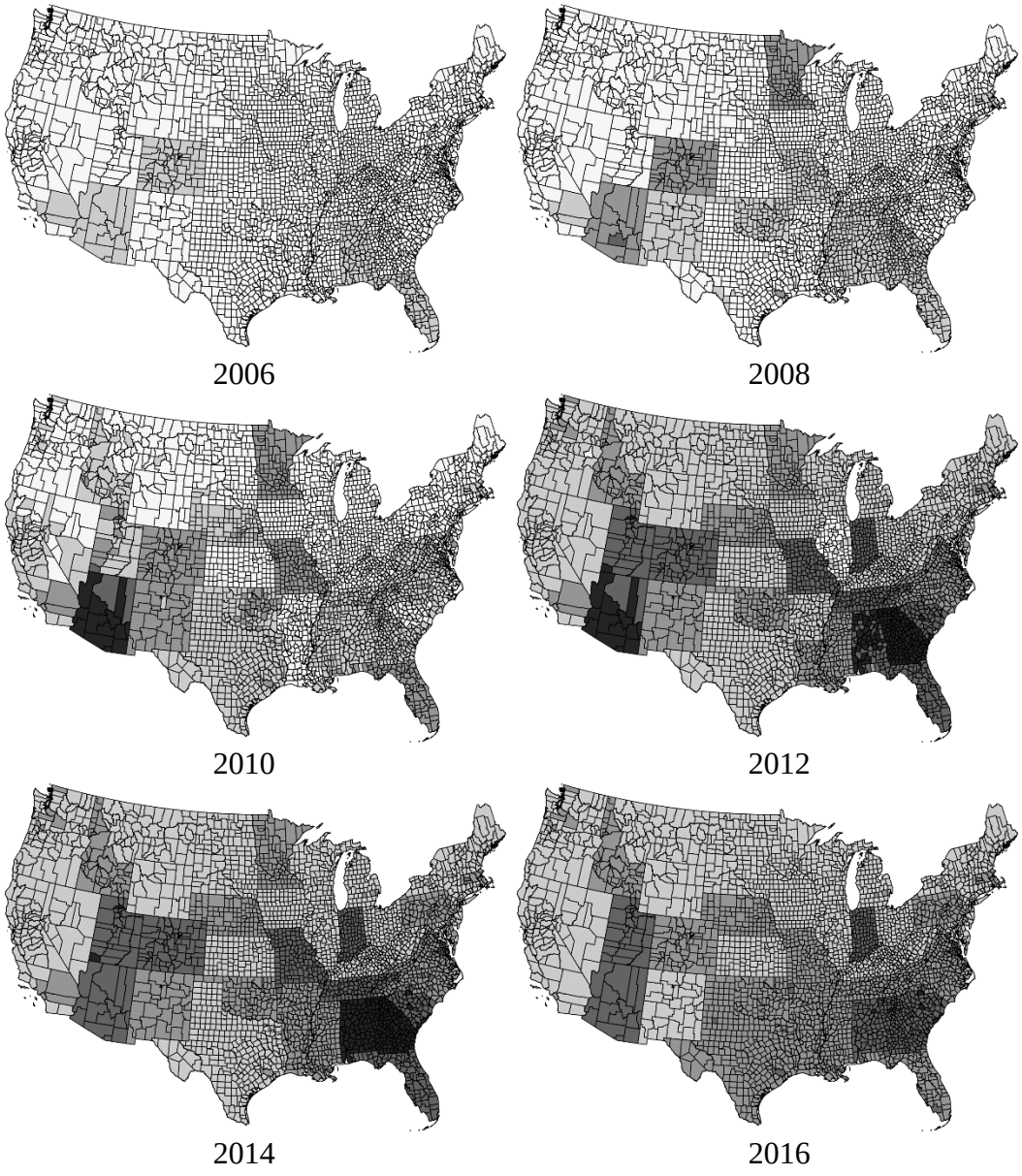
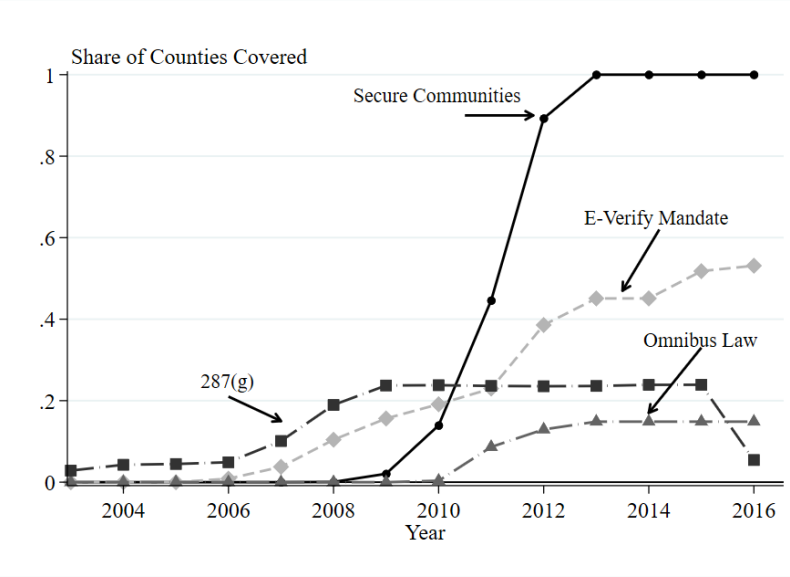
Figure 1
Immigration Enforcement Over Time



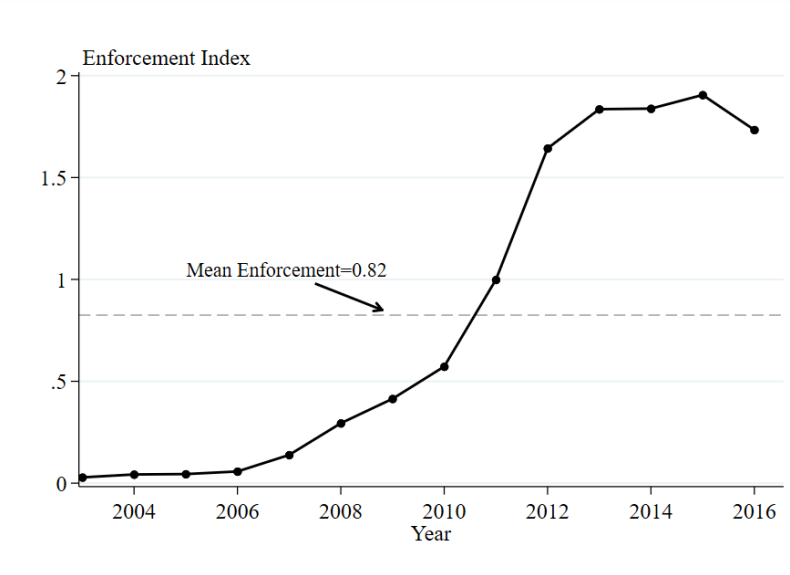
Source: The source for each immigration enforcement measure are listed in Appendix Table A1.
Note: Each panel shows the immigration enforcement intensity across the United States. The lightest shading corresponds to no enforcement measures enacted, while the darkest shading corresponds to all four measures (287(g) agreement, Security Communities, omnibus immigration legislation, employment verification mandate) enacted.

Figure 2
Immigration Enforcement Measures Over Time

Panel A

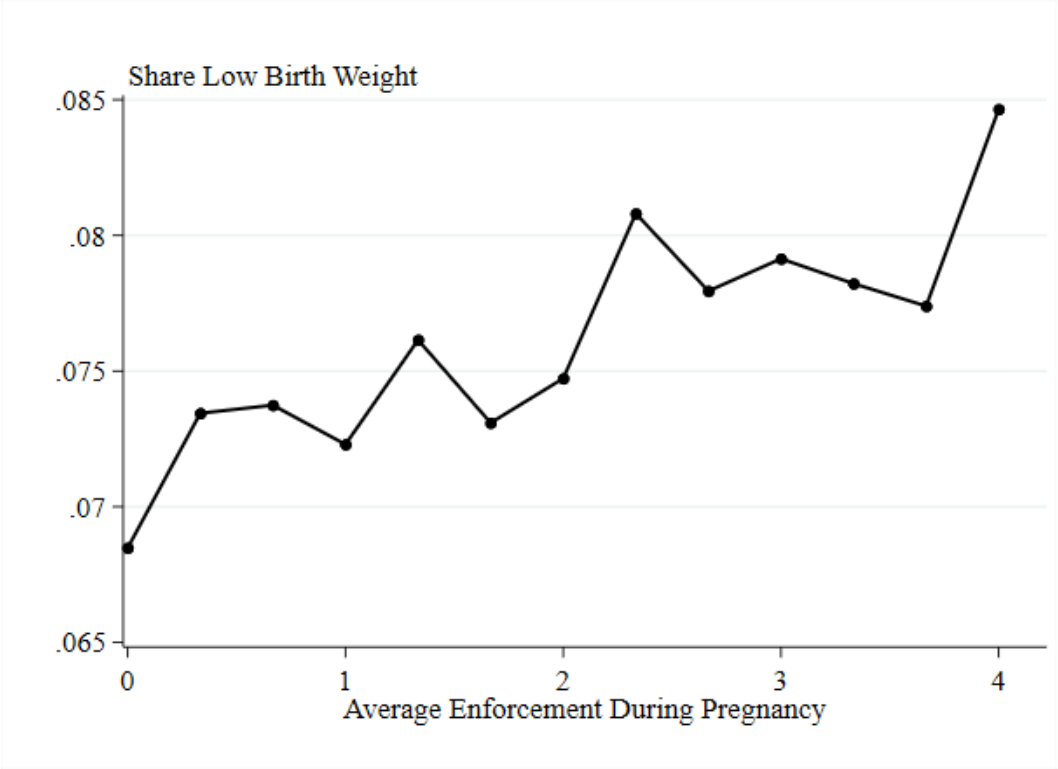


Panel B



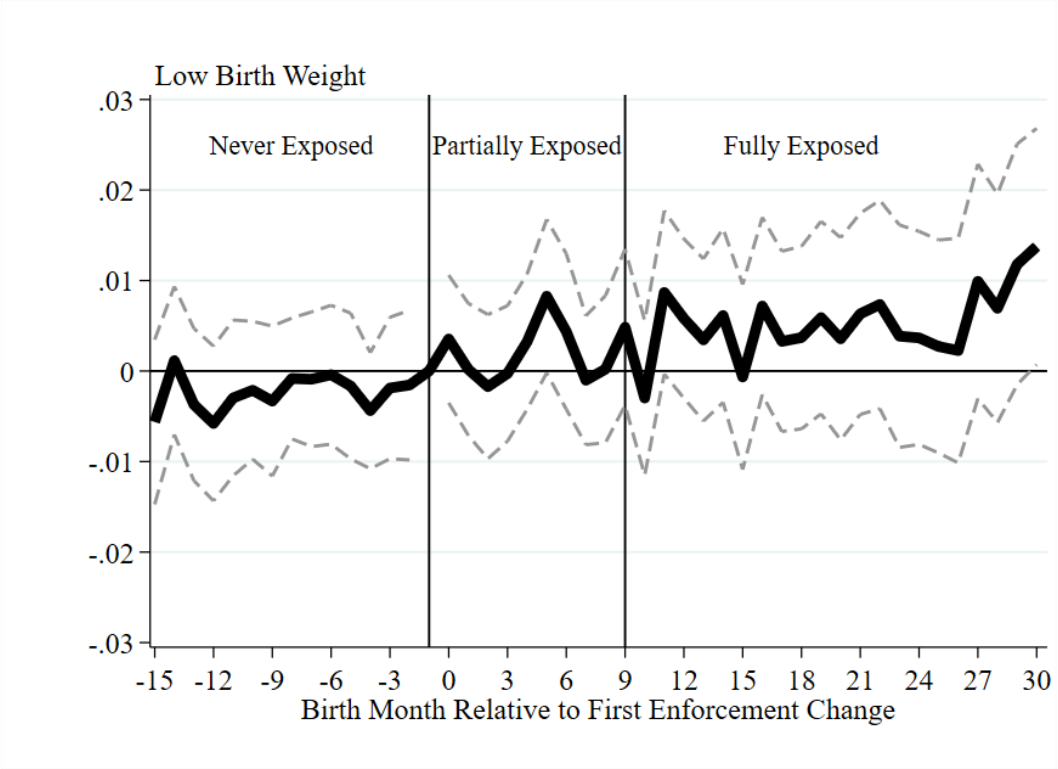
Source: The source for each immigration enforcement measure are listed in Appendix Table A1.
Note: Panel (A) plots the evolution of each immigration enforcement policy used in the enforcement index. Panel (B) plots the average county-level immigration enforcement index. Over the sample period, the index averaged 0.82 with a standard deviation of 0.79.

Figure 3
Relationship between Low Birth Weight and Exposure to Immigration Enforcement



Source: NCHS Vital Statistics Period Linked Birth/Infant Death 2003-2016
Note: The figure plots the share of infants born low birth weight (< 2500 grams) against the average interior immigration enforcement experienced by the mother during pregnancy.

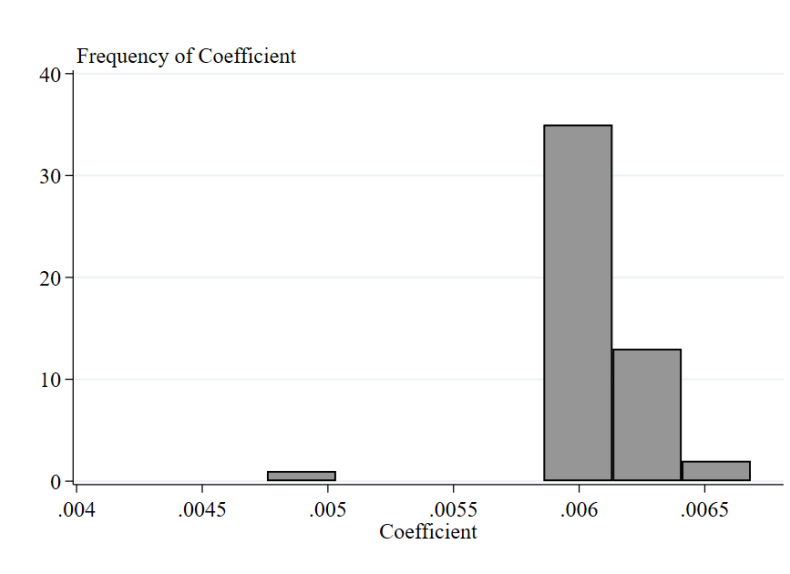
Figure 4
Event Study for the Likelihood of Low Birth Weight



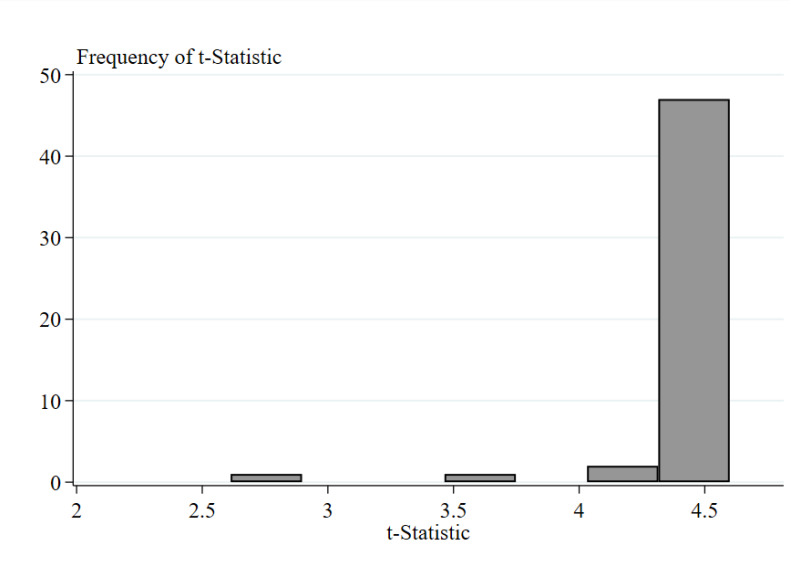
Source: NCHS Vital Statistics Period Linked Birth/Infant Death 2003-2016.
Note: The dark solid line denotes the point estimates, while the lighter dashed lines indicate the 95 percent confidence intervals for each coefficient. The dependent variable is an indicator for a low birth weight birth (<2500 grams). The independent variables of interest are variables for being *j* periods away from the first change in interior immigration enforcement. The sample is restricted to first-born births to likely undocumented women and the regressions include the controls from Table 2 column (4). We cannot reject the null hypothesis that the pre-period coefficients are jointly equal to zero (p=0.876). However, the post-period coefficients are jointly different from zero (p=0.042). Standard errors are clustered at the county level.

Figure 5
Immigration Enforcement and Low Birth Weight after Dropping One State at a Time

Panel A



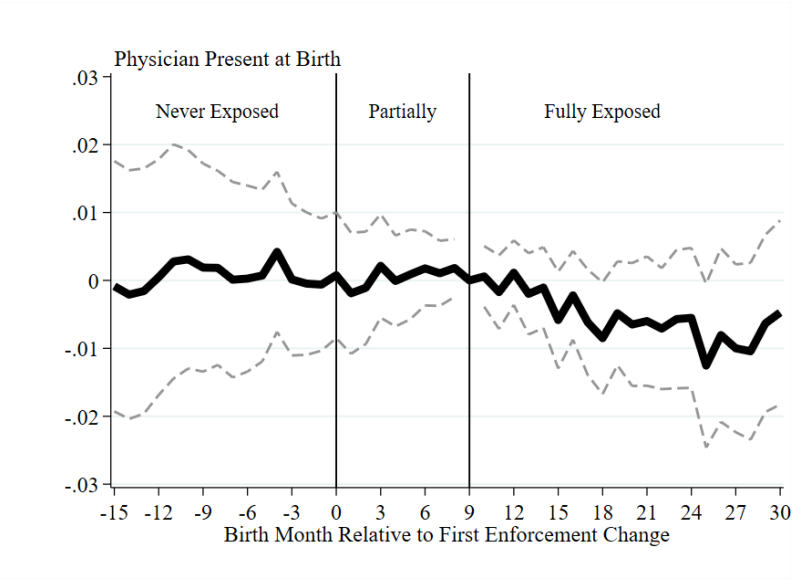
Panel B



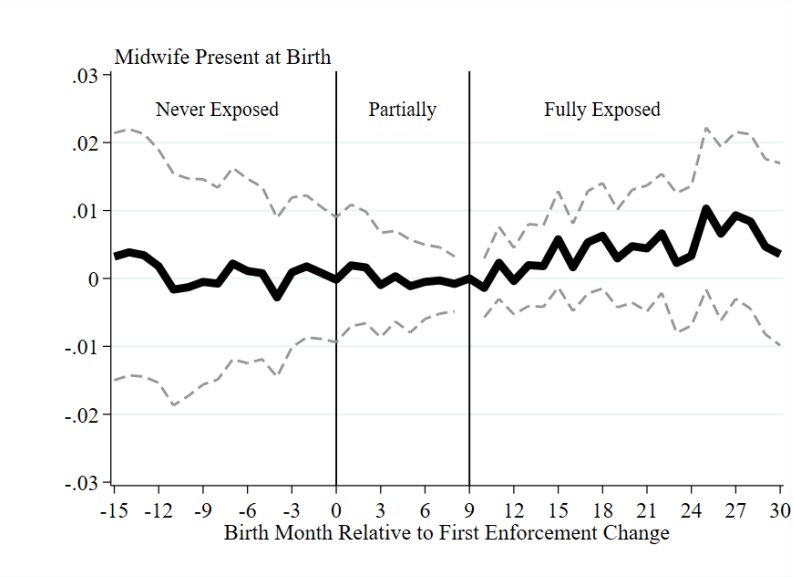
Source: NCHS Vital Statistics Period Linked Birth/Infant Death 2003-2016
Note: Panel A displays the distribution of coefficients for immigration enforcement during the third trimester obtained from the preferred specification (Table 2 column 4) when every state is iteratively dropped. Panel B plots the corresponding distribution of t-statistics.

Figure 6
Immigration Enforcement and Engagement with the Health Care System

Panel A



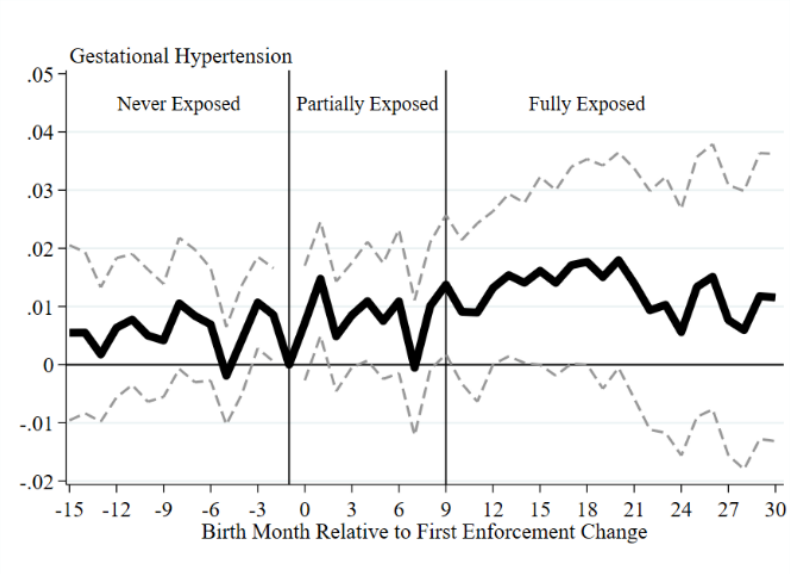
Panel B



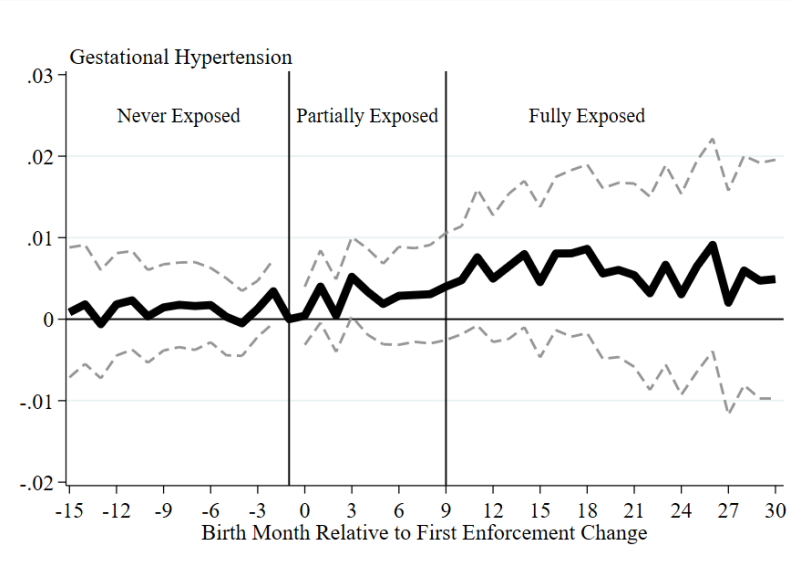
Source: NCHS Vital Statistics Period Linked Birth/Infant Death 2003-2016
Note: The dark solid line denotes the point estimates, while the lighter dashed lines indicate the 95 percent confidence intervals for each coefficient. The dependent variable in Panel A is an indicator for having a physician (MD or DO) present at birth, while the dependent variable in Panel B is an indicator for having a midwife present at birth. The independent variables of interest are variables for being *j* periods away from the first change in interior immigration enforcement. The sample is restricted to first-born births to likely undocumented women and the regressions include the controls from Table 2 column (4). In Panel A we cannot reject the null hypothesis that the pre-period coefficients are jointly equal to zero (p=0.463) or that the post-period coefficients are different from zero (p=0.191). In Panel B we cannot reject the null hypothesis that the pre-period coefficients are jointly equal to zero (p=0.589) or that the post-period coefficients are different from zero (p=0.242). Standard errors are clustered at the county level.

Figure 7
Immigration Enforcement and Gestational Hypertension

Panel A—First-Born Infants



Panel B—All Infants



Source: NCHS Vital Statistics Period Linked Birth/Infant Death 2003-2016
Note: The dark solid line denotes the point estimates, while the lighter dashed lines indicate the 95 percent confidence intervals for each coefficient. The dependent variable is an indicator for whether the mother suffered from gestational hypertension. Panel A restricts the sample to first-born births, while Panel B considers all births. The independent variables of interest are variables for being *j* periods away from the first change in interior immigration enforcement. The sample is restricted to births to likely undocumented women and the regressions include the controls from Table 2 column (4). In Panel A, the pre-periods coefficients (p=0.039) and the post-period coefficients (p=0.001) are both jointly different from zero. In Panel B, we cannot reject the null hypothesis that the pre-period coefficients are jointly equal to zero (p=0.558), but we can reject that the post-period coefficients are different from zero (p=0.001). Standard errors are clustered at the county level.

Table 1: Summary Statistics

	Overall	Average Enforcement = 0	0 < Average Enforcement ≤ 1	1 < Average Enforcement ≤ 2	2 < Average Enforcement ≤ 3	3 < Average Enforcement ≤ 4
Low Birth Weight	0.07130	0.06888	0.07276	0.07559	0.08188	0.08195
	(0.25732)	(0.25326)	(0.25975)	(0.26433)	(0.27419)	(0.27431)
Very Low Birth Weight	0.01264	0.01192	0.01291	0.01432	0.01599	0.01510
	(0.11171)	(0.10851)	(0.11289)	(0.11884)	(0.12545)	(0.12196)
Preterm	0.10977	0.10991	0.10934	0.10458	0.12385	0.12652
	(0.31260)	(0.31278)	(0.31208)	(0.30601)	(0.32941)	(0.33246)
Very Preterm	0.00641	0.00641	0.00739	0.00789	0.00970	0.01010
	(0.07982)	(0.07982)	(0.08567)	(0.08846)	(0.09800)	(0.10002)
Low Apgar Score	0.01836	0.01577	0.01862	0.03165	0.02521	0.02169
	(0.13424)	(0.12458)	(0.13519)	(0.17507)	(0.15678)	(0.14566)
Very Low Apgar Score	0.00583	0.00490	0.00579	0.01118	0.00789	0.00908
	(0.07614)	(0.06980)	(0.07585)	(0.10516)	(0.08849)	(0.09488)
Physician Present at Birth	0.89501	0.88766	0.90410	0.92633	0.86503	0.73295
	(0.30654)	(0.31579)	(0.29446)	(0.26124)	(0.34169)	(0.44245)
Midwife Present at Birth	0.10177	0.10951	0.09269	0.06981	0.13108	0.24197
	(0.30234)	(0.31227)	(0.29000)	(0.25482)	(0.33749)	(0.42831)
Hospital Birth	0.99474	0.99400	0.99494	0.99631	0.99794	0.99897
	(0.07237)	(0.07721)	(0.07093)	(0.06066)	(0.04532)	(0.32005)
No Prenatal Care	0.02832	0.02783	0.02796	0.02847	0.03650	0.04145
	(0.16588)	(0.16449)	(0.16486)	(0.16631)	(0.18754)	(0.19935)
Inadequate Prenatal Care	0.14215	0.14795	0.13056	0.13078	0.17781	0.17410
	(0.34920)	(0.35505)	(0.33692)	(0.33716)	(0.38236)	(0.37923)

Source: NCHS Vital Statistics Period Linked Birth/Infant Death 2003-2016
Note: The sample is restricted to first born births of likely undocumented mothers, who were born in Mexico or Central America and had at most 12 years of education.

Table 2: Immigration Enforcement and the Likelihood of Low Birth Weight

	(1)	(2)	(3)	(4)
Enforcement – Conception	0.00075	0.00191	0.00150	0.00175
	(0.00162)	(0.00176)	(0.00163)	(0.00161)
	[1.000]	[1.000]	[1.000]	[1.000]
Enforcement – 2nd Trimester	-0.00295	-0.00240	-0.00219	-0.00229
	(0.00214)	(0.00199)	(0.00186)	(0.00186)
	[1.000]	[1.000]	[1.000]	[1.000]
Enforcement – 3rd Trimester	0.00644***	0.00512***	0.00475**	0.00499***
	(0.00130)	(0.00123)	(0.00125)	(0.00126)
	[0.000]	[0.004]	[0.017]	[0.009]
County FE?	N	Y	Y	Y
Birth Month-by-Year FE?	N	Y	Y	Y
Demographic Controls?	N	N	Y	Y
Economic & Policy Controls?	N	N	N	Y
Low Birth Weight Mean	0.07130	0.07130	0.07130	0.07130
Observations	1,201,287	1,201,287	1,201,287	1,201,287

Source: NCHS Vital Statistics Period Linked Birth/Infant Death 2003-2016.
Note: The dependent variable is an indicator for low birth weight (<2500 grams). The independent variables of interest capture the immigration policy environment and take on values 0-4 depending on the number of policies implemented in the county at the relevant time. *Enforcement – Conception* measures the policy environment at conception, *Enforcement – 2nd Trimester* measures the policy environment at the start of the second trimester, and *Enforcement – 3rd Trimester* measures the policy environment at the start of the third trimester. The sample is restricted to first born births where the mother was born in Mexico or Central America and had at most 12 years of education. Column (1) is the simple bivariate relationship. Column (2) includes controls for time-invariant county fixed effects and location-invariant birth month-by-year fixed effects. Column (3) includes demographic controls, including an indicator for a single rather than multiple birth, an indicator the infant's sex, an indicator for if the mother had at most an 8th grade education, an indicator for whether the mother was married, indicators for maternal and paternal age groups (<20, 20-24, 25-34, 35+, and missing), indicators for father's ethnicity (Hispanic, non-Hispanic, and missing), and an indicator for the style of birth certificate used (2003 revision of the U.S. Standard Certificate of Live Birth with the 1989 Revision of the U.S. Standard Certificate of Live Birth omitted). Column (4) includes economic and policy controls, including the annual county unemployment rate and an indicator for whether the state expanded Medicaid as part of the Affordable Care Act. It also includes indicators for whether the state offers Medicaid to unauthorized pregnant women, public insurance for lawful permanent resident adults within the 5-year restriction window, Medicaid for lawful permanent resident pregnant women within the 5-year restriction window, and public insurance for unauthorized children. It also includes indicators for whether the state offers food assistance to lawful permanent resident kids and/or lawful permanent resident adults. Robust standard errors, shown in parentheses, are clustered at the county level. To account for multiple hypothesis testing, statistical significance is obtained using Bonferroni corrected p-values which are reported in brackets. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Table 3: Immigration Enforcement the Likelihood of Low Birth Weight – Robustness to Controls for Spatial Heterogeneity

	(1)	(2)	(3)	(4)
Enforcement – Conception	0.00355	0.00363	0.00642	0.00757**
	(0.00178)	(0.00158)	(0.00197)	(0.00215)
	[1.000]	[1.000]	[0.121]	[0.049]
Enforcement – 2nd Trimester	-0.00124	-0.00217	-0.00075	-0.00010
	(0.00186)	(0.00184)	(0.00184)	(0.00196)
	[1.000]	[1.000]	[1.000]	[1.000]
Enforcement – 3rd Trimester	0.00924***	0.00572***	0.01022***	0.01198***
	(0.00168)	(0.00132)	(0.00171)	(0.00169)
	[0.000]	[0.002]	[0.000]	[0.000]
State-by-Birth Year FE?	Y	N	Y	Y
County-Specific Linear Time Trends?	N	Y	Y	Y
County-Specific Quadratic Time Trends?	N	N	N	Y
Low Birth Weight Mean	0.07130	0.07130	0.07130	0.07130
Observations	1,201,287	1,201,287	1,201,287	1,201,287

Source: NCHS Vital Statistics Period Linked Birth/Infant Death 2003-2016.
Note: The dependent variable is an indicator for low birth weight (<2500 grams). The independent variables of interest capture the immigration policy environment and take on values 0-4 depending on the number of policies implemented in the county at the relevant time. *Enforcement – Conception* measures the policy environment at conception, *Enforcement – 2nd Trimester* measures the policy environment at the start of the second trimester, and *Enforcement – 3rd Trimester* measures the policy environment at the start of the third trimester. The sample restrictions and overall empirical specification follow Table 2 column (4). Column (1) augments that specification with state-by-birth year fixed effects, while column (2) includes county-specific linear time trends. Column (3) includes both state-by-birth year fixed effects and county-specific linear time trends, while column (4) augments this model with county-specific quadratic time trends. Robust standard errors, shown in parentheses, are clustered at the county level. To account for multiple hypothesis testing, statistical significance is obtained using Bonferroni corrected p-values which are reported in brackets.
*** p < 0.01, ** p < 0.05, * p < 0.10.

Table 4: Immigration Enforcement the Likelihood of Low Birth Weight – Robustness Tests

	(1)	(2)	(3)	(4)	(5)
	Unbalanced Panel of Counties	**Including All Births**	**Hispanic Father**	**Non-Hispanic or Missing Father**	**College Educated White Non-Hispanic Households**
Enforcement – Conception	0.00105	0.00187	0.00209	0.00001	0.00149
	(0.00133)	(0.00076)	(0.00170)	(0.00360)	(0.00117)
	[1.000]	[1.000]	[1.000]	[1.000]	[1.000]
Enforcement – 2nd Trimester	-0.00242	-0.00192	-0.00295	0.00103	0.00039
	(0.00156)	(0.00083)	(0.00209)	(0.00448)	(0.00133)
	[1.000]	[1.000]	[1.000]	[1.000]	[1.000]
Enforcement – 3rd Trimester	0.00569***	0.00380***	0.00567***	0.00222	0.00168
	(0.00115)	(0.00063)	(0.00127)	(0.00354)	(0.00107)
	[0.000]	[0.000]	[0.001]	[1.000]	[1.000]
Low Birth Weight Mean	0.07080	0.06138	0.06947	0.07843	0.06841
Observations	1,466,615	4,490,241	955,078	246,209	1,976,066

Source: NCHS Vital Statistics Period Linked Birth/Infant Death 2003-2016.
Note: The dependent variable is an indicator for low birth weight (<2500 grams). The independent variables of interest capture the immigration policy environment and take on values 0-4 depending on the number of policies implemented in the county at the relevant time. *Enforcement – Conception* measures the policy environment at conception, *Enforcement – 2nd Trimester* measures the policy environment at the start of the second trimester, and *Enforcement – 3rd Trimester* measures the policy environment at the start of the third trimester. The sample restrictions and empirical specification follow Table 2 column (4). Column (1) drops the restriction the balanced panel restriction and considers all first-born observations for infants with likely-unauthorized mothers, while column (2) drops the birth order restriction and considers all infants born to likely-unauthorized mothers. Column (3) limits our primary sample to those with Hispanic fathers, while column (4) contains observations with non-Hispanic fathers or for whom father's information was not provided. Finally, column (5) uses a sample of infants with college educated white non-Hispanic mothers and non-Hispanic fathers. Robust standard errors, shown in parentheses, are clustered at the county level. To account for multiple hypothesis testing, statistical significance is obtained using Bonferroni corrected p-values which are reported in brackets.
*** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Table 5: Immigration Enforcement and Other Birth Outcomes

	(1)	(2)	(3)	(4)	(5)
	Very Low Birth Weight (< 1500 Grams)	**Preterm (Gestation < 37 Wks)**	**Very Preterm (Gestation < 28 Wks)**	**Low Apgar Score (Apgar < 7)**	**Very Low Apgar Score (Apgar < 4)**
Enforcement – Conception	0.00104	0.00603	0.00095	0.00131	0.00171
	(0.00061)	(0.00208)	(0.00047)	(0.00140)	(0.00077)
	[1.000]	[0.394]	[1.000]	[1.000]	[1.000]
Enforcement – 2nd Trimester	-0.00043	0.00464	-0.00001	0.00027	0.00007
	(0.00081)	(0.00240)	(0.00055)	(0.00180)	(0.00113)
	[1.000]	[1.000]	[1.000]	[1.000]	[1.000]
Enforcement – 3rd Trimester	0.00167	0.00041	0.00100	0.00179	-0.00003
	(0.00057)	(0.00218)	(0.00048)	(0.00160)	(0.00082)
	[0.375]	[1.000]	[1.000]	[1.000]	[1.000]
Dependent Variable Mean	0.01264	0.10977	0.00700	0.01836	0.00583
Observations	1,201,287	1,201,316	1,201,316	559,362	559,362

Source: NCHS Vital Statistics Period Linked Birth/Infant Death 2003-2016.
Notes: The dependent variable in column (1) is an indicator for very low birth weight (< 1500 grams. The dependent variable in columns (2) and (3) relate to gestation time. Column (2)'s dependent variable is an indicator for being a preterm birth (< 37 weeks), while the dependent variable in column (3) is an indicator for being a very preterm birth (< 28 weeks). The dependent variable in column (4) is an indicator for low Apgar score (Apgar < 7) and the dependent variable in column (5) is an indicator for very low Apgar score (Apgar < 4). The independent variables of interest capture the immigration policy environment and take on values 0-4 depending on the number of policies implemented in the county at the relevant time. *Enforcement – Conception* measures the policy environment at conception, *Enforcement – 2nd Trimester* measures the policy environment at the start of the second trimester, and *Enforcement – 3rd Trimester* measures the policy environment at the start of the third trimester. Columns (1)-(5) include the full set of controls from Table 2 column (4). Robust standard errors, shown in parentheses, are clustered at the county level. To account for multiple hypothesis testing, statistical significance is obtained using Bonferroni corrected p-values which are reported in brackets.
*** p < 0.01, ** p < 0.05, * p < 0.10.

Table 6: Immigration Enforcement and Health Care Utilization

	(1)	(2)	(3)	(4)	(5)
	Physician Present at Birth	**Midwife Present at Birth**	**Hospital Birth**	**No Prenatal Care Visits**	**Inadequate Prenatal Care Visits**
Enforcement – Conception	-0.00639	0.00631	-0.00082	0.00157	0.00674
	(0.00418)	(0.00427)	(0.00044)	(0.00208)	(0.00480)
	[1.000]	[1.000]	[1.000]	[1.000]	[1.000]
Enforcement – 2nd Trimester	0.00252	-0.00244	0.00083	-0.00030	-0.00056
	(0.00243)	(0.00247)	(0.00048)	(0.00123)	(0.00256)
	[1.000]	[1.000]	[1.000]	[1.000]	[1.000]
Enforcement – 3rd Trimester	-0.00287	0.00133	-0.00082	-0.00012	0.00366
	(0.00403)	(0.00375)	(0.00042)	(0.00292)	(0.00736)
	[1.000]	[1.000]	[1.000]	[1.000]	[1.000]
Dependent Variable Mean	0.89501	0.10177	0.99474	0.02832	0.14215
Observations	1,200,781	1,200,781	1,099,152	1,159,001	1,159,001

Source: NCHS Vital Statistics Period Linked Birth/Infant Death 2003-2016.
Notes: The dependent variable in column (1) is an indicator for a physician being present at birth, while the dependent variable in column (2) is an indicator for whether a midwife was present at birth. The dependent variable in column (3) is an indicator for whether the birth took place in a hospital. The dependent variable in column (4) is an indicator for whether the infant received no prenatal care, while the dependent variable in column (5) is an indicator for inadequate prenatal care (< 7 visits). The independent variables of interest capture the immigration policy environment and take on values 0-4 depending on the number of policies implemented in the county at the relevant time. *Enforcement – Conception* measures the policy environment at conception, *Enforcement – 2nd Trimester* measures the policy environment at the start of the second trimester, and *Enforcement – 3rd Trimester* measures the policy environment at the start of the third trimester. Each column includes the full set of controls from Table 2 column (4). Robust standard errors, shown in parentheses, are clustered at the county level. To account for multiple hypothesis testing, statistical significance is obtained using Bonferroni corrected p-values which are reported in brackets.
*** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$

Table 7: Immigration Enforcement, Mother Health Outcomes, and Birth Complications

	(1)	(2)	(3)	(4)	(5)	(6)
	Gestational Hypertension	**Eclampsia**	**Infant Required Assisted Ventilation**	**Induced Labor**	**C-Section Delivery**	**Mother's Weight Gain**
Enforcement – Conception	0.00736	-0.00031	0.00316	0.00423	0.00941	0.29639
	(0.00571)	(0.00040)	(0.00153)	(0.00703)	(0.00583)	(0.11032)
	[1.000]	[1.000]	[1.000]	[1.000]	[1.000]	[0.766]
Enforcement – 2nd Trimester	-0.00531	0.00061	-0.00176	-0.00671	-0.00186	0.10400
	(0.00286)	(0.00050)	(0.00087)	(0.00296)	(0.00303)	(0.11673)
	[1.000]	[1.000]	[1.000]	[1.000]	[1.000]	[1.000]
Enforcement – 3rd Trimester	0.00321	-0.00060	0.00125	-0.00589	-0.00315	-0.21841
	(0.00218)	(0.00031)	(0.00106)	(0.00483)	(0.00476)	(0.17406)
	[1.000]	[1.000]	[1.000]	[1.000]	[1.000]	[1.000]
Dependent Variable Mean	0.04241	0.00222	0.01094	0.18339	0.25808	29.09852
Observations	844,635	844,635	1,302,766	1,463,681	1,465,050	1,219,389

Source: NCHS Vital Statistics Period Linked Birth/Infant Death 2003-2016.
Notes: The dependent variable in column (1) is an indicator for whether the mother had gestational hypertension, while the dependent variable in column (2) is an indicator for whether the mother had eclampsia. The dependent variable in column (3) is an indicator for whether the infant required assisted ventilation. The dependent variable in column (4) is an indicator for whether labor was induced, while the dependent variable in column (5) is an indicator for whether the infant was born via Cesarean section. Finally, the dependent variable in column (6) is mother's weight gain during pregnancy (in pounds). The independent variables of interest capture the immigration policy environment and take on values 0-4 depending on the number of policies implemented in the county at the relevant time. *Enforcement – Conception* measures the policy environment at conception, *Enforcement – 2nd Trimester* measures the policy environment at the start of the second trimester, and *Enforcement – 3rd Trimester* measures the policy environment at the start of the third trimester. Each column includes the full set of controls from Table 2 column (4). Robust standard errors, shown in parentheses, are clustered at the county level. We utilize the Bonferroni correction to adjust for multiple hypothesis testing.
*** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Table 8: Immigration Enforcement the Likelihood of Low Birth Weight by Enforcement Type

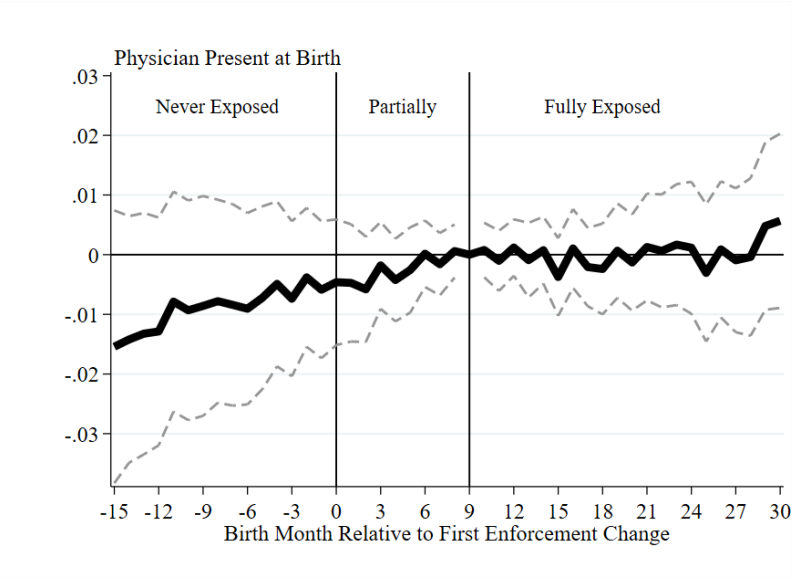
	(1)	(2)	(3)	(4)
Police Enforcement – Conception	-0.00038	0.00146	0.00091	0.00101
	(0.00177)	(0.00191)	(0.00168)	(0.00161)
	[1.000]	[1.000]	[1.000]	[1.000]
Police Enforcement – 2nd Trimester	-0.00128	-0.00114	-0.00083	-0.00093
	(0.00213)	(0.00202)	(0.00182)	(0.00182)
	[1.000]	[1.000]	[1.000]	[1.000]
Police Enforcement – 3rd Trimester	0.00395	0.00531**	0.00512*	0.00500*
	(0.00139)	(0.00147)	(0.00151)	(0.00150)
	[0.490]	[0.033]	[0.080]	[0.094]
Employment Enforcement – Conception	0.00820	0.00526	0.00560	0.00600
	(0.00419)	(0.00425)	(0.00440)	(0.00444)
	[1.000]	[1.000]	[1.000]	[1.000]
Employment Enforcement – 2nd Trimester	-0.01015	-0.00871	-0.00884	-0.00879
	(0.00435)	(0.00450)	(0.00457)	(0.00455)
	[1.000]	[1.000]	[1.000]	[1.000]
Employment Enforcement – 3rd Trimester	0.01166	0.00583	0.00487	0.00572
	(0.00391)	(0.00352)	(0.00338)	(0.00323)
	[0.304]	[1.000]	[1.000]	[1.000]
County FE?	N	Y	Y	Y
Birth Month-by-Year FE?	N	Y	Y	Y
Demographic Controls?	N	N	Y	Y
Economic & Policy Controls?	N	N	N	Y
Low Birth Weight Mean	0.07130	0.07130	0.07130	0.07130
Observations	1,201,287	1,201,287	1,201,287	1,201,287

Source: NCHS Vital Statistics Period Linked Birth/Infant Death 2003-2016.
Note: The dependent variable is an indicator for low birth weight (<2500 grams). The independent variables of interest capture the immigration policy environment. *Police Enforcement* takes on values 0 to 3 and indicates whether the county had entered into a 287(g) agreement with the Department of Homeland Security, whether the state had passed an omnibus immigration law, and whether the Secure Communities program had been implemented in the county. *Employment Enforcement* is an indicator for whether the state had passed an employment verification mandate. The changing covariates in each column follows Table 2. Robust standard errors, shown in parentheses, are clustered at the county level. To account for multiple hypothesis testing, statistical significance is obtained using Bonferroni corrected p-values which are reported in brackets.
*** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

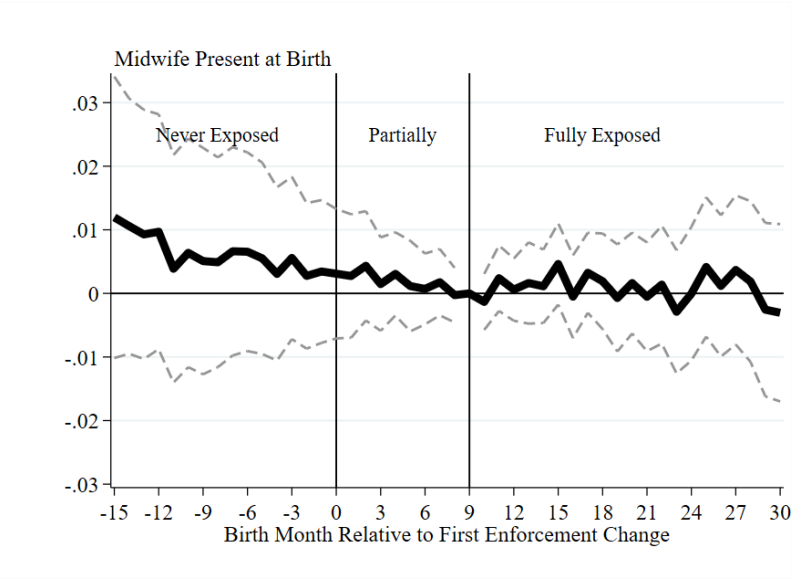
pped. Panel B plots the corresponding distribution of t-statistics.

Figure A1
Immigration Enforcement and Engagement with the Health Care System for College-Educated White Non-Hispanic Natives

Panel A



Panel B



Source: NCHS Vital Statistics Period Linked Birth/Infant Death 2003-2016
Note: The dark solid line denotes the point estimates, while the lighter dashed lines indicate the 95 percent confidence intervals for each coefficient. The dependent variable in Panel A is an indicator for having a physician (MD or DO) present at birth, while the dependent variable in Panel B is an indicator for having a midwife present at birth. The independent variables of interest are variables for being *j* periods away from the first change in interior immigration enforcement. The sample is restricted to first-born births to college educated white non-Hispanic women and non-Hispanic fatehrs and the regressions include the controls from Table 2 column (4). In Panel A we cannot reject the null hypothesis that the pre-period coefficients are jointly equal to zero (p=0.705) or that the post-period coefficients are different from zero (p=0.466). In Panel B we cannot reject the null hypothesis that the pre-period coefficients are jointly equal to zero (p=0.818) or that the post-period coefficients are different from zero (p=0.459). Standard errors are clustered at the county level.

Table A1: Description of Interior Immigration Enforcement

287(g) Agreements (2002-2012) (2017-onwards)
The aim of these policies is to make communities safer by the identification and removal of serious criminals. State and local enforcement entities signed a contract (Memorandum of Agreement -MOA) with the U.S. Immigration and Customs Enforcement (ICE). There are various functions: • **Task Force**: allows local and state officers interrogate and arrest non-citizens during their regular duties on law enforcement operations. • **Jail enforcement** permits local officers to question immigrant who have been arrested on state and local charges about their immigration status. • **Hybrid model:** which allow participate in both types of programs. *Source:* ICEs 287(g) Fact Sheet website, Amuedo-Dorantes and Bansak (2014), and Kostandini *et al*. (2013).
Secure Communities (2009-2014) (2017-onwards)
They are enacted to identify non-citizens who have committed serious crime using biometric information The program allows for the submission of biometric information on detainees that is contrasted against records in FBI and DHS databases. *Source:* ICE's releases on activated jurisdictions: https://www.ice.gov/doclib/secure-communities/pdf/sc-activated.pdf
Omnibus Immigration Laws (2010-onwards)
Comprehensive laws that may include: • A "show me your papers" clause, enabling the police to request proper identification documentation during a lawful stop. • Require that schools report students' legal status. *Source:* http://www.ncsl.org/documents/statefed/omnibus_laws.pdf
E-Verify (2006-onwards)
Electronic program that allows employers to screen newly hired workers for work eligibility. *Source:* National Conference of State Legislatures.

Table A2: Immigration Enforcement the Likelihood of Low Birth Weight (w/Average Enforcement Level during Pregnancy)

	(1)	(2)	(3)	(4)
Average Enforcement	0.00426***	0.00455***	0.00402***	0.00438***
	(0.00062)	(0.00071)	(0.00073)	(0.00079)
	[0.000]	[0.000]	[0.000]	[0.000]
County FE?	N	Y	Y	Y
Birth Month-by-Year FE?	N	Y	Y	Y
Demographic Controls?	N	N	Y	Y
Economic & Policy Controls?	N	N	N	Y
Low Birth Weight Mean	0.07130	0.07130	0.07130	0.07130
Observations	1,201,287	1,201,287	1,201,287	1,201,287

Source: NCHS Vital Statistics Period Linked Birth/Infant Death 2003-2016.
Note: The dependent variable is an indicator for low birth weight (<2500 grams). The independent variable of interest captures the average immigration enforcement intensity experienced by the mother throughout her pregnancy. The changing covariates in each column follows Table 2. Robust standard errors, shown in parentheses, are clustered at the county level. To account for multiple hypothesis testing, statistical significance is obtained using Bonferroni corrected p-values which are reported in brackets.
*** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Table A3: Immigration Enforcement and Other Birth Outcomes

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Mother is Married	**Mother has < 9 Years of Education**	**Mother Age: 20-24**	**Mother Age: 25-34**	**Mother Age: 35+**	**Mother Age: < 20**	**Father is Hispanic**
Enforcement – Conception	-0.00173	0.00560	-0.00089	-0.00600	-0.00067	0.00757	-0.00165
	(0.00474)	(0.00541)	(0.00302)	(0.00384)	(0.00190)	(0.00402)	(0.00342)
	[1.000]	[1.000]	[1.000]	[1.000]	[1.000]	[1.000]	[1.000]
Enforcement – 2nd Trimester	0.00985	-0.00846	0.00516	-0.00492	-0.00103	0.00079	0.00106
	(0.00371)	(0.00480)	(0.00323)	(0.00317)	(0.00147)	(0.00347)	(0.00352)
	[0.823]	[1.000]	[1.000]	[1.000]	[1.000]	[1.000]	[1.000]
Enforcement – 3rd Trimester	-0.00185	-0.00678	-0.00530	0.00809	0.00345	-0.00624	-0.00535
	(0.00355)	(0.00279)	(0.00291)	(0.00336)	(0.00165)	(0.00325)	(0.00325)
	[1.000]	[1.000]	[1.000]	[1.000]	[1.000]	[1.000]	[1.000]
	(8)	**(9)**	**(10)**	**(11)**	**(12)**	**(13)**	**(14)**
	Father Ethnicity Missing	**Father is Non-Hispanic**	**Father Age: 20-24**	**Father Age: 25-34**	**Father Age: 35+**	**Father Age: < 20**	**Father Age: Missing**
Enforcement – Conception	-0.00039	0.00205	-0.00042	-0.00494	-0.00238	0.00345	0.00429
	(0.00345)	(0.00139)	(0.00332)	(0.00323)	(0.00241)	(0.00139)	(0.00312)
	[1.000]	[1.000]	[1.000]	[1.000]	[1.000]	[1.000]	[1.000]
Enforcement – 2nd Trimester	0.00091	-0.00196	0.00308	-0.00549	0.00132	0.00013	0.00096
	(0.00285)	(0.00166)	(0.00280)	(0.00319)	(0.00191)	(0.00142)	(0.00269)
	[1.000]	[1.000]	[1.000]	[1.000]	[1.000]	[1.000]	[1.000]
Enforcement – 3rd Trimester	0.00426	0.00109	-0.00677	0.00612	0.00373	-0.00232	-0.00076
	(0.00313)	(0.00131)	(0.00271)	(0.00206)	(0.00214)	(0.00143)	(0.00231)
	[1.000]	[1.000]	[1.000]	[1.000]	[1.000]	[1.000]	[1.000]

Source: NCHS Vital Statistics Period Linked Birth/Infant Death 2003-2016.
Notes: Robust standard errors, shown in parentheses, are clustered at the county level. To account for multiple hypothesis testing, statistical significance is obtained using Bonferroni corrected p-values which are reported in brackets. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Table A4: Immigration Enforcement and Birth Outcomes for Infants with Native-Born White Non-Hispanic Parents

	(1)	(2)	(3)	(4)	(5)	(6)
	Low Birth Weight (< 2500 Grams)	**Very Low Birth Weight (< 1500 Grams)**	**Preterm (Gestation < 37 Wks)**	**Very Preterm (Gestation < 28 Wks)**	**Low Apgar Score (Apgar < 7)**	**Very Low Apgar Score (Apgar < 4)**
Enforcement – Conception	0.00149	-0.00018	0.00159	0.00023	0.00142	0.00059
	(0.00117)	(0.00058)	(0.00131)	(0.00034)	(0.00083)	(0.00037)
	[1.000]	[1.000]	[1.000]	[1.000]	[1.000]	[1.000]
Enforcement – 2nd Trimester	0.00039	0.00060	0.00389	-0.00005	0.00057	-0.00003
	(0.00133)	(0.00071)	(0.00134)	(0.00044)	(0.00088)	(0.00039)
	[1.000]	[1.000]	[1.000]	[1.000]	[1.000]	[1.000]
Enforcement – 3rd Trimester	0.00168	0.00076	0.00048	0.00035	-0.00090	-0.00021
	(0.00107)	(0.00051)	(0.00106)	(0.00035)	(0.00079)	(0.00038)
	[1.000]	[1.000]	[1.000]	[1.000]	[1.000]	[1.000]
Dependent Variable Mean	0.06840	0.01162	0.09748	0.00472	0.01883	0.00483
Observations	1,976,066	1,976,066	1,976,336	1,976,336	1,383,200	1,383,200

Source: NCHS Vital Statistics Period Linked Birth/Infant Death 2003-2016.
Notes: The dependent variable in column (1) is an indicator for low birth weight (< 2500 grams), while the dependent variable in column (2) is an indicator for very low birth weight (<1500 grams). The dependent variable in columns (3) and (4) relate to gestation time. Column (3)'s dependent variable is an indicator for being a preterm birth (< 37 weeks), while the dependent variable in column (4) is an indicator for being a very preterm birth (< 28 weeks). The dependent variable in column (5) is an indicator for low Apgar score (Apgar < 7) and the dependent variable in column (6) is an indicator for very low Apgar score (Apgar < 4The independent variables of interest capture the immigration policy environment and take on values 0-4 depending on the number of policies implemented in the county at the relevant time. *Enforcement – Conception* measures the policy environment at conception, *Enforcement – 2nd Trimester* measures the policy environment at the start of the second trimester, and *Enforcement – 3rd Trimester* measures the policy environment at the start of the third trimester. Columns (1)-(6) include the full set of controls from Table 2 column (4). The sample is limited to infants with white non-Hispanic college educated mothers married to non-Hispanic men. Robust standard errors, shown in parentheses, are clustered at the county level. To account for multiple hypothesis testing, statistical significance is obtained using Bonferroni corrected p-values which are reported in brackets.
*** p < 0.01, ** p < 0.05, * p < 0.10.