From Access to Wellness: Early Life Exposure to Abortion Legalization and the Next Generation's Health[*]

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Abstract

We examine the multigenerational impacts of legalized abortion in the United States by analyzing how early-life exposure to this policy shift affects birth outcomes in the next generation. Using event study and two-way fixed effects models, we link maternal early-life exposure to legal abortion with improved birth outcomes in the subsequent generation, including higher birth weights and reduced rates of low birth weight. Our analysis of the mechanisms shows that these improvements in birth outcomes are not driven by changes in maternal racial or age composition within the treated generation. Instead, enhanced educational attainment and increased prenatal care utilization among the treated generation appear to play a critical role. Our results highlight the far-reaching implications of reproductive health policies, especially relevant in the post-Dobbs era, where access may once again become constrained for many.

Keywords: Abortion, Roe v. Wade, Infant Health, Intergenerational Effects, Dobbs v. Jackson Women's Health Organization

JEL Codes: H75, I12, I18, J13, J16, J18

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1. Introduction

Legal abortion has gained renewed attention following the Supreme Court's decision in Dobbs v. Jackson Women's Health Organization, which overturned Roe v. Wade. This ruling has profound implications for women's reproductive rights and access to abortion services, with potential long-term effects on maternal and infant health outcomes. Research suggests that access to safe, legal abortion provides women with greater control over their reproductive choices, reducing unwanted or mistimed pregnancies (Levine et al., 1999; Myers, 2017). This, in turn, may lead to better prenatal care and improved birth outcomes for future generations.

In this study, we investigate the multigenerational impacts of one of the most transformative public health interventions of the 20th century: the legalization of abortion in the United States during the early 1970s. By giving women greater autonomy over their reproductive choices, this policy shift had widespread social, economic, and health implications. We build on prior research that demonstrates the short-term benefits of legal abortion for the first generation to explore whether these positive effects carry forward to the next generation.

We use natality data from 1974 to 2017 and implement two-way fixed effects models to study how legal abortion access in early life affects birth outcomes across generations. Specifically, we examine children whose mothers were exposed to legal abortion during childhood, calling them the "second generation." To explore possible mechanisms, we also study these mothers—women born between 1960 and 1980 who directly exposed to abortion legalization in their early years—referring to them as the "first generation." Finally, we consider their mothers, who gave birth between 1960 and 1980, labeling them the "zero generation."

We find that the first generation's exposure to legal abortion leads to a statistically significant increase in the second generation's birth weight and reduces the incidence of very low

birth weight and small-for-gestational-age. These outcomes are of particular interest for second-generation analysis, as birth weight strongly predicts health and economic outcomes later in life (Almond et al., 2018; Almond & Currie, 2011). Event study analyses rule out concerns that these effects reflect pre-existing trends in birth outcomes. Further, we show that the effects are robust to alternative specifications and new methods introduced by Sun & Abraham (2021), which address biases often encountered in traditional two-way fixed effects and event study models.

Our analysis of the mechanisms shows that the improvements in birth outcomes of the second generation are not driven by shifts in racial composition or maternal age in the first generation who were exposed to legal abortion in early life. Instead, enhanced first-generation education and increased prenatal care utilization appear to play a critical role. Exposure is linked to higher high school and college completion rates among the first generation, more frequent prenatal visits, and earlier initiation of care, all of which likely contribute to better outcomes for the second generation. Additionally, exposure to legal abortion is associated with improved birth outcomes among the first generation. Since mothers' low birth weight is linked to their child's low birth weight (Currie & Moretti, 2007), this improvement in first-generation birth outcomes could partly explain the better overall birth outcomes in the second generation.

This paper contributes to two strands of literature. First, it adds to the ongoing literature on the "fetal origins hypothesis." While most causal studies in this area focus exclusively on the treated cohorts (Almond et al., 2018), we extend this research by using a quasi-experimental design to document multigenerational effects that reach beyond the initially treated cohorts.

Second, this paper contributes to the literature on how early-life health experiences affect later offspring. Most studies in this area have focused on exposure to extreme events, such as famines or disease outbreaks, which may not fully capture the effects of more common—and

modifiable—health exposures. Notable exceptions include East et al. (2023), who examined the intergenerational impact of Medicaid expansions, and Colmer & Voorheis (2020), who studied the 1970 Clean Air Act. Our study adds to this literature by documenting the multigenerational effects of one of the most transformative public health interventions of the 20th century. This evidence is particularly relevant in light of the recent Supreme Court decision in Dobbs v. Jackson Women's Health Organization. By demonstrating significant intergenerational effects, our findings suggest that changes in reproductive healthcare access may have lasting impacts, extending beyond those directly affected to future generations.

In addition to the aforementioned studies, our paper closely aligns with recent studies examining the effects of in utero exposure to abortion legalization in the United States during the early 1970s on later-life disability, mortality, and longevity. Farin (2024) reports a positive impact of in utero exposure to legal abortion on midlife survival probability, with an increase of roughly 3%. Noghanibehambari et al. (2024) focus on adult mortality and disability outcomes, finding that in utero exposure to legalized abortion is associated with a 3.8% reduction in adult cumulative mortality rates and an approximate 4.5% reduction in disability. Lutchen (2011) documents a reduction in mortality rates over the age range of 20–30 by approximately 3%. Building on this foundation, our paper provides evidence that the benefits extend beyond longevity: the first generation not only had higher survival rates during the first and fifth decades of life but also has healthier offspring, highlighting intergenerational health gains associated with early-life policy changes.

The remainder of our paper is organized as follows: Section 2 provides background on abortion legislation in the 1960s-1970s and reviews related literature. Section 3 outlines our empirical strategy, and Section 4 describes the data used in our analysis. Section 5 presents the

results, followed by Section 6, which examines the underlying mechanisms. Finally, Section 7 concludes with a summary of findings and implications.

2. Background

2.1. Related literature

Previous research has demonstrated that the legalization of abortion in the late 1960s and early 1970s had far-reaching impacts on a variety of socioeconomic outcomes. These include improvements in educational attainment and female labor force participation, changes in family structure and fertility rates, and according to some studies, a reduction in crime rates (Ananat et al., 2009; Angrist et al., 2012; Donohue & Levitt, 2020, 2001, 2008; Foote & Goetz, 2008; Gruber et al., 1999; Kalist, 2004; Melanie, 2008; Myers, 2017). However, the relationship between abortion legalization to lower crime rates remains contested, with other research finding no clear evidence of a causal effect (Joyce, 2004, 2009). Gruber et al. (1999) sought to explain the observed changes in socioeconomic outcomes following the legalization of abortion through what they called the "marginal child" hypothesis. They argued that the children who were not born because of increased access to legal abortion—referred to as "marginal children"—would have been more likely to experience adverse socioeconomic conditions had they been born.

The literature also underscores that legal abortion access significantly reduced maternal mortality, decreased infant mortality, and improved infant health (Farin et al., 2024; Gruber et al., 1999; Joyce, 1987). Of particular importance to our study, Currie & Moretti (2007) demonstrate that a mother born with low birth weight is significantly more likely to have a child with low birth weight. This raises the natural question of whether the impacts of legal abortion on the first generation persist into the next generation. Our study seeks to examine whether the socioeconomic

and health effects of abortion access for mothers translate into long-term effects on their children's birth outcomes.

Research on the multigenerational impacts of early-life exposures is growing. Almond et al. (2006) examine the significant drop in Black infant mortality following the Civil Rights Act and find that Black women born during this period were less likely to have low birth weight babies. Similarly, Almond et al. (2012) show that higher infant mortality rates, serving as a proxy for disease exposure, are linked to worse long-term health outcomes and a higher likelihood of future offspring being born underweight. Colmer & Voorheis (2020) document improved educational outcomes for the grandchildren of those exposed to pollution reductions following the 1970 Clean Air Act amendments. East et al. (2023) investigate the multigenerational impacts of prenatal Medicaid eligibility expansions, finding that the health benefits of early-life program exposure extend to the next generation.

International studies offer further evidence. Painter et al. (2008) find that the offspring of individuals exposed to the Dutch Hunger Winter of 1944–1945 in utero experienced poorer health in later life. Almond et al. (2010) similarly report increased low birth weight in the next generation following fetal exposure to the 1959–1961 Chinese famine. Richter & Robling (2013) show that in-utero exposure to the 1918–1919 influenza pandemic reduced educational attainment in the children of those affected in Sweden, while Black et al. (2019) link in-utero exposure to radioactive fallout in Norway with lower cognitive ability in their offspring.

We build on this growing body of research by exploiting policy-driven changes in access to legal abortion, a key aspect of reproductive rights in the U.S. In doing so, we shed light on the intergenerational benefits of legal abortion, which have not been examined in previous studies.

2.2. Abortion Legislation in the 1960s and 1970s: The Road to Roe v. Wade

In the 1960s, abortion was illegal in nearly every U.S. state, with only a handful permitting it in cases where the mother's life was at risk (Droegemueller et al., 1969). By the mid-1960s, however, states began to address this stark landscape. The first wave of change came from "reform" states, which modified their criminal abortion laws to allow the procedure in specific cases. In 1967, Colorado became the first state to reform its abortion laws, marking the beginning of a broader movement across the United States (Myers, 2024). Colorado's law allowed abortion in cases of rape, incest, severe birth defects, or when there was a substantial risk to the mother's physical or mental health (Lamm, 1971). Following Colorado, other states began reforming their abortion laws, allowing limited access under specific conditions. By 1972, 13 states had enacted similar reforms (Myers, 2024).[5]

While these states allowed abortion under restricted conditions, they stopped short of full legalization. By the end of the 1960s, however, another group of states—referred to as "repeal" states—went further. Beginning with California in 1969, these states fully repealed their criminal abortion laws, permitting the procedure without the same strict limitations (Myers, 2024). In 1970, Alaska, Hawaii, New York, and Washington joined California in legalizing abortion (Myers, 2024). Washington, D.C., also allowed abortion from 1971 following a court ruling (Myers, 2024).

This gradual shift in state laws set the stage for the landmark 1973 Roe v. Wade decision, which effectively overturned state-level restrictions on abortion. The Supreme Court's ruling in Roe legalized abortion nationwide, establishing the constitutional right to access abortion and marking a significant turning point in reproductive rights across the United States.

[5] The "reform" states that enacted more limited changes to their abortion laws during the late 1960s and early 1970s include California, Colorado, and North Carolina in 1967; Maryland in 1968; Arkansas, Delaware, Georgia, New Mexico, and Oregon in 1969; Kansas, South Carolina, and Virginia in 1970; and Florida in 1972.

2.3. Mechanisms Through Which Legal Abortion Affects Subsequent Generations' Birth Outcomes

A key mechanism through which expanded access to reproductive rights and services, such as the legalization of abortion, can impact the health and well-being of subsequent generations is the *selection effect*. This effect can prevent the birth of "marginal children"—those more likely to be born into adverse circumstances (Gruber et al., 1999).

An emerging body of theoretical and empirical research suggests that expanded access to reproductive rights and services—including the legalization of abortion in the 1970s—could have significant, unintended impacts on the health and well-being of subsequent generations through selection effects. For instance, greater access to reproductive health services can impact the timing of parenthood, potentially reducing teenage pregnancies, which are associated with various short- and long-term health costs for both mothers and infants (Branson & Byker, 2018; Heiland et al., 2019; Hotz et al., 2005; Ribar, 1994, 1996; Schulkind & Sandler, 2019). Such policies may also shift demographic patterns by altering cohort characteristics, particularly through differential rates of teenage pregnancies across various sociodemographic groups (Geronimus, 2003; Kearney & Levine, 2015; Santelli & Melnikas, 2010). This selection mechanism has also been observed in recent policies restricting reproductive healthcare access. For example, Caraher (2024) examines Texas's 2021 six-week abortion ban and finds it reduced abortion rates by 40%, increased fertility by 4%, raised very low birth weight incidence by 7 percentage points, and led to a 6% rise in infant mortality, with the most severe effects on Black non-Hispanic women and those far from less restrictive states.

The legalization of abortion might improve health outcomes for children born to parents who actively choose to become parents (Bozzoli et al., 2009; Nobles & Hamoudi, 2019). Changes

in fertility rates and family size may also play a critical role. Smaller family sizes allow for increased resource allocation per child, including time, nutrition, and investments in human capital (Blake, 1981; Conley & Glauber, 2006; Fletcher & Kim, 2019; Frenette, 2011). Reduced fertility also lowers the cost associated with enhancing child quality, encouraging parental investments (Becker & Lewis, 1973). Delayed or fewer births among teenagers may also increase personal resources and time for human capital development and labor market entry (Angrist et al., 2012; Bailey et al., 2012; Goldin & Katz, 2002; Miller et al., 2023).

In turn, parent's higher educational attainment and work experience can lead to improved labor market outcomes, which in turn benefit children in both the short and long run (Aizer et al., 2016; Almond et al., 2018; Chen & Li, 2009; Lindo, 2011). Reduced teenage childbearing might also delay unplanned marriages and improve partner matching, leading to increased family income and marital stability, which further enhance children's outcomes (Choo & Siow, 2006; Forsstrom, 2021; Frimmel et al., 2024; Goldin & Katz, 2000; Gruber, 2004).

Additionally, legalization of abortion may affect cohort sizes by reducing overall fertility rates, with potential advantages for school resources (via smaller class sizes), educational attainment, and wage outcomes (due to reduced labor supply and competition) (Bound & Turner, 2007; Brunello, 2009; Connelly, 1986; Morin, 2015; Reiling, 2016).

Moreover, abortion legalization, and more generally, improvements in reproductive healthcare access, may also change the composition of the labor market with implications for child outcomes. Herbst & Tekin (2025) examine how the expansion of oral contraceptives and abortion access in the 1960s and 1970s reshaped the child care labor market. They find that these reproductive policies led to a decline in the share of highly educated women in the child care

workforce, increasing the proportion of lower-skilled workers, which in turn reduced average wages and potentially impacted the quality of child care services.

A second potential channel through which abortion access can improve the health of subsequent generations is through *healing effects*. By reducing maternal stress and encouraging the utilization of prenatal care, abortion access may lead to healthier birth outcomes for children who are carried to term.

While theoretical insights suggest that in utero exposure to legalized abortion may yield long-term benefits, empirical evidence is still needed to confirm these effects on maternal and infant health outcomes. This paper aims to address this research gap.

3. Econometric Method

Our empirical strategy compares birth outcomes of mothers who were born in different years relative to the birth-state-specific year of abortion legalization. We operationalize these comparisons using event study specifications of the following forms:

$$y_{cbrstg} = \alpha + \sum_{i=\underline{T}}^{-5} \gamma_i I(c - T_b^* = i) + \sum_{j=0}^{\overline{T}} \lambda_j I(c - T_b^* = j) + \beta Z_{cbr} + \Theta_g + \Gamma_{\text{rc}} + \Lambda_b + \Omega_s + \Psi_t + \varepsilon_{cbrstg} \quad (1)$$

Where y is the average birth outcome of mothers who belong to birth cohort c, born in state b in census region r, currently reside in state s, and are observed in year t, and categorized in a sociodemographic group g. The sociodemographic group is based on race (white, Black, other), maternal education (less than eight years, between 9 – 12 years, more than 12 years), maternal age (12-18, 19-39, 40-54), maternal pregnancy order (first-time mother, second-and-higher birth orders), and child gender (female, male). The function $I(.)$ is an indicator function

that turns on if its inside argument is true. The parameter T_b^* represents the year abortion was legalized in each state. Therefore, the parameters γ and λ measure differences in birth outcomes of the second generation in states with early legalization compared to other states.

The matrix Z includes several maternal birth state-by-birth year covariates, including real per capita income, hospital beds per capita, hospitals per capita, average disease rate, and measures of state–cohort exposure to Aid to Families with Dependent Children (AFDC), Medicaid, and Fair Employment Practices Act (FEPA).[6]

The parameter Θ includes dummies for maternal race, maternal education, maternal age, birth order, and child gender. The parameter Γ represents birth cohort-by-birth region fixed effects, which accounts for the cross-cohort convergence of health outcomes across Census regions (Goodman-Bacon, 2021). Cohort fixed effects also account for the overall evolution of birth outcomes based on maternal cohort and all temporal changes in health technology, and relevant economic and social policies that affect cohorts within a census region. The parameter Λ contains birth state fixed effects to absorb time-invariant unobservable characteristics of states that affect individuals' long-term outcomes, including maternal birth outcomes. The parameters Ω and Ψ represent current state and current year fixed effects to account for time-invariant place-specific unobserved characteristics and place-invariant temporal features that affect birth outcomes. Standard errors are clustered on maternal birth state and birth year to account for both serial and spatial correlations in error terms. The regressions are weighted using the number of births in each collapsed cell.

[6] In Appendix Table B-13, we control for the potential influence of variations in contraception pill access across states and cohorts. Our results remain robust even after incorporating controls for pill policies.

To summarize the event study coefficients, we also estimate the effects on a dummy variable indicating maternal birth year being after the birth-state-specific year of abortion legalization (Exp), using the following formula:

$$y_{cbrstg} = \alpha + \eta Exp_{cbr} + \beta Z_{cbr} + \Theta_g + \Gamma_{\mathrm{rc}} + \Lambda_b + \Omega_s + \Psi_t + \varepsilon_{cbrstg} \quad (2)$$

All parameters and covariates are similar to those of equation (1). All regressions are implemented using the difference-in-differences method developed by Sun & Abraham (2021).

4. Data

The primary source of data comes from natality detailed files of the National Center for Health Statistics (NCHS, 2020). The restricted-access version of the NCHS data provides mothers' state of birth, an important identifier in our setting. The data includes limited maternal sociodemographic information, including age, race, education, and marital status. It also reports several crucial infants' characteristics, including gender and birth order, as well as information on their health at birth, including birth weight and gestational age.

We remove observations with missing values for the primary variables in our empirical method (dropping <1% of total observations). We further remove mothers who were born outside of the US (eliminating 10.8% of observations). In addition, we restrict the sample to birth cohorts of 1960 – 1980 to have several cohorts born before and after abortion legalization. These restrictions leave us with a sample of roughly 68 million births. We collapse the sample at the following levels: mother's birth state, mother's birth year, current state, current year, maternal race (white, Black, other), maternal education (less than eight years, between 9 – 12 years, more than 12 years), maternal age (12-18, 19-39, 40-54), maternal pregnancy order (first-time mother, second-and-higher birth orders), and child gender (female, male).

We use data from several sources to construct state by year panel of covariates covering the years 1960 – 1980. First, we construct total reported disease per capita using the state-level disease inventory collected by the Tycho project (Tycho, 2021). Second, we extract the information on state-level Aid to Families with Dependent Children (AFDC) as well as measures of income per capita and hospital per capita from (Goodman-Bacon, 2018). We obtain state-level information on the Fair Employment Practices Act from (Farin et al., 2024).

Outcome Variables. We use birth weight and gestational age as the primary outcomes of interest, while constructing several derivative outcomes as follows. As an adverse outcome related to birth weight, we generate a dummy variable for low birth weight, indicating birth weight less than 2,500 g. This is a conventional threshold in the literature, and several studies document associations between low birth weight and adverse developmental outcomes throughout the life course (Bharadwaj et al., 2018; Currie & Moretti, 2007; Fletcher, 2011). As another standard adverse outcome related to gestational age, we define preterm birth as indicating gestational age under 37 weeks. Since birth weight and gestational age are mechanically linked, it is useful to disentangle the influences of birth weight from those of gestational age. To do so, we focus on fetal growth, which measures the intrauterine weekly weight gain of infants, i.e., birth weight divided by gestational age. In addition, we define a dummy variable to measure the birth weight rank of an infant within their gestational week of birth. The small-for-gestational-age (SGA) variable is defined as a dummy indicating that the infant's birth weight falls in the bottom decile of the birth weight distribution for their gestational week.

Census-ACS Data. To explore children's longer-term outcomes, we use census 2000 and the American Community Survey 2001 – 2022 (hereafter Census – ACS data), extracted from the IPUMS project (Ruggles et al., 2024). We focus on several measures of disability. Since these

measures are reported for post-childhood years, we restrict the sample to individuals at least 18 years old. Additionally, since we need to observe mothers in the household to extract birth state and birth year information, we further restrict the sample to individuals aged 26 or younger. Besides, we implement criteria consistent with the NCHS data, focusing on mothers born between 1960 and 1980.

Summary Statistics. Figure 1 shows the geographic distribution of abortion legalization across states. Figure 2 illustrates the time series evolution of preterm birth (top panel) and low birth weight (bottom panel) among mothers from the 1960–1980 birth cohorts who gave birth between 1980 and 2017. Visually, we observe a shift in these trends starting with the maternal cohorts of 1973. Additionally, early-adopting states show a sharper decline in these outcomes. While the data are aggregated, they suggest potential intergenerational effects of abortion legalization.

Table 1 reports summary statistics of the final sample for mothers born before and after abortion legalization in their state of birth, in the left and right panels, respectively. There is a slightly higher share of white mothers in the pre-legalization subsample versus the post-legalization subsample, 72.8% versus 68.5%. Both subsamples reveal quite comparable maternal education levels. The average birth weight is higher in the pre-legalization versus post-legalization subsample, 3306.8 g versus 3275.8 g. The Shares of low birth weight and preterm birth are also lower in the pre-legalization subsample compared to the post-legalization subsample, 8.2% (11.9%) versus 8.5% (12.3%). Both subsamples reveal quite similar prenatal healthcare utilization measures, including the total number of prenatal visits, whether any prenatal visits occurred, and the month prenatal care began.

The bottom panel of Table 1 reports summary statistics of the Census – ACS sample. Similar to the NCHS sample, we observe a higher share of whites in the pre-legalization subsample. We observe slightly higher incidences of cognitive disability and ambulatory disability in the post-legalization subsample versus the pre-legalization subsample. However, self-care disability is quite similar across both subsamples, at 1.2%. Vision–hearing disability is more prevalent in the post-legalization subsample than in the pre-legalization subsample, 2.2% versus 1.7%.

5. Results

5.1. Second Generation Infant Health

Figure 3, Figure 4, and Figure 5 display the event study estimates outlined in Equation (2). These figures illustrate the impact of mother's in utero exposure to legal abortion on their children's infant health, compared to children of mothers who were not exposed, across the five years preceding legalization and six years following the event. The year before the event ($t = -1$) corresponds to an omitted category and is thus normalized to zero by construction.

Figure 3 and Figure 4 demonstrate that in the five years before legalization, there is no significant difference in birth outcomes—such as birth weight, likelihood of low birth weight, gestational age, and likelihood of preterm birth—between the treatment and control groups. However, these outcomes begin to diverge a few years after legalization: infants of mothers exposed to abortion legalization exhibit improved birth outcomes compared to those of non-exposed mothers. By five years post-legalization, legal abortion is associated with an increase in birth weight of 7–8 grams, a gestational age increase of 0.07 weeks, and reductions in low birth weight by 0.4 percentage points and preterm birth by 0.6 percentage points. Although the impacts

on fetal growth and small-for-gestational-age outcomes in Figure 5 are less precisely estimated, they indicate similarly positive effects.

Table 2 presents the overall difference-in-differences estimates based on Equation (1). Consistent with the event study results, we find that legal abortion led to statistically significant improvements in birth outcomes, including increases in average birth weight and fetal growth, as well as reductions in the likelihood of low birth weight and small-for-gestational-age births. The coefficient estimates indicate that legal abortion increases next generation's birth weight by 3.3 grams, or 0.1% relative to the mean (column 1), and decreases the likelihood of low birth weight by 1.6% (column 2). Additionally, exposure to legal abortion is associated with a 0.07-gram per week reduction in fetal growth, relative to a mean of 85 grams per week, corresponding to a 0.08% decrease. It is also linked to a 0.1 percentage point reduction in the likelihood of small-for-gestational-age births, or a 1.2% decrease relative to the mean.

To better understand the magnitude of these effects, we can compare them to the documented intergenerational impacts of other early-life maternal exposures on second-generation birth outcomes. For instance, East et al. (2023) employed a difference-in-difference and event study approach to explore how mothers' in-utero access to Medicaid affected second-generation birth outcomes. Their findings revealed that the 1980s Medicaid expansions resulted in a 4.7-gram increase in birth weight for the next generation. Thus, the effect of legal abortion exposure on birth weight is approximately 70% of the impact associated with Medicaid access.

Similarly, Almond et al. (2012) found that higher exposure to disease increases the likelihood that future offspring are born below the low birth weight threshold. Specifically, an additional post-neonatal death in the year following birth is estimated to raise the probability of

low birth weight by 0.6%. Therefore, the effect of in-utero exposure to legal abortion is comparable to an exposure reduction of approximately 2.7 fewer post-neonatal deaths.[7]

5.2. Heterogeneity Analysis

Previous research suggests that early-life exposure to legal abortion could impact maternal mortality differently by race (Farin et al., 2024). Further, male fetuses are more sensitive to negative health environments than female fetuses (Trivers and Willard, 1973). Therefore, one would expect that improvements in maternal health might disproportionately affect male fetuses. Based on this line of evidence, we examine heterogeneity in the effects of legal abortion and next-generation birth outcomes by maternal race and child gender. These results are reported in Table 3 and Table 4.

Comparing panels A and B of Table 3, we observe significant differences in the effects of early-life exposure to legal abortion based on maternal race. For white mothers (Panel A), exposure leads to a small but statistically significant increase in the second generation's birth weight (1.88 grams) and fetal growth (0.04 grams per gestational week). However, the effects on other outcomes, such as low birth weight, gestational age, preterm birth, and small-for-gestational-age (SGA), are not statistically significant.

In contrast, the impact on Black mothers (Panel B) is much more substantial and covers a broader range of outcomes. Exposure to legal abortion results in a 13.29-gram increase in birth weight and a 0.31-gram per week increase in fetal growth. Additionally, it significantly reduces

[7] It is worth noting that the magnitude of the health improvements documented in our study also complements and extends the findings of Farin (2024), Lutchen (2011), and Noghanibehambari et al. (2024). While these studies identify significant health gains in terms of mortality (2.9–3.2% reduction in adulthood cumulative mortality) and disability (4.5% reduction in adulthood disability), our study focuses on the intergenerational effects of legal abortion, demonstrating health benefits for the offspring of those exposed to legal abortion in utero. Specifically, we find that legal abortion policies are associated with modest but meaningful improvements in birth outcomes for the next generation, including a 3.3-gram increase in birth weight (0.1% of the mean), a 1.6% reduction in the likelihood of low birth weight, and a 1.2% decline in small-for-gestational-age births.

the likelihood of low birth weight by 0.54 percentage points, preterm birth by 0.30 percentage points, and SGA by 0.30 percentage points. These results indicate that Black mothers experience stronger and more comprehensive benefits from early-life exposure to legal abortion compared to white mothers. This is consistent with the findings of Farin et al. (2024), who reported that legal abortion led to a greater reduction in maternal deaths among non-white mothers compared to white mothers.

In Table 4, we examine heterogeneity across subsamples based on child gender. The results show differences between male and female offspring. For female children (Panel A), maternal exposure to legal abortion is associated with a statistically significant increase in birth weight by 3.44 grams and an improvement in fetal growth by 0.08 grams per week. Additionally, the probability of low birth weight decreases by 0.12 percentage points, and the likelihood of being SGA decreases by 0.13 percentage points. No significant effects are found on gestational age or preterm birth.

For male children (Panel B), the effects are also positive but slightly smaller in magnitude. Maternal exposure to legal abortion leads to a 3.14-gram increase in birth weight and a 0.06-gram per week improvement in fetal growth. The likelihood of low birth weight decreases by 0.12 percentage points, and the probability of being SGA is reduced by 0.10 percentage points. Additionally, there is a marginally significant reduction in preterm births by 0.13 percentage points, though no significant effects are observed for gestational age. Overall, the findings suggest that maternal exposure to legal abortion positively impacts the birth outcomes of both male and

female offspring, with slightly stronger effects observed for female children, particularly in terms of fetal growth and the reduction of SGA births.[8]

5.3. Correlates of Early Adoption

One interesting question is what factors affected early adopters to legalize abortion. Although this is an empirical question that deserves a deeper investigation beyond the scope of the current study, we can examine descriptive correlations between state characteristics and early adoption status. Specifically, we focus on the year 1968 and construct state-level data that includes several state characteristics such as income, hospital beds per capita, hospitals per capita, disease rates, an indicator of early Medicaid adoption, an indicator of early contraceptive pill legalization, and measures of the gender wage gap. To calculate the gender wage gap, we employ data from the Annual Social and Economic Supplements of the Current Population Survey (ASEC-CPS) extracted from (Flood et al., 2018). We use raw wages reported by individuals for the years 1962 – 1968 to calculate the state-level gender wage gap. Additionally, we partial out the effects of age, education, race, occupation type (272 codes), and industry (836 codes) to construct a residual gender wage gap measure.

Appendix Table A-1 shows the correlations between these characteristics and an indicator of early abortion legalization. Focusing on regressions that include region fixed effects (columns 2 and 4), we observe that income and gender wage gap are the primary factors associated with early abortion legalization. For instance, a $1,000 increase in the gender wage gap (in 2020 dollars) is correlated with a 9.6 percentage point higher probability of early adoption, based on a mean of 0.12. We should note that all regressions include these additional state covariates. In the main

[8] In Appendix Figure C-1 through Appendix Figure C-6, we show the event studies for the heterogeneity analyses discussed in this section.

results of the paper, we do not include measures of the gender wage gap as the state-year panel extracted from the ASEC-CPS eliminates a significant portion of states. However, as reported in Appendix Table B-16, the results become even larger when we include this measure into our regressions.

5.4. Robustness Checks

In Appendix B, we show the robustness of the results across alternative specifications and sample selections. We document that the results are robust to the inclusion of second-generations' birth region-by-birth year fixed effects (Appendix Table B-1). The results are robust if we drop early reform states (Appendix Table B-2) and states with historically lower access to reproductive health services and more restrictive abortion culture (Appendix Table B-3).[9] Since early repeal states could serve as hubs for abortion services for neighboring states, spillovers could bias the estimates (Farin et al., 2024). In Appendix Table B-4, we find comparable and, in some cases, larger coefficients when we exclude states adjacent to early repeal states.

The results become smaller in size but remain comparable and significant for several outcomes when we include a state specific trend (Appendix Table B-5). The results are also quite comparable to the main estimates when we exclude all covariates and include only birth state and region – cohort fixed effects (Appendix Table B-6). The results are even slightly larger when we include additional maternal birth state covariates, including infant mortality rate, life expectancy, and measures of measles and polio rates interacted with birth year fixed effects (Appendix Table

[9] This sample list of states was frequently referenced in several studies (Freilich & Pridemore, 2007; Hoffmann & Johnson, 2005; Jones et al., 2008; Mouw & Sobel, 2001).

B-7).[10] Although standard errors are slightly inflated when we cluster them at the birth state level only, the primary coefficients remain statistically significant (Appendix Table B-8).

We observe larger effects when we weigh the regressions using a combination of birth counts and the proportion of women in the maternal birth state, as well as by interacting birth count with maternal birth state infant mortality rate (Appendix Table B-9 and Appendix Table B-10)

In Appendix Table B-11, we allow for fixed effects of states to flexibly vary across race groups and find comparable point estimates. As early-life shocks might change the propensity of individuals to migrate, we include interactions of birth state fixed effects with current state fixed effects. The results reported in Appendix Table B-12, are quite comparable to the main results. In Appendix Table B-13, we control for the potential influence of changes in contraception pill access across states and cohorts and observe comparable point estimates.

Further, the coefficient magnitudes are comparable to the main results when we utilize OLS, suggesting minimal influence of negative weighting of OLS (Appendix Table B-14). Finally, we show that the estimated effects are quite robust and even larger when we add a battery of additional maternal and paternal controls to our regressions (Appendix Table B-15).[11] Moreover, there is evidence that a large portion of the observed effects of abortion on marriage, divorce, and fertility was driven by California (Hoehn-Velasco et al., 2024). In Appendix Table B-17, we show that our results remain significant when we remove California-born mothers to mitigate the so-called *California Effect*.

[10] Several studies point to the relevance of early life disease on long-term outcomes, including multigenerational effects on birth outcomes (Almond et al., 2012; Case et al., 2005; Case & Paxson, 2009; Noghanibehambari, 2023). Specifically, this is specification accounts for the influence of the polio vaccination campaign of 1955 and the measles vaccination campaign of 1963 (Atwood, 2022).

[11] In Appendix Figure B-1 through Appendix Figure B-6, we show the event studies for the robustness analyses discussed in this section.

Additionally, we conduct two balancing tests. First, we artificially shift the abortion years ten years earlier. The fact that the resulting point estimates become small and statistically insignificant lends credibility to the argument that our results capture the true effects of abortion (Appendix Table B-18). Second, since the effects are specific to the in utero period, we should not observe similar changes among foreign-born mothers. To test this, we assign a placebo abortion legalization exposure based on their current state of residence and replicate the analysis using these mothers. As expected, the estimated coefficients become small and statistically insignificant (Appendix Table B-19).

Both low birth weight and SGA are defined based on conventional but arbitrary threshold definitions. To examine the robustness of the results across alternative definitions of these variables, we generate additional dummy variables capturing alternative thresholds. For low birth weight, for example, we create dummy variables indicating whether birth weight is below values ranging from 2,000 to 3,000 grams. For SGA, we create dummy variables that capture whether a baby's birth weight falls below specific cutoffs based on deciles for each gestational week. These cutoffs range from the 1^{st} to the 10^{th} decile. We report these results in Figure 6. The top panels show the estimated coefficients across different thresholds and the bottom panels show the percentage change with respect to the mean of the outcomes. For low birth weight, we observe a relatively robust and constant effect across different thresholds. For birth weight rank, we observe reductions at the lower tail up to the third decile and increases in the top two deciles.

5.5. Second-Generation Disability Outcomes

Low birth weight has been linked to a higher risk of physical disabilities, vision disability, hearing disability, and learning disorders later in life (Chaikind & Corman, 1991; Fletcher, 2011; Mccormick et al., 1992; Spracklen et al., 2017). Given this well-documented association, it is

crucial to investigate whether improvements in birth conditions following maternal exposure to legalized abortion translate into better long-term health outcomes for children. To reassess this relationship in our context, we analyze U.S. Census data from 2000-2022,[12] with the results presented in Table 5, which explores the impact of maternal exposure to legalized abortion on children's later-life disability outcomes.

The findings reveal a meaningful reduction in several disability outcomes among children whose mothers were exposed to legalized abortion. Specifically, this exposure is associated with a 0.24 percentage point decrease in self-care disability (column 3) and a 0.30 percentage point decrease in vision-hearing disabilities (column 4). These results suggest that maternal in-utero exposure to legalized abortion is linked to improved health outcomes in the next generation, particularly in reducing self-care and sensory disabilities. This supports broader evidence that access to legal abortion may help avoid high-risk pregnancies and improve birth outcomes, ultimately leading to better long-term health outcomes for children.

6. Mechanisms

Improvements in birth outcomes for the second generation can occur through two potential channels. The first is the *selection effect*, which may prevent the birth of "marginal children"—those more likely to grow up in adverse circumstances (Gruber et al., 1999). This occurs due to compositional changes among those born in the first or second generation. The second channel involves *healing effects*, where legal abortion improves the overall health distribution of infants affected in utero. This shift could result from reduced maternal stress or positive behavioral changes, such as increased utilization of prenatal care, among those who proceed with childbirth.

[12] Extending the analysis to earlier years is not feasible, as this period is the earliest in which second-generation individuals reach 18 years of age.

To shed light on these pathways, we begin by examining changes in the composition of first-generation mothers and their patterns of prenatal care utilization.

We should note that improvements in health outcomes among first generations could reflect both selection and healing effects. For instance, abortion legalization could impose a compositional change by selecting healthier mothers into pregnancy and birth. On the other hand, reductions in fertility and family size could increase per child resources and parental investment with long-term implications for children's health outcomes intergenerational spillovers (Bailey, 2013; Bailey et al., 2012). Within the framework of the current study we cannot disentangle these two effects.

6.1. Composition of Women Giving Birth

We begin by examining how exposure to legal abortion impacts the sociodemographic characteristics of the first generation. Columns 1 and 2 of Table 6 present the effects of exposure on the racial composition of the first generation. The results show no significant changes in the likelihood of a mother being white or Black, with coefficients close to zero and statistically insignificant. This suggests that the observed improvements in birth outcomes are unlikely to be driven by changes in the racial composition of mothers. Additionally, we perform a robustness check that excludes controls for the mother's education and race. The results, presented in Appendix Table B-6, closely align with our main model estimates. This suggests that the observed health improvements in the second generation are not driven by changes in the racial composition of mothers giving birth.

Next, we explore the effect of exposure on maternal age at the time of childbirth. Columns 7–9 of Table 6 show that legal abortion has no significant effect on the likelihood of a mother being a teenager (12–18 years old) or over 40 years old at the time of birth, with small and

insignificant coefficients in columns 7 and 9. The coefficient for mothers aged 19–39 (column 8) is also not statistically significant. Thus, the improvements in birth outcomes do not appear to be driven by shifts in the age at which women give birth.

In terms of education, the results are more pronounced. Exposure to legal abortion is associated with a 4.1 percentage point increase in the likelihood of a mother having completed high school (column 5) and a 1.3 percentage point increase in the likelihood of completing college or more (column 6). Since higher maternal education is strongly linked to better child birth outcomes (Currie & Moretti, 2003), this educational improvement could partly explain the better overall birth outcomes in the next generation.

6.2. First-Generation Prenatal Healthcare Utilization

Second, we investigate prenatal healthcare utilization as a potential mechanism behind improved birth outcomes. The estimate in column 10 of Table 6 suggests that exposure to legal abortion is linked to a 0.28 increase in the number of prenatal visits. Furthermore, the likelihood of receiving no prenatal care (column 11) decreases by 0.15 percentage points, and the initiation of prenatal care is accelerated by 0.25 months (column 12). The event study results in Figure 7 reinforce these findings. This implies that the improvements in mothers' prenatal care utilization likely contribute to the enhanced birth outcomes observed in the second generation.

6.3. First-Generation Infant Health

Third, we consider the immediate impact of legal abortion on births in 1960-1980. The findings are reported in Table 7 and Figure 8. The results suggest that legal abortion is associated with several positive birth outcomes for the first generations. In particular, legal abortion is associated with a significant reduction in low birth weight rates, very low birth weight rates, and infant mortality rates. The effects on low birth weight and infant mortality rates are primarily

concentrated among whites while the effects on very low birth weight remains significant for both whites and Blacks. The coefficient in column 3 of Table 7 suggests a reduction of roughly 3.2% with respect to the mean among first generations. The coefficient of column 2 of Table 2 suggests a reduction of approximately 1.6% among second generations. Using these two numbers, we estimate the cross-generation elasticity and low birth weight of roughly 50%. Currie & Moretti (2007) employ grandmother fixed effects to estimate mother – child correlations in birth outcomes. They estimate a correlation coefficient of 0.029, of a mean of 0.06, a change of roughly 48%. This number is quite similar to what we observe in our comparisons of first and second generations' changes in low birth weight.

6.4. Effects on Zero-Generation Outcomes

Finally, we examine the impact of legal abortion on fertility rates, the share of teenage mothers, and the proportion of married mothers among the zero generation—defined as cohorts directly exposed to legal abortion who had children between 1960 and 1980. The findings in columns 1 and 2 of Table 8 (and top two panels of Figure 9) indicate that exposure to legal abortion does not significantly alter fertility patterns among white mothers of the zero generation. In contrast, Black mothers show a significant reduction in fertility rates by 0.067 percentage points (1.4 percent relative to the mean). Given that white infants generally exhibit better health outcomes than Black infants and that maternal birth outcomes are linked to children's birth outcomes (Currie & Moretti, 2007), the selection effect—reflected in the reduction of Black births in the first generation—could contribute to the positive impact of legalization on the second generation's health.

The results of columns 3 and 4 (and bottom two panels of Figure 9) indicate that exposure to legal abortion is linked to a decrease in teenage motherhood and an increase in the share of

married mothers. These selection effects in the zero generation—fewer teenage mothers and more married mothers—may help explain the observed results. These patterns suggest that access to legal abortion not only empowers women to make better reproductive choices but also positively influences their family dynamics and social outcomes. In this regard, legal abortion provides women with the means to prevent the birth of "marginal children"—those who might grow up in adverse circumstances (Gruber et al., 1999).

7. Conclusion

Our research provides evidence that access to legal abortion has far-reaching, intergenerational consequences for maternal and child health. We find that early-life exposure to legal abortion is associated with improved birth outcomes in the subsequent generation, including higher birth weight and reduced rates of low birth weight. These findings suggest that the positive impacts of abortion access extend beyond the immediate health benefits for women to their children.

We perform a back-of-the-envelope calculation to estimate the average social benefit of these positive effects. In 2000, approximately 307,000 births were classified as low birth weight. Based on the estimated impact in Table 2, this represents a reduction of 1.15% relative to the mean, or about 1,774 fewer cases of low birth weight in that year. Each instance of low birth weight incurs $82,106 (2000 USD) in health care costs (Beam et al., 2020).[13] Using this estimated cost, first-generation exposure to legal abortion eligibility results in about $146 million in medical cost savings related to low birth weight in the second generation. Importantly, this estimate accounts only for benefits to the second generation, excluding potential improvements in the first generation's health, educational attainment, and labor market outcomes. Additionally, this

[13] We adjust Beam et al. (2020) estimated healthcare spending of $114,437 (in 2016 USD) to $82,106 (in 2000 USD).

calculation does not include potential medical cost savings from improved long-term health outcomes in the second generation linked to healthier birth weights.

Our findings underscore the importance of reproductive health policies in shaping the health and well-being of future generations. The recent Supreme Court decision in Dobbs v. Jackson Women's Health Organization has raised concerns about the potential erosion of abortion access in the United States. As policymakers and healthcare providers navigate this new landscape, it is crucial to consider the long-term implications of such changes for maternal and child health. Our research provides valuable insights into the potential costs of restricting access to abortion, highlighting the need for policies that support reproductive health and well-being.

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Tables

Table 1 - Summary Statistics

	Born Post-Legalization		Born Pre-Legalization	
	Mean	**SD**	**Mean**	**SD**
NCHS Sample:				
Birth Year of Child	2003.895	6.835	1994.396	8.027
Birth Year of Mother	1976.635	2.326	1966.331	3.962
White	.685	.464	.728	.445
Black	.216	.412	.212	.409
Mother's Education: 0-8 Years	.057	.231	.056	.229
Mother's Education: High School	.387	.487	.407	.491
Mother's Education: College-More	.478	.5	.466	.499
Mother's Age 12-18	.094	.292	.078	.269
Mother's Age 19-39	.881	.324	.857	.35
Mother's Age: 40-54	.025	.156	.065	.246
Firstborn Child	.397	.489	.387	.487
Birth Count	10.081	60.904	9.913	59.745
Child Female	.494	.5	.495	.5
Birth Weight	3275.789	494.674	3306.795	500.875
Low Birth Weight	.085	.223	.082	.221
Gestational Age	38.698	2.154	38.926	2.278
Preterm Birth	.123	.263	.119	.26
Fetal Growth	84.341	11.56	84.698	11.751
Small for Gestational Age	.106	.247	.103	.244
Total Prenatal Visits	11.382	3.446	11.287	3.513
No Prenatal Visits	.013	.092	.013	.094
Month Prenatal Care Began	2.765	1.253	2.521	1.325
Exposure to Abortion Legalization	1	0	0	0
Per-Capita Income (1967 1,000 Dollars)	7.328	1.816	3.163	.996
Hospital Beds Per Capita (Per 1,000)	5.202	.99	4.983	.842
Hospitals Per Capita (1,000)	.034	.015	.037	.017
Reported Disease Rate (Per 1,000)	212.953	230.884	273.86	293.095
Share of Black Women (20-64) on AFDC	20.138	7.222	12.799	6.996
Share of White Women (20-64) on AFDC	3.21	1.55	1.512	.994
Exposure to Medicaid	9.215	3.39	-1.154	4.673
Exposure to FEPA	4.817	6.369	.372	3.721
Observations	2,342,310		4,478,323	
Census-ACS sample:				
White	.648	.478	.772	.42
Female	.462	.499	.457	.498
Birth Year of Child	1997.674	3.766	1991.475	5.982
Birth Year of Mother	1975.588	2.546	1965.149	3.76
Exposure to Abortion Legalization	1	0	.055	.229
Cognitive Disability	.064	.245	.039	.194
Ambulatory Disability	.043	.204	.012	.11
Self-Care Disability	.012	.11	.017	.131
Vision Hearing Disability	.022	.148	.022	.148
Observations	244,287		1,248,685	

Notes. The NCHS sample is collapsed at the state, year, birth state, birth year, maternal race, child gender, birth order (first time/higher-order), maternal age (teenage, middle-age, old), and maternal education (less than high school, preschool, college). Number of pre-collapse observations is 68,006,570. The sample covers years 1973-2017 for cohorts born between 1960 – 1980. FEPA stands for Fair Employment Practices Act.

Table 2 – Effects on Second Generations' Birth Outcomes

	Outcomes:					
	Birth Weight	Low Birth Weight	Gestational Age	Preterm Birth	Fetal Growth	Small For Gestational Age
	(1)	(2)	(3)	(4)	(5)	(6)
Exposure	3.28449***	-.0012***	.0069	-.00095*	.06948***	-.00113***
	(.958)	(.00037)	(.00464)	(.00055)	(.01925)	(.00036)
Observations	6820633	6820633	6820633	6820633	6820633	6820633
R-squared	.3195	.10401	.2275	.11669	.31611	.14793
Mean DV	3317.625	0.077	38.902	0.116	85.047	0.098

Notes. Standard errors, clustered on maternal birth state and birth year, are in parentheses. Regressions are weighted using birth counts in each cell. All regressions include maternal birth state fixed effects, maternal birth year by birth region fixed effects, child birth state fixed effects, child birth year fixed effects, maternal race, maternal education, maternal age, birth order, and child gender. Regressions also contain maternal birth state controls, including per capita income, per capita hospitals, per capita hospital beds, reported disease rates, share of women receiving AFDC, and dummies for exposure to Medicaid and FEPA. The data covers the years 1973-2017 for maternal cohorts of 1960 – 1980.
Second generation: Children whose mothers, born between 1960 and 1980, were exposed to legal abortion in early life.
*** p<0.01, ** p<0.05, * p<0.1

Table 3 - Heterogeneity in the Effects on Birth Outcomes of Second Generation by Maternal Race

	Outcomes:					
	Birth Weight	Low Birth Weight	Gestational Age	Preterm Birth	Fetal Growth	Small For Gestational Age
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A. White						
Exposure	1.88169**	-.00052	.00292	-.00062	.03999**	-.00051
	(.85473)	(.00032)	(.00378)	(.00049)	(.01885)	(.00036)
Observations	4865822	4865822	4865822	4865822	4865822	4865822
R-squared	.20372	.03568	.22402	.04721	.25114	.10464
Mean DV	3365.611	0.065	39.034	0.101	86.034	0.085
Panel B. Black						
Exposure	13.28736***	-.0054***	.02538	-.00297*	.31378***	-.00304**
	(3.03599)	(.00148)	(.01558)	(.00172)	(.06774)	(.00129)
Observations	1455694	1455694	1455694	1455694	1455694	1455694
R-squared	.09406	.03795	.06385	.04561	.10022	.07401
Mean DV	3087.881	0.135	38.280	0.187	80.294	0.158

Notes. Standard errors, clustered on maternal birth state and birth year, are in parentheses. Regressions are weighted using birth counts in each cell. All regressions include maternal birth state fixed effects, maternal birth year by birth region fixed effects, child birth state fixed effects, child birth year fixed effects, maternal race, maternal education, maternal age, birth order, and child gender. Regressions also contain maternal birth state controls, including per capita income, per capita hospitals, per capita hospital beds, reported disease rates, share of women receiving AFDC, and dummies for exposure to Medicaid and FEPA. The data covers the years 1973-2017 for maternal cohorts of 1960 – 1980.
Second generation: Children whose mothers, born between 1960 and 1980, were exposed to legal abortion in early life.
*** p<0.01, ** p<0.05, * p<0.1

Table 4 - Heterogeneity in the Effects on Birth Outcomes of Second Generation by Sex

	Outcomes:					
	Birth Weight	Low Birth Weight	Gestational Age	Preterm Birth	Fetal Growth	Small For Gestational Age
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A. Female						
Exposure	3.43895***	-.00118***	.00586	-.00064	.0766***	-.00128***
	(1.0043)	(.00044)	(.00508)	(.00055)	(.02216)	(.00043)
Observations	3372867	3372867	3372867	3372867	3372867	3372867
R-squared	.27322	.11132	.23584	.12206	.24558	.125
Mean DV	3256.376	0.083	38.962	0.111	83.361	0.119
Panel B. Male						
Exposure	3.14079**	-.00121**	.00785	-.00125*	.06278**	-.00098*
	(1.27414)	(.00048)	(.00558)	(.00074)	(.02678)	(.00053)
Observations	3447766	3447766	3447766	3447766	3447766	3447766
R-squared	.27665	.09011	.21494	.10912	.25792	.10458
Mean DV	3376.050	0.071	38.845	0.121	86.655	0.078

Notes. Standard errors, clustered on maternal birth state and birth year, are in parentheses. Regressions are weighted using birth counts in each cell. All regressions include maternal birth state fixed effects, maternal birth year by birth region fixed effects, child birth state fixed effects, child birth year fixed effects, maternal race, maternal education, maternal age, birth order, and child gender. Regressions also contain maternal birth state controls, including per capita income, per capita hospitals, per capita hospital beds, reported disease rates, share of women receiving AFDC, and dummies for exposure to Medicaid and FEPA. The data covers the years 1973-2017 for maternal cohorts of 1960 – 1980.
Second generation: Children whose mothers, born between 1960 and 1980, were exposed to legal abortion in early life.
*** p<0.01, ** p<0.05, * p<0.1

Table 5 – Effects on Second-Generation Disability Outcomes

	Outcomes:			
	Cognitive disability	Ambulatory disability	Self-care disability	Vision-hearing disability
	(1)	(2)	(3)	(4)
Exposure	-.00484*	-.00221	-.00239**	-.00299**
	(.00275)	(.00189)	(.00113)	(.00146)
Observations	1492972	1492972	1492972	1492972
R-squared	.00423	.00313	.00145	.0017
Mean DV	0.057	0.037	0.012	0.019

Notes. Standard errors, clustered on mother birth state, are in parentheses. Regressions are weighted using IPUMS person weights. All regressions include maternal birth state fixed effects, maternal birth year by birth region fixed effects, child birth state fixed effects, and child birth year fixed effects, and child gender. Regressions also contain maternal birth state controls, including per capita income, per capita hospitals, per capita hospital beds, reported disease rates, share of women receiving AFDC, and dummies for exposure to Medicaid and FEPA. The data covers the years 2000-2022. The sample is restricted to individuals aged 18-25.
Second generation: Children whose mothers, born between 1960 and 1980, were exposed to legal abortion in early life.
*** p<0.01, ** p<0.05, * p<0.1

Table 6 - Exploring Mechanism Channels: Effects on First-Generation Sociodemographic Characteristics and Prenatal Care Utilization

	Outcomes:					
	Mother White	Mother Black	Child Gender	Mother Education 0-8 Years	Mother Education High School	Mother Education College – More
	(1)	(2)	(3)	(4)	(5)	(6)
Exposure	.0017	-.00136	-.00014	-.00029	.04068***	.01253***
	(.00192)	(.00182)	(.00058)	(.00046)	(.00754)	(.00318)
Observations	6820633	6820633	6820633	6820633	6820633	6820633
R-squared	.11233	.12686	.00001	.02328	.18967	.24215
Mean DV	0.809	0.168	0.488	0.020	0.465	0.451
	Mother Age 12-18 Years	Mother Age 19-39 Years	Mother Age 40-54 Years	Total Number of Prenatal Visits	No Prenatal Visits	Months Prenatal Care Began
	(7)	(8)	(9)	(10)	(11)	(12)
Exposure	-.00052	.00039	.00013	.2789***	-.00152***	-.02485**
	(.00091)	(.00125)	(.00061)	(.06782)	(.0005)	(.01023)
Observations	6820633	6820633	6820633	6665792	6820633	6563596
R-squared	.31305	.19043	.13972	.39411	.09405	.41536
Mean DV	0.082	0.900	0.018	11.281	0.012	2.510

Notes. Standard errors, clustered on maternal birth state and birth year, are in parentheses. Regressions are weighted using birth counts in each cell. All regressions include maternal birth state fixed effects, maternal birth year by birth region fixed effects, child birth state fixed effects, child birth year fixed effects, maternal race, maternal education, maternal age, birth order, and child gender. Regressions also contain maternal birth state controls, including per capita income, per capita hospitals, per capita hospital beds, reported disease rates, share of women receiving AFDC, and dummies for exposure to Medicaid and FEPA. The data covers the years 1973-2017 for maternal cohorts of 1960 – 1980.

First generation: Women born between 1960 and 1980 who were directly exposed to legal abortion in early life.

*** p<0.01, ** p<0.05, * p<0.1

Table 7 - Exploring Mechanism Channels: Effects on First-Generation Infant Health

	Outcomes:		
	Share Low Birth Weight Whites	Share Low Birth Weight Blacks	Share Low Birth Weight Total
	(1)	(2)	(3)
Exposure	-.00212***	-.00003	-.00185*
	(.00049)	(.00168)	(.00106)
Observations	1071	1071	1071
R-squared	.93014	.87713	.89948
Mean DV	0.066	0.126	0.101
	Share Very Low Birth Weight Whites	Share Very Low Birth Weight Blacks	Share Very Low Birth Weight Total
	(4)	(5)	(6)
Exposure	-.00037**	-.00126*	-.00108**
	(.00017)	(.00072)	(.00046)
Observations	1071	1071	1071
R-squared	.56073	.64075	.69839
Mean DV	0.010	0.022	0.017
	Infant Mortality Rate Whites (per 1,000 Births)	Infant Mortality Rate Blacks (per 1,000 Births)	Infant Mortality Rate Total (per 1,000 Births)
	(7)	(8)	(9)
Exposure	-.61026***	-.39994	-.56013***
	(.19058)	(.65177)	(.18674)
Observations	1071	1071	1071
R-squared	.96788	.89177	.9704
Mean DV	17.193	29.385	19.463

Notes. Standard errors, clustered on state, are in parentheses. Regressions are weighted using state population. All regressions include state fixed effects and region by year fixed effects. Regressions also contain state controls, including per capita income, per capita hospitals, per capita hospital beds, reported disease rates, share of women receiving AFDC, and dummies for exposure to Medicaid and FEPA. The data covers the years 1960 – 1980.
First generation: Women born between 1960 and 1980 who were directly exposed to legal abortion in early life.
*** p<0.01, ** p<0.05, * p<0.1

Table 8 - Exploring Mechanism Channels: Effects on Zero-Generation Outcomes

	Outcomes:			
	Birth Rate Whites (per 1,000 Women)	Birth Rate Blacks (per 1,000 Women)	Share Teenage Mothers	Share Married Mothers
	(1)	(2)	(3)	(4)
Exposure	-2.17053***	-7.61891***	-.002	.02524***
	(.73392)	(1.23013)	(.00186)	(.00591)
Observations	1071	1071	650	650
R-squared	.97467	.94895	.98713	.88046
Mean DV	79.274	110.940	0.175	0.872

Notes. Standard errors, clustered on state, are in parentheses. Regressions are weighted using state population. All regressions include state fixed effects and region by year fixed effects. Regressions also contain state controls, including per capita income, per capita hospitals, per capita hospital beds, reported disease rates, share of women receiving AFDC, and dummies for exposure to Medicaid and FEPA. The data covers the years 1960 – 1980.
Zero generation: Women who had children between 1960 and 1980.
*** p<0.01, ** p<0.05, * p<0.1

Figures

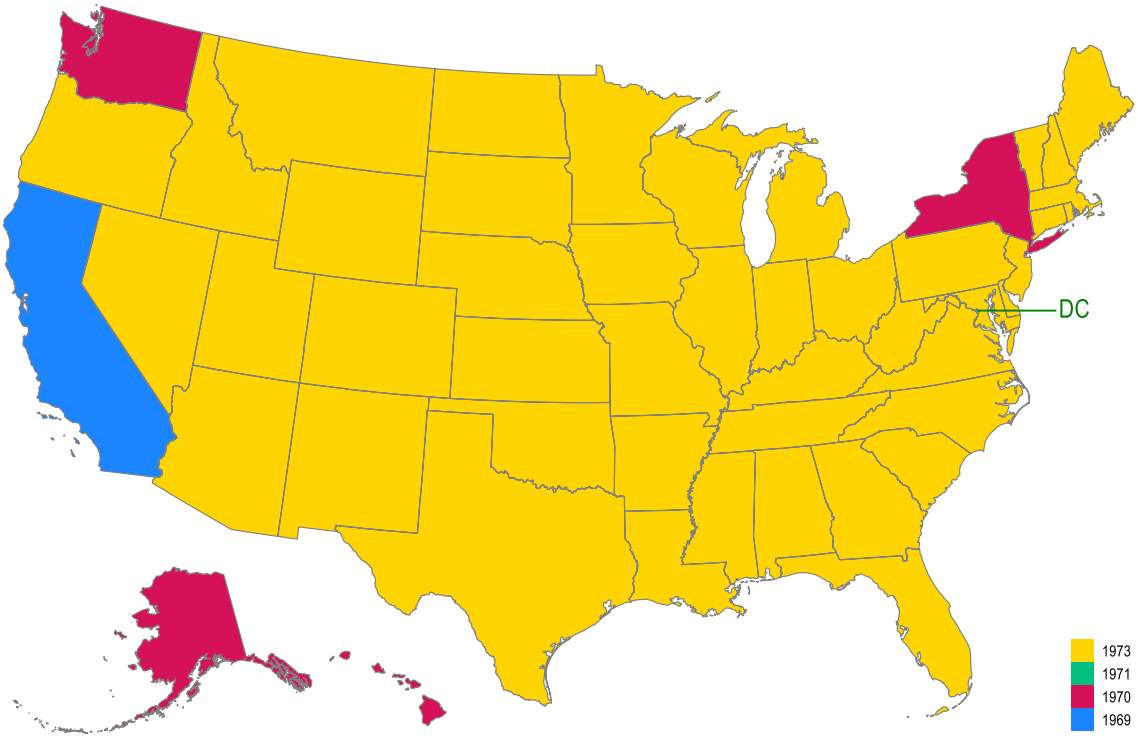


Figure 1 - Abortion Legalization across States

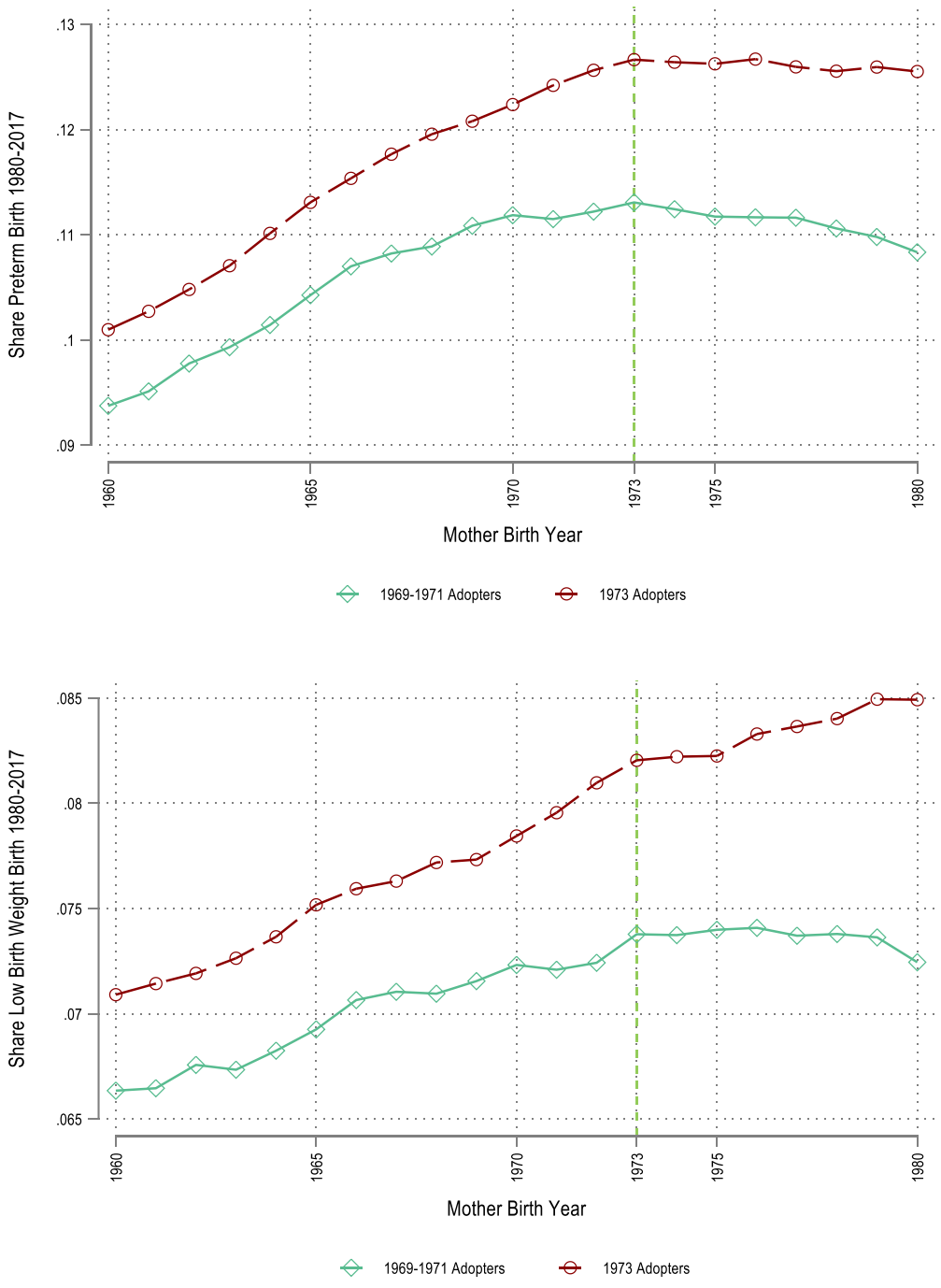


Figure 2 – Time series Evolution of Preterm Birth Share and Low Birth Weight Share by Maternal Birth Cohort

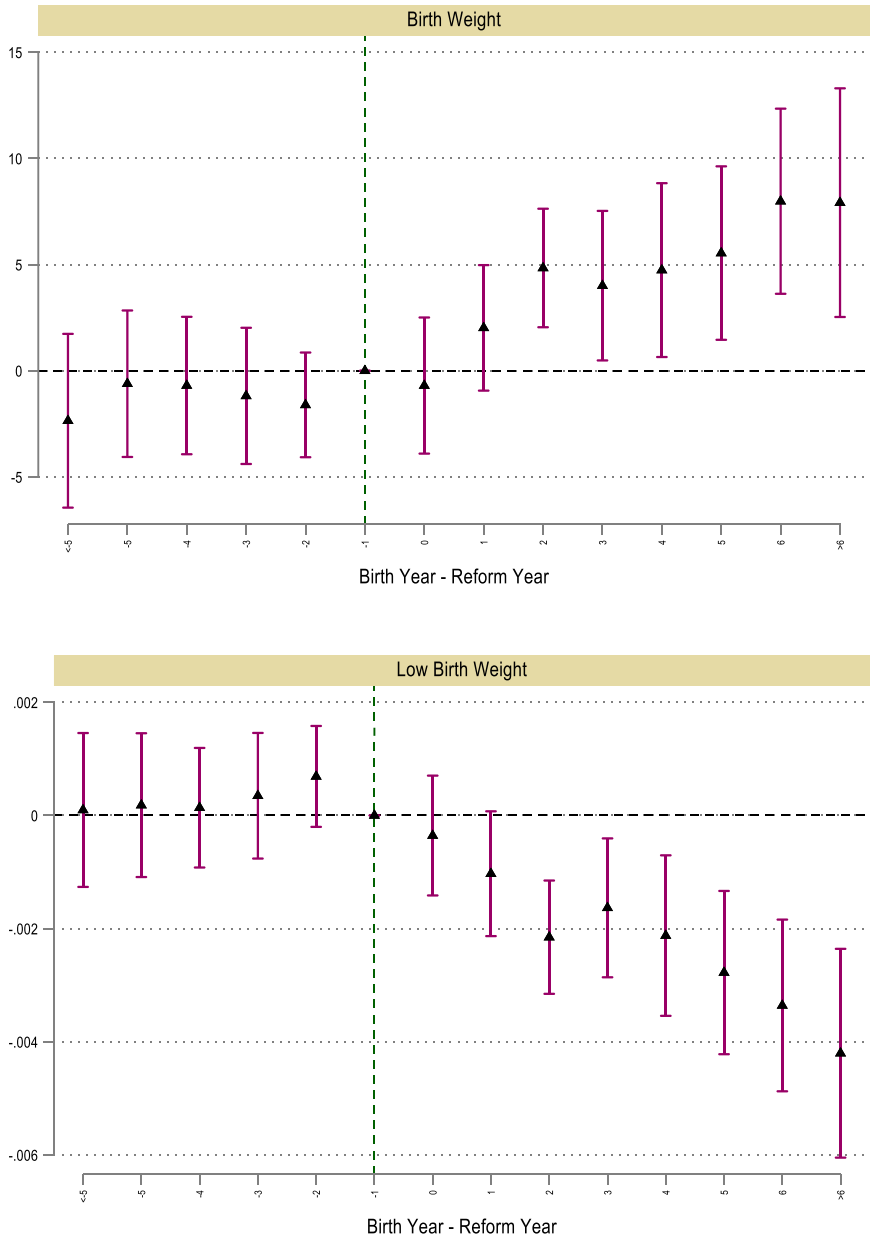


Figure 3 - Event Study Analysis to Show the Evolution of Second-Generation Birth Outcomes in Different Years Relative to the State-Specific Abortion Legalization Year

Notes. The horizontal axis displays the difference between the mother's birth year and the year abortion was legalized in their state, with negative values indicating birth years prior to legalization and positive values indicating birth years after legalization. Point estimates and 95% confidence intervals are illustrated. Standard errors are clustered on maternal birth state. Regressions are weighted using birth counts in each cell. All regressions include maternal birth state fixed effects, maternal birth year by birth region fixed effects, child birth state fixed effects, child birth year fixed effects, maternal race, maternal education, maternal age, birth order, and child gender. Regressions also contain maternal birth state controls, including per capita income, per capita hospitals, per capita hospital beds, reported disease rates, share of women receiving AFDC, and dummies for exposure to Medicaid and FEPA. The data covers the years 1973-2017 for maternal cohorts of 1960 – 1980. Second generation: Children whose mothers, born between 1960 and 1980, were exposed to legal abortion in early life.

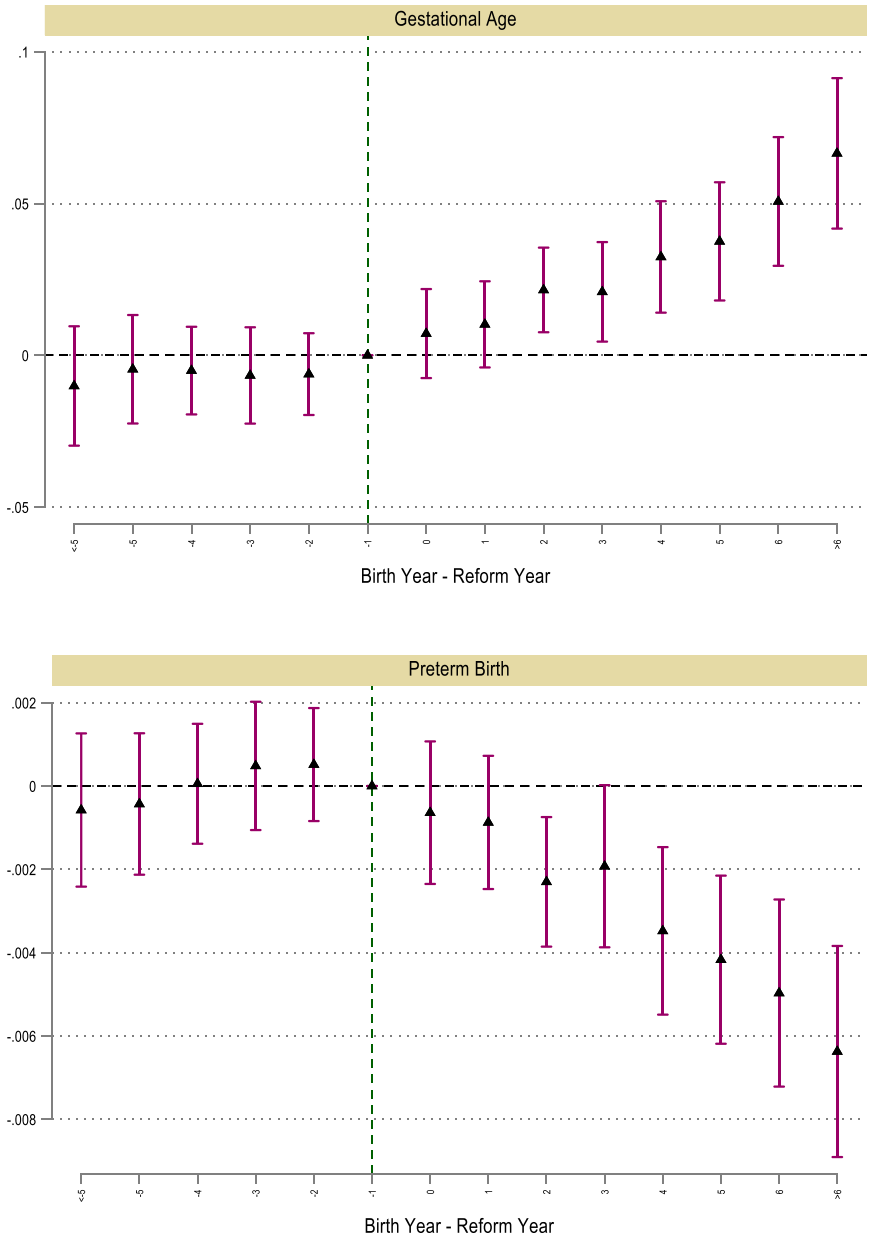


Figure 4 - Event Study Analysis to Show the Evolution of Second-Generation Birth Outcomes in Different Years Relative to the State-Specific Abortion Legalization Year

Notes. The horizontal axis displays the difference between the mother's birth year and the year abortion was legalized in their state, with negative values indicating birth years prior to legalization and positive values indicating birth years after legalization. Point estimates and 95% confidence intervals are illustrated. Standard errors are clustered on maternal birth state. Regressions are weighted using birth counts in each cell. All regressions include maternal birth state fixed effects, maternal birth year by birth region fixed effects, child birth state fixed effects, child birth year fixed effects, maternal race, maternal education, maternal age, birth order, and child gender. Regressions also contain maternal birth state controls, including per capita income, per capita hospitals, per capita hospital beds, reported disease rates, share of women receiving AFDC, and dummies for exposure to Medicaid and FEPA. The data covers the years 1973-2017 for maternal cohorts of 1960 – 1980. Second generation: Children whose mothers, born between 1960 and 1980, were exposed to legal abortion in early life.

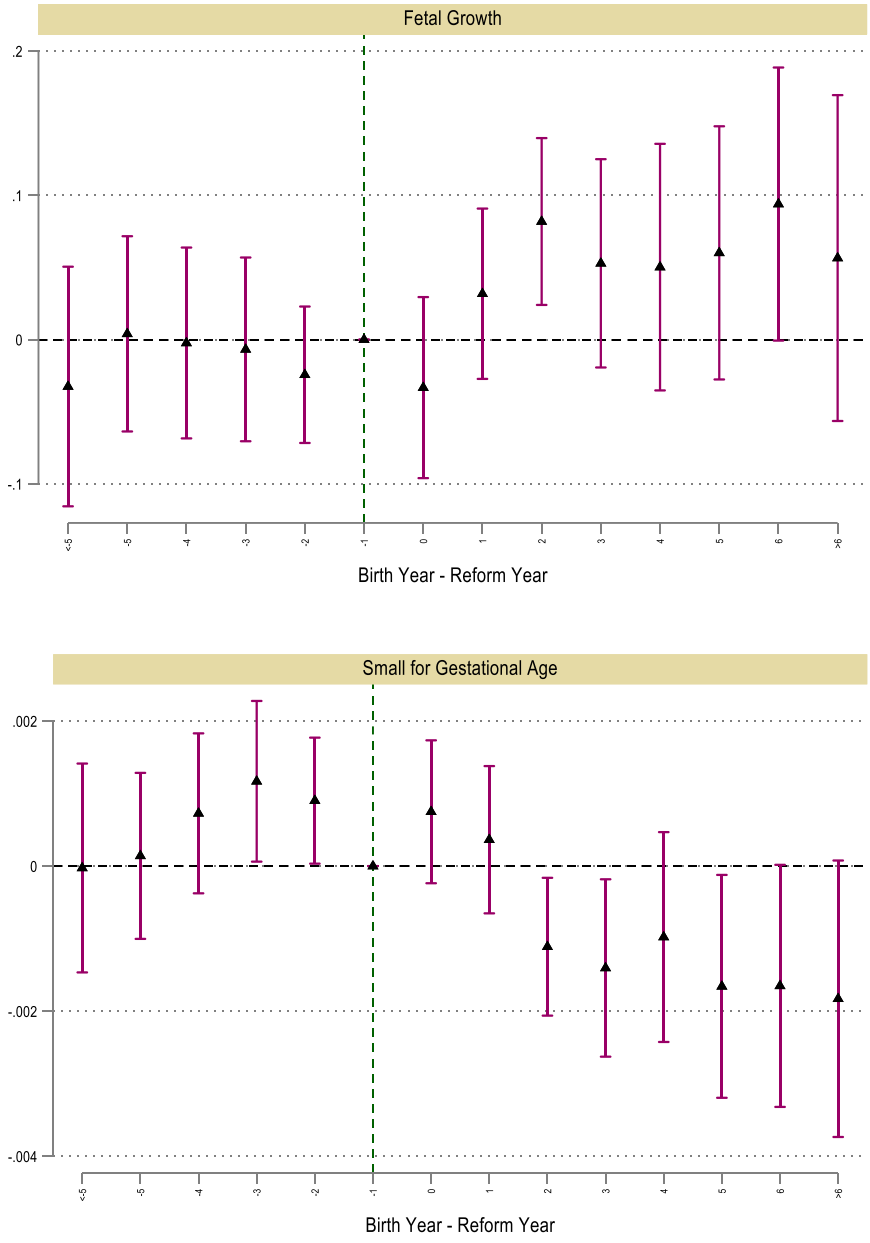


Figure 5 - Event Study Analysis to Show the Evolution of Second-Generation Birth Outcomes in Different Years Relative to the State-Specific Abortion Legalization Year

Notes. The horizontal axis displays the difference between the mother's birth year and the year abortion was legalized in their state, with negative values indicating birth years prior to legalization and positive values indicating birth years after legalization. Point estimates and 95% confidence intervals are illustrated. Standard errors are clustered on maternal birth state. Regressions are weighted using birth counts in each cell. All regressions include maternal birth state fixed effects, maternal birth year by birth region fixed effects, child birth state fixed effects, child birth year fixed effects, maternal race, maternal education, maternal age, birth order, and child gender. Regressions also contain maternal birth state controls, including per capita income, per capita hospitals, per capita hospital beds, reported disease rates, share of women receiving AFDC, and dummies for exposure to Medicaid and FEPA. The data covers the years 1973-2017 for maternal cohorts of 1960 – 1980. Second generation: Children whose mothers, born between 1960 and 1980, were exposed to legal abortion in early life.

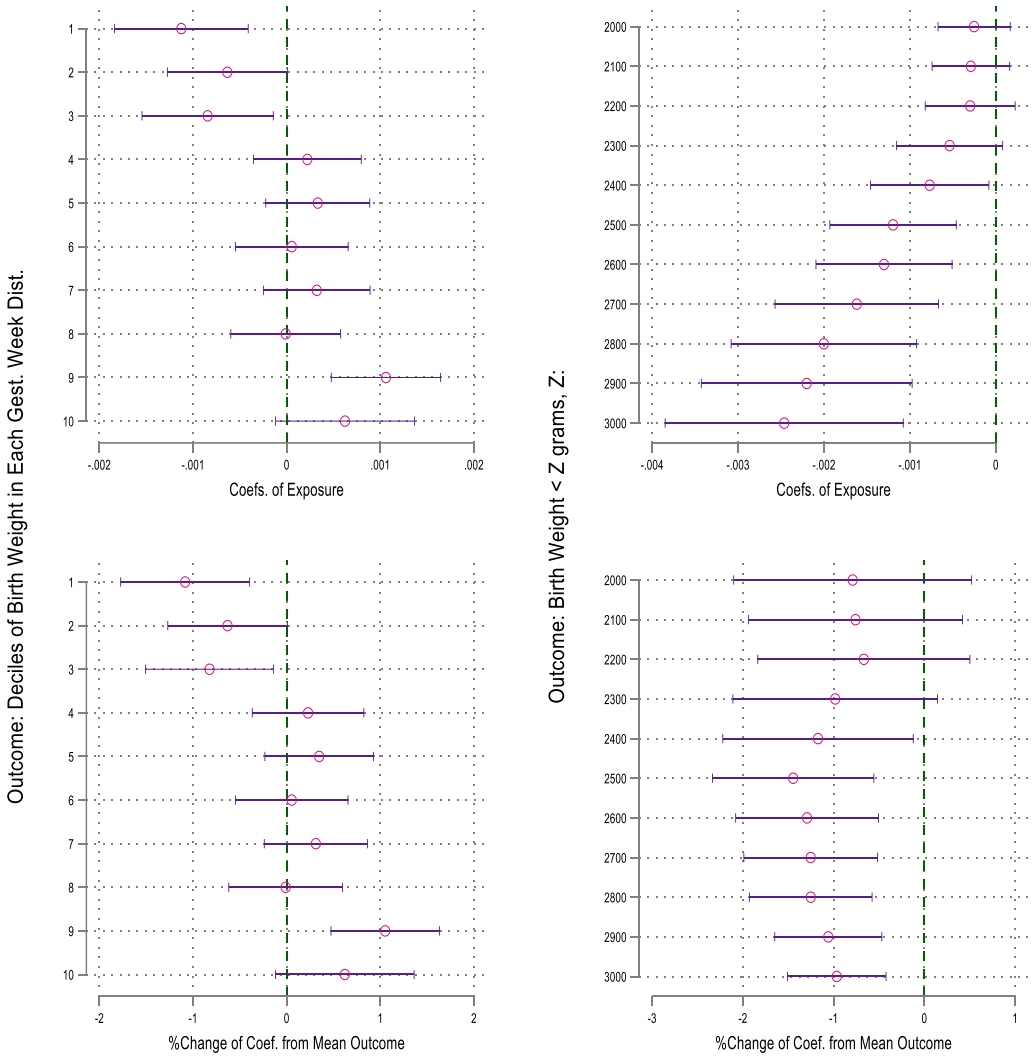


Figure 6 - Estimated Coefficients across the Birthweight Ranks Within Gestational Age Distribution (Left Panel) and Across the Thresholds of Low Birth Weight (Right Panel)

Notes. Point estimates and 95% confidence intervals are illustrated. Standard errors are clustered on maternal birth state. Regressions are weighted using birth counts in each cell. All regressions include maternal birth state fixed effects, maternal birth year by birth region fixed effects, child birth state fixed effects, child birth year fixed effects, maternal race, maternal education, maternal age, birth order, and child gender. Regressions also contain maternal birth state controls, including per capita income, per capita hospitals, per capita hospital beds, reported disease rates, share of women receiving AFDC, and dummies for exposure to Medicaid and FEPA. The data covers the years 1973-2017 for maternal cohorts of 1960 – 1980.

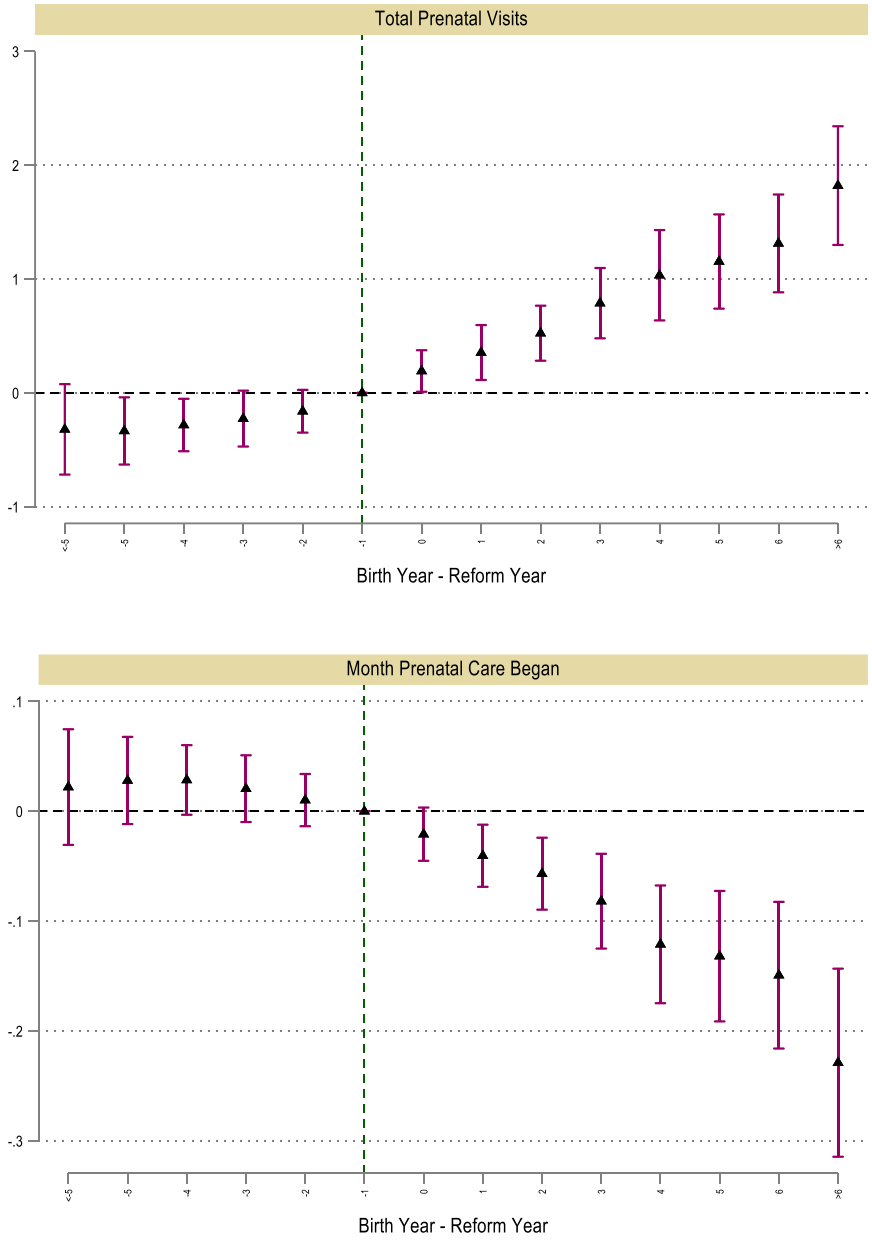


Figure 7 - Event Study Analysis to Show the Evolution of First-Generation Prenatal Care Utilization in Different Years Relative to the State-Specific Abortion Legalization Year

Notes. The horizontal axis displays the difference between the mother's birth year and the year abortion was legalized in their state. Point estimates and 95% confidence intervals are illustrated. Standard errors are clustered on maternal birth state. Regressions are weighted using birth counts in each cell. All regressions include maternal birth state fixed effects, maternal birth year by birth region fixed effects, child birth state fixed effects, child birth year fixed effects, maternal race, maternal education, maternal age, birth order, and child gender. Regressions also contain maternal birth state controls, including per capita income, per capita hospitals, per capita hospital beds, reported disease rates, share of women receiving AFDC, and dummies for exposure to Medicaid and FEPA. The data covers the years 1973-2017 for maternal cohorts of 1960 – 1980. First generation: Women born between 1960 and 1980 who were directly exposed to legal abortion in early life.

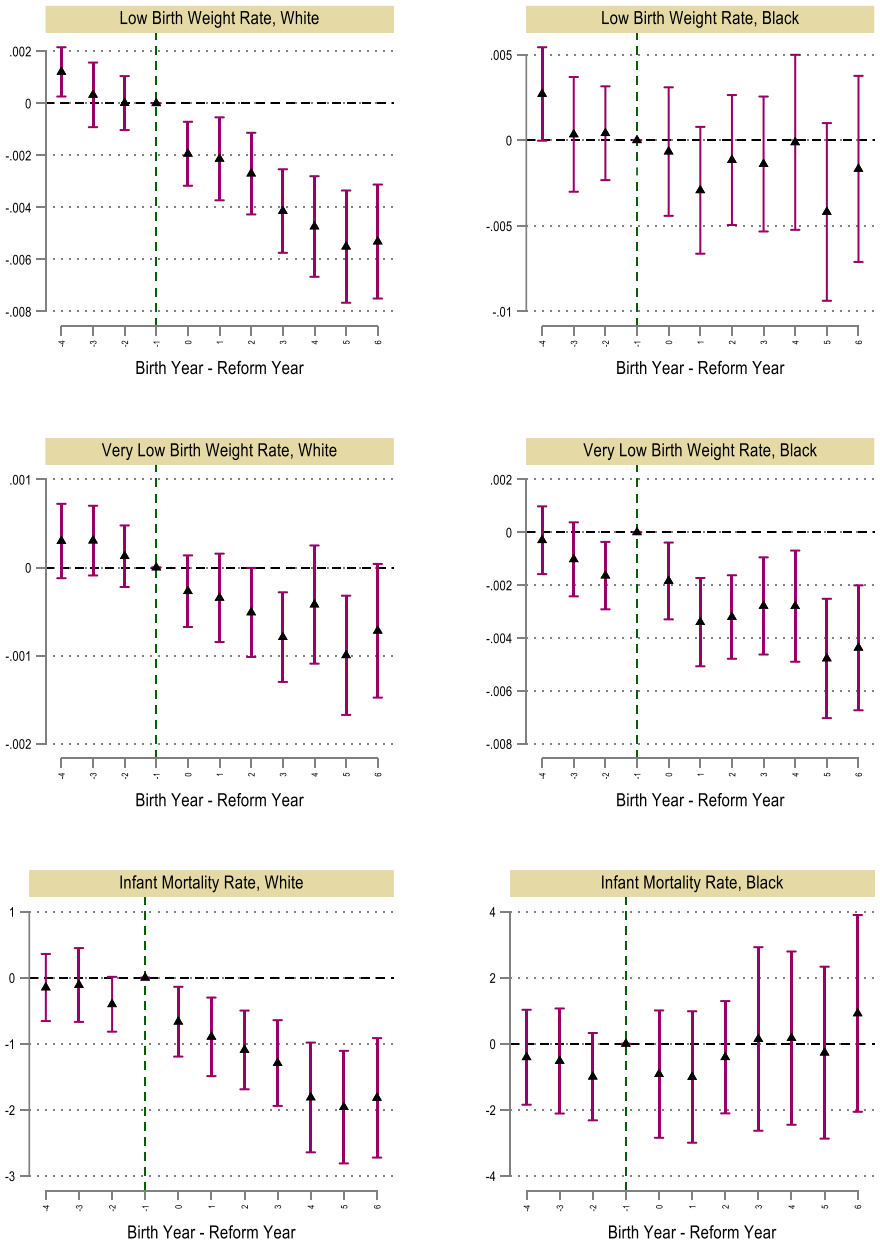


Figure 8 - Event Study Analysis to Show the Effects on First-Generation Infant Health

Notes. The horizontal axis displays the difference between the mother's birth year and the year abortion was legalized in their state. Point estimates and 95% confidence intervals are illustrated. Standard errors are clustered on maternal birth state. Regressions are weighted using state population. All regressions include state fixed effects and region by year fixed effects. Regressions also contain state controls, including per capita income, per capita hospitals, per capita hospital beds, reported disease rates, share of women receiving AFDC, and dummies for exposure to Medicaid and FEPA. The data covers the years 1960 – 1980.
First generation: Women born between 1960 and 1980 who were directly exposed to legal abortion in early life.

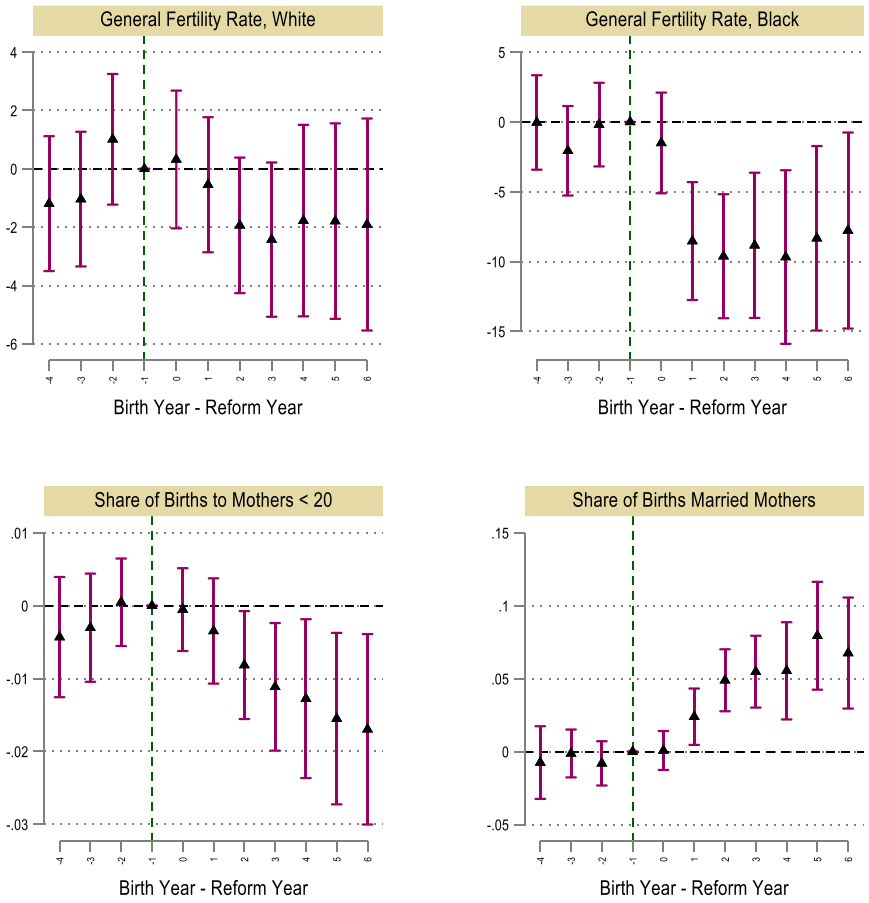


Figure 9 - Event Study Analysis to Show the Effects on Zero-Generation Infant Health

Notes. The horizontal axis displays the difference between the mother's birth year and the year abortion was legalized in their state. Point estimates and 95% confidence intervals are illustrated. Standard errors are clustered on maternal birth state. Regressions are weighted using state population. All regressions include state fixed effects and region by year fixed effects. Regressions also contain state controls, including per capita income, per capita hospitals, per capita hospital beds, reported disease rates, share of women receiving AFDC, and dummies for exposure to Medicaid and FEPA. The data covers the years 1960 – 1980.
Zero generation: Women who had children between 1960 and 1980.

Appendix A

Appendix Table A-1 - Correlation Between Early Abortion and State Characteristics

	Outcome: Early abortion			
	(1)	(2)	(3)	(4)
Gender Wage Gap 1962-1968 ($1,000 in 2020 dollars)	.07066***	.09611***		
	(.02332)	(.02526)		
Residual Gender Wage Gap 1962-1968 ($1,000 in 2020 dollars)			.075***	.10267***
			(.02772)	(.03202)
Log Per-Capita Income	1.75238***	1.7039***	1.66693***	1.5911***
	(.35956)	(.30042)	(.36389)	(.31893)
Hospital Beds per Capita (1,000)	-.03814	.00563	-.03644	.00665
	(.04537)	(.02771)	(.04482)	(.02946)
Hospitals per Capita (1,000)	3.3618**	-.05718	4.19713**	1.19158
	(1.5923)	(2.18892)	(1.62136)	(2.17744)
Disease Rate	.02245	.00791	.03124	.01971
	(.03242)	(.02991)	(.03058)	(.03023)
Early Medicaid Adopter	-.11176	-.01305	-.14164*	-.05595
	(.07358)	(.08166)	(.07412)	(.08201)
Early Contraceptive Pill Legalization	.1482	.0918	.15706*	.10427
	(.09012)	(.09642)	(.09103)	(.09281)
Observations	51	51	51	51
R-squared	.45553	.57488	.44321	.55626
Mean DV	0.118	0.118	0.118	0.118
Region FE	No	Yes	No	Yes

Standard errors are in parentheses. The data is for the year 1968. In calculating residual gender wage gap (columns 3-4), we partial out the effects of age, education, race, occupation type (272 codes), and industry (836 codes) from raw state-level gender wage gap.

*** p<0.01, ** p<0.05, * p<0.1

Appendix B

Appendix Table B-1 - Adding Current Region by Current Year Fixed Effects

	Outcomes:					
	Birth Weight	Low Birth Weight	Gestational Age	Preterm Birth	Fetal Growth	Small For Gestational Age
	(1)	(2)	(3)	(4)	(5)	(6)
Exposure	3.29452***	-.0012***	.00588	-.00093*	.07187***	-.00116***
	(.96727)	(.00037)	(.00473)	(.00056)	(.01935)	(.00036)
Observations	6820631	6820631	6820631	6820631	6820631	6820631
R-squared	.32015	.10423	.22845	.11702	.31667	.14813
Mean DV	3317.625	0.077	38.902	0.116	85.047	0.098

Standard errors, clustered on maternal birth state and birth year, are in parentheses. Regressions are weighted using birth counts in each cell. All regressions include maternal birth state fixed effects, maternal birth year by birth region fixed effects, child birth state fixed effects, child birth year fixed effects, maternal race, maternal education, maternal age, birth order, and child gender. Regressions also contain maternal birth state controls, including per capita income, per capita hospitals, per capita hospital beds, reported disease rates, share of women receiving AFDC, and dummies for exposure to Medicaid and FEPA. The data covers the years 1973-2017 for maternal cohorts of 1960 – 1980.

The regressions also include current region by current year fixed effects.

*** p<0.01, ** p<0.05, * p<0.1

Appendix Table B-2 - Dropping Early Reform States

	Outcomes:					
	Birth Weight	Low Birth Weight	Gestational Age	Preterm Birth	Fetal Growth	Small For Gestational Age
	(1)	(2)	(3)	(4)	(5)	(6)
Exposure	3.31831***	-.00131***	.00767	-.00073	.06552***	-.00107**
	(1.22822)	(.00035)	(.00528)	(.00062)	(.02532)	(.00047)
Observations	4505635	4505635	4505635	4505635	4505635	4505635
R-squared	.31106	.0995	.22993	.11149	.31365	.14659
Mean DV	3324.710	0.075	38.918	0.114	85.197	0.096

Standard errors, clustered on maternal birth state and birth year, are in parentheses. Regressions are weighted using birth counts in each cell. All regressions include maternal birth state fixed effects, maternal birth year by birth region fixed effects, child birth state fixed effects, child birth year fixed effects, maternal race, maternal education, maternal age, birth order, and child gender. Regressions also contain maternal birth state controls, including per capita income, per capita hospitals, per capita hospital beds, reported disease rates, share of women receiving AFDC, and dummies for exposure to Medicaid and FEPA. The data covers the years 1973-2017 for maternal cohorts of 1960 – 1980.

*** p<0.01, ** p<0.05, * p<0.1

Appendix Table B-3 - Dropping Alabama, Louisiana, Mississippi, Missouri, Georgia, and Texas

	Outcomes:					
	Birth Weight	Low Birth Weight	Gestational Age	Preterm Birth	Fetal Growth	Small For Gestational Age
	(1)	(2)	(3)	(4)	(5)	(6)
Exposure	3.33432***	-.00122***	.00655	-.00092*	.07147***	-.00125***
	(.96084)	(.00038)	(.00473)	(.00056)	(.01889)	(.00037)
Observations	5808784	5808784	5808784	5808784	5808784	5808784
R-squared	.30109	.09548	.21431	.10333	.30346	.13886
Mean DV	3328.560	0.075	38.940	0.112	85.246	0.095

Standard errors, clustered on maternal birth state and birth year, are in parentheses. Regressions are weighted using birth counts in each cell. All regressions include maternal birth state fixed effects, maternal birth year by birth region fixed effects, child birth state fixed effects, child birth year fixed effects, maternal race, maternal education, maternal age, birth order, and child gender. Regressions also contain maternal birth state controls, including per capita income, per capita hospitals, per capita hospital beds, reported disease rates, share of women receiving AFDC, and dummies for exposure to Medicaid and FEPA. The data covers the years 1973-2017 for maternal cohorts of 1960 – 1980.

*** p<0.01, ** p<0.05, * p<0.1

Appendix Table B-4 - Dropping Spillover States

	Outcomes:					
	Birth Weight	Low Birth Weight	Gestational Age	Preterm Birth	Fetal Growth	Small For Gestational Age
	(1)	(2)	(3)	(4)	(5)	(6)
Exposure	3.58336***	-.00124***	.01034**	-.00121**	.06963***	-.00114***
	(1.03102)	(.0004)	(.00507)	(.0006)	(.02025)	(.00035)
Observations	6124741	6124741	6124741	6124741	6124741	6124741
R-squared	.32359	.10538	.23027	.11823	.31951	.15041
Mean DV	3315.704	0.077	38.894	0.117	85.016	0.098

Standard errors, clustered on maternal birth state and birth year, are in parentheses. Regressions are weighted using birth counts in each cell. All regressions include maternal birth state fixed effects, maternal birth year by birth region fixed effects, child birth state fixed effects, child birth year fixed effects, maternal race, maternal education, maternal age, birth order, and child gender. Regressions also contain maternal birth state controls, including per capita income, per capita hospitals, per capita hospital beds, reported disease rates, share of women receiving AFDC, and dummies for exposure to Medicaid and FEPA. The data covers the years 1973-2017 for maternal cohorts of 1960 – 1980.

The sample drops states in the neighboring of early repeal states.

*** p<0.01, ** p<0.05, * p<0.1

Appendix Table B-5 - Adding State-Specific Linear Time Trend for Pretreatment Years

	Outcomes:					
	Birth Weight	Low Birth Weight	Gestational Age	Preterm Birth	Fetal Growth	Small For Gestational Age
	(1)	(2)	(3)	(4)	(5)	(6)
Exposure	2.71193***	-.00055	.00292	-.00007	.06616***	-.00074**
	(.91263)	(.00035)	(.00426)	(.00051)	(.01934)	(.00036)
Observations	6820633	6820633	6820633	6820633	6820633	6820633
R-squared	.31961	.10407	.22767	.1168	.31619	.14798
Mean DV	3317.625	0.077	38.902	0.116	85.047	0.098

Standard errors, clustered on maternal birth state and birth year, are in parentheses. Regressions are weighted using birth counts in each cell. All regressions include maternal birth state fixed effects, maternal birth year by birth region fixed effects, child birth state fixed effects, child birth year fixed effects, maternal race, maternal education, maternal age, birth order, and child gender. Regressions also contain maternal birth state controls, including per capita income, per capita hospitals, per capita hospital beds, reported disease rates, share of women receiving AFDC, and dummies for exposure to Medicaid and FEPA. The data covers the years 1973-2017 for maternal cohorts of 1960 – 1980.

The regressions include a birth state linear trend for the years prior to abortion legalization.

*** p<0.01, ** p<0.05, * p<0.1

Appendix Table B-6 - Only Birth State and Region – Cohort Fixed Effects

	Outcomes:					
	Birth Weight	Low Birth Weight	Gestational Age	Preterm Birth	Fetal Growth	Small For Gestational Age
	(1)	(2)	(3)	(4)	(5)	(6)
Exposure	3.31527***	-.00131***	.01562***	-.00112*	.05596**	-.00097***
	(1.22763)	(.00042)	(.00529)	(.00058)	(.02849)	(.00037)
Observations	6820633	6820633	6820633	6820633	6820633	6820633
R-squared	.04849	.01561	.05799	.0236	.0311	.0144
Mean DV	3317.625	0.077	38.902	0.116	85.047	0.098

Standard errors, clustered on maternal birth state and birth year, are in parentheses. Regressions are weighted using birth counts in each cell. All regressions include maternal birth state fixed effects and maternal birth year by birth region fixed effects. The data covers the years 1973-2017 for maternal cohorts of 1960 – 1980.
*** p<0.01, ** p<0.05, * p<0.1

Appendix Table B-7 - Adding Birth State Infant Mortality Rate, Life Expectancy, and Continuous Measures of Measles Rate (1950-1965) and Polio Rate (1950-1955) Interacted by Birth Year Fixed Effects

	Outcomes:					
	Birth Weight	Low Birth Weight	Gestational Age	Preterm Birth	Fetal Growth	Small For Gestational Age
	(1)	(2)	(3)	(4)	(5)	(6)
Exposure	3.33048***	-.00113***	.00889*	-.00127**	.06561***	-.00098***
	(.98586)	(.00037)	(.00482)	(.00057)	(.02009)	(.00036)
Observations	6673268	6673268	6673268	6673268	6673268	6673268
R-squared	.32291	.10545	.23032	.1185	.31933	.14975
Mean DV	3317.541	0.077	38.902	0.116	85.044	0.098

Standard errors, clustered on maternal birth state and birth year, are in parentheses. Regressions are weighted using birth counts in each cell. All regressions include maternal birth state fixed effects, maternal birth year by birth region fixed effects, child birth state fixed effects, child birth year fixed effects, maternal race, maternal education, maternal age, birth order, and child gender. Regressions also contain maternal birth state controls, including per capita income, per capita hospitals, per capita hospital beds, reported disease rates, share of women receiving AFDC, and dummies for exposure to Medicaid and FEPA. The data covers the years 1973-2017 for maternal cohorts of 1960 – 1980.

The regressions also include maternal birth state by birth year infant mortality rate and life expectancy. Additionally, regressions include continuous measures of measles and polio rates at maternal birth state level interacted with birth year fixed effects.

*** p<0.01, ** p<0.05, * p<0.1

Appendix Table B-8 - Birth State Level Clustering

	Outcomes:					
	Birth Weight	Low Birth Weight	Gestational Age	Preterm Birth	Fetal Growth	Small For Gestational Age
	(1)	(2)	(3)	(4)	(5)	(6)
Exposure	3.28449**	-.0012**	.0069	-.00095	.06948**	-.00113***
	(1.35429)	(.00054)	(.00662)	(.00061)	(.02605)	(.00037)
Observations	6820633	6820633	6820633	6820633	6820633	6820633
R-squared	.3195	.10401	.2275	.11669	.31611	.14793
Mean DV	3317.625	0.077	38.902	0.116	85.047	0.098

Standard errors, clustered on maternal birth state, are in parentheses. Regressions are weighted using birth counts in each cell. All regressions include maternal birth state fixed effects, maternal birth year by birth region fixed effects, child birth state fixed effects, child birth year fixed effects, maternal race, maternal education, maternal age, birth order, and child gender. Regressions also contain maternal birth state controls, including per capita income, per capita hospitals, per capita hospital beds, reported disease rates, share of women receiving AFDC, and dummies for exposure to Medicaid and FEPA. The data covers the years 1973-2017 for maternal cohorts of 1960 – 1980.
*** p<0.01, ** p<0.05, * p<0.1

Appendix Table B-9 - Weighting by Birth Count and Share of Females in Maternal Birth State Population

	Outcomes:					
	Birth Weight	Low Birth Weight	Gestational Age	Preterm Birth	Fetal Growth	Small For Gestational Age
	(1)	(2)	(3)	(4)	(5)	(6)
Exposure	5.04903***	-.00148***	.00737	-.00097	.11673***	-.00146***
	(1.0394)	(.00041)	(.00563)	(.00063)	(.0201)	(.0004)
Observations	6702480	6702480	6702480	6702480	6702480	6702480
R-squared	.37288	.12802	.2697	.13791	.37315	.18058
Mean DV	3320.764	0.076	38.899	0.115	85.131	0.096

Standard errors, clustered on maternal birth state and birth year, are in parentheses. Regressions are weighted using birth counts in each cell multiplied by the share of women in mothers' birth state. All regressions include maternal birth state fixed effects, maternal birth year by birth region fixed effects, child birth state fixed effects, child birth year fixed effects, maternal race, maternal education, maternal age, birth order, and child gender. Regressions also contain maternal birth state controls, including per capita income, per capita hospitals, per capita hospital beds, reported disease rates, share of women receiving AFDC, and dummies for exposure to Medicaid and FEPA. The data covers the years 1973-2017 for maternal cohorts of 1960 – 1980.
*** p<0.01, ** p<0.05, * p<0.1

Appendix Table B-10 - Weighting by Birth Count and Infant Mortality Rate in Maternal Birth State Population

	Outcomes:					
	Birth Weight	Low Birth Weight	Gestational Age	Preterm Birth	Fetal Growth	Small For Gestational Age
	(1)	(2)	(3)	(4)	(5)	(6)
Exposure	5.75446***	-.00204***	.00864	-.00139**	.13675***	-.00167***
	(1.34329)	(.00051)	(.00724)	(.00069)	(.02596)	(.00046)
Observations	6820633	6820633	6820633	6820633	6820633	6820633
R-squared	.38393	.13575	.27098	.15003	.37672	.18562
Mean DV	3308.966	0.079	38.873	0.119	84.879	0.100

Standard errors, clustered on maternal birth state and birth year, are in parentheses. Regressions are weighted using birth counts in each cell multiplied by the share of women in mothers' birth state. All regressions include maternal birth state fixed effects, maternal birth year by birth region fixed effects, child birth state fixed effects, child birth year fixed effects, maternal race, maternal education, maternal age, birth order, and child gender. Regressions also contain maternal birth state controls, including per capita income, per capita hospitals, per capita hospital beds, reported disease rates, share of women receiving AFDC, and dummies for exposure to Medicaid and FEPA. The data covers the years 1973-2017 for maternal cohorts of 1960 – 1980.
*** p<0.01, ** p<0.05, * p<0.1

Appendix Table B-11 - Adding Birth State by Maternal Race Fixed Effects

	Outcomes:					
	Birth Weight	Low Birth Weight	Gestational Age	Preterm Birth	Fetal Growth	Small For Gestational Age
	(1)	(2)	(3)	(4)	(5)	(6)
Exposure	3.13801***	-.00117***	.00622	-.00086	.06684***	-.00114***
	(.982)	(.00038)	(.0047)	(.00055)	(.0196)	(.00037)
Observations	6820633	6820633	6820633	6820633	6820633	6820633
R-squared	.32179	.10456	.2285	.11736	.31857	.1489
Mean DV	3317.625	0.077	38.902	0.116	85.047	0.098

Standard errors, clustered on maternal birth state and birth year, are in parentheses. Regressions are weighted using birth counts in each cell. All regressions include maternal birth state fixed effects, maternal birth year by birth region fixed effects, child birth state fixed effects, child birth year fixed effects, maternal race, maternal education, maternal age, birth order, and child gender. Regressions also contain maternal birth state controls, including per capita income, per capita hospitals, per capita hospital beds, reported disease rates, share of women receiving AFDC, and dummies for exposure to Medicaid and FEPA. The data covers the years 1973-2017 for maternal cohorts of 1960 – 1980.

The regressions include the interaction of maternal birth state by race dummies.

*** p<0.01, ** p<0.05, * p<0.1

Appendix Table B-12 - Adding Birth State by Current State Fixed Effects

	Outcomes:					
	Birth Weight	Low Birth Weight	Gestational Age	Preterm Birth	Fetal Growth	Small For Gestational Age
	(1)	(2)	(3)	(4)	(5)	(6)
Exposure	3.22321***	-.0012***	.00676	-.00094*	.06823***	-.00112***
	(.96584)	(.00038)	(.00468)	(.00056)	(.0194)	(.00037)
Observations	6820633	6820633	6820633	6820633	6820633	6820633
R-squared	.32128	.1049	.22931	.11792	.31743	.14875
Mean DV	3317.625	0.077	38.902	0.116	85.047	0.098

Standard errors, clustered on maternal birth state and birth year, are in parentheses. Regressions are weighted using birth counts in each cell. All regressions include maternal birth state fixed effects, maternal birth year by birth region fixed effects, child birth state fixed effects, child birth year fixed effects, maternal race, maternal education, maternal age, birth order, and child gender. Regressions also contain maternal birth state controls, including per capita income, per capita hospitals, per capita hospital beds, reported disease rates, share of women receiving AFDC, and dummies for exposure to Medicaid and FEPA. The data covers the years 1973-2017 for maternal cohorts of 1960 – 1980.

The regressions also add birth state by current state fixed effects.

*** p<0.01, ** p<0.05, * p<0.1

Appendix Table B-13 - Adding Dummies to Capture Cohort-State-Specific Exposure to Contraception Pill Access

	Outcomes:					
	Birth Weight	Low Birth Weight	Gestational Age	Preterm Birth	Fetal Growth	Small For Gestational Age
	(1)	(2)	(3)	(4)	(5)	(6)
Exposure	2.99318***	-.00118***	.00577	-.00091*	.06524***	-.00107***
	(.9669)	(.00036)	(.00449)	(.00055)	(.02008)	(.00037)
Observations	6820633	6820633	6820633	6820633	6820633	6820633
R-squared	.31953	.10402	.22753	.11669	.31613	.14794
Mean DV	3317.625	0.077	38.902	0.116	85.047	0.098

Standard errors, clustered on maternal birth state and birth year, are in parentheses. Regressions are weighted using birth counts in each cell. All regressions include maternal birth state fixed effects, maternal birth year by birth region fixed effects, child birth state fixed effects, child birth year fixed effects, maternal race, maternal education, maternal age, birth order, and child gender. Regressions also contain maternal birth state controls, including per capita income, per capita hospitals, per capita hospital beds, reported disease rates, share of women receiving AFDC, and dummies for exposure to Medicaid and FEPA. The data covers the years 1973-2017 for maternal cohorts of 1960 – 1980.

The regressions add a series of dummy variables indicating the distance of mothers' cohorts relative to the state specific year of oral contraception pill access.

*** p<0.01, ** p<0.05, * p<0.1

Appendix Table B-14 - Utilizing Ordinary Least Squares Method

	Outcomes:					
	Birth Weight	Low Birth Weight	Gestational Age	Preterm Birth	Fetal Growth	Small For Gestational Age
	(1)	(2)	(3)	(4)	(5)	(6)
Exposure	3.28449***	-.0012***	.0069	-.00095*	.06948***	-.00113***
	(.95798)	(.00037)	(.00464)	(.00055)	(.01925)	(.00036)
Observations	68006574	68006574	68006574	68006574	68006574	68006574
R-squared	.3195	.10401	.2275	.11669	.31611	.14793
Mean DV	3317.625	0.077	38.902	0.116	85.047	0.098

Standard errors, clustered on maternal birth state and birth year, are in parentheses. Regressions are weighted using birth counts in each cell. All regressions include maternal birth state fixed effects, maternal birth year by birth region fixed effects, child birth state fixed effects, child birth year fixed effects, maternal race, maternal education, maternal age, birth order, and child gender. Regressions also contain maternal birth state controls, including per capita income, per capita hospitals, per capita hospital beds, reported disease rates, share of women receiving AFDC, and dummies for exposure to Medicaid and FEPA. The data covers the years 1973-2017 for maternal cohorts of 1960 – 1980.

*** p<0.01, ** p<0.05, * p<0.1

Appendix Table B-15 - Additional Maternal and Paternal Controls

	Outcomes:					
	Birth Weight	Low Birth Weight	Gestational Age	Preterm Birth	Fetal Growth	Small For Gestational Age
	(1)	(2)	(3)	(4)	(5)	(6)
Exposure	3.58336***	-.00124***	.01034**	-.00121**	.06963***	-.00114***
	(1.03102)	(.0004)	(.00507)	(.0006)	(.02025)	(.00035)
Observations	6124741	6124741	6124741	6124741	6124741	6124741
R-squared	.32359	.10538	.23027	.11823	.31951	.15041
Mean DV	3315.704	0.077	38.894	0.117	85.016	0.098

Standard errors, clustered on maternal birth state and birth year, are in parentheses. Regressions are weighted using birth counts in each cell. All regressions include maternal birth state fixed effects, maternal birth year by birth region fixed effects, child birth state fixed effects, child birth year fixed effects, maternal race, maternal education, maternal age, birth order, and child gender. Regressions also contain maternal birth state controls, including per capita income, per capita hospitals, per capita hospital beds, reported disease rates, share of women receiving AFDC, and dummies for exposure to Medicaid and FEPA. The data covers the years 1973-2017 for maternal cohorts of 1960 – 1980.

Additional controls include father race, father age group, maternal marital status at the time of birth, and missing variables for the missing values of these controls.

*** p<0.01, ** p<0.05, * p<0.1

Appendix Table B-16 – Adding Birth-State Gender Wage Gap

	Outcomes:					
	Birth Weight	Low Birth Weight	Gestational Age	Preterm Birth	Fetal Growth	Small For Gestational Age
	(1)	(2)	(3)	(4)	(5)	(6)
Exposure	7.02215***	-.00331***	.01644**	-.00117	.15648***	-.00213***
	(1.64145)	(.00062)	(.00811)	(.00079)	(.03489)	(.00064)
Observations	4189566	4189566	4189566	4189566	4189566	4189566
R-squared	.34133	.11465	.23474	.12643	.33817	.16046
Mean DV	3311.343	0.078	38.858	0.118	84.973	0.098

Standard errors, clustered on maternal birth state and birth year, are in parentheses. Regressions are weighted using birth counts in each cell. All regressions include maternal birth state fixed effects, maternal birth year by birth region fixed effects, child birth state fixed effects, child birth year fixed effects, maternal race, maternal education, maternal age, birth order, and child gender. Regressions also contain maternal birth state controls, including per capita income, per capita hospitals, per capita hospital beds, reported disease rates, share of women receiving AFDC, and dummies for exposure to Medicaid and FEPA. The data covers the years 1973-2017 for maternal cohorts of 1960 – 1980.

Additional regressors are raw state-level gender wage gap as well as residual gender wage gap. To calculate residual gender wage gap, we partial out the effects of age, education, race, occupation type (272 codes), and industry (836 codes) from raw state-level gender wage gap. These measures are calculated from ASEC-CPS data for the years 1962-1980.

*** p<0.01, ** p<0.05, * p<0.1

Appendix Table B-17 – Removing California

	Outcomes:					
	Birth Weight	Low Birth Weight	Gestational Age	Preterm Birth	Fetal Growth	Small For Gestational Age
	(1)	(2)	(3)	(4)	(5)	(6)
Exposure	3.33012***	-.00163***	.00868	-.001	.06807**	-.00116**
	(1.29001)	(.0004)	(.00549)	(.00062)	(.02652)	(.00045)
Observations	6503380	6503380	6503380	6503380	6503380	6503380
R-squared	.31502	.1022	.22265	.11597	.31089	.1458
Mean DV	3313.472	0.078	38.891	0.117	84.961	0.099

Standard errors, clustered on maternal birth state and birth year, are in parentheses. Regressions are weighted using birth counts in each cell. All regressions include maternal birth state fixed effects, maternal birth year by birth region fixed effects, child birth state fixed effects, child birth year fixed effects, maternal race, maternal education, maternal age, birth order, and child gender. Regressions also contain maternal birth state controls, including per capita income, per capita hospitals, per capita hospital beds, reported disease rates, share of women receiving AFDC, and dummies for exposure to Medicaid and FEPA. The data covers the years 1973-2017 for maternal cohorts of 1960 – 1980.

*** p<0.01, ** p<0.05, * p<0.1

Appendix Table B-18 – Placebo Test: Shifting Abortion Years Ten Years Earlier

	Outcomes:					
	Birth Weight	Low Birth Weight	Gestational Age	Preterm Birth	Fetal Growth	Small For Gestational Age
	(1)	(2)	(3)	(4)	(5)	(6)
Exposure	.59772	.0003	-.00667*	.00138***	.02916	-.00031
	(1.08596)	(.00031)	(.0039)	(.0004)	(.02329)	(.00037)
Observations	6220756	6220756	6220756	6220756	6220756	6220756
R-squared	.33413	.11355	.24284	.13831	.32649	.15524
Mean DV	3351.234	0.070	39.192	0.102	85.328	0.096

Standard errors, clustered on maternal birth state and birth year, are in parentheses. Regressions are weighted using birth counts in each cell. All regressions include maternal birth state fixed effects, maternal birth year by birth region fixed effects, child birth state fixed effects, child birth year fixed effects, maternal race, maternal education, maternal age, birth order, and child gender. Regressions also contain maternal birth state controls, including per capita income, per capita hospitals, per capita hospital beds, reported disease rates, share of women receiving AFDC, and dummies for exposure to Medicaid and FEPA. The data covers the years 1973-2017 for maternal cohorts of 1960 – 1980.

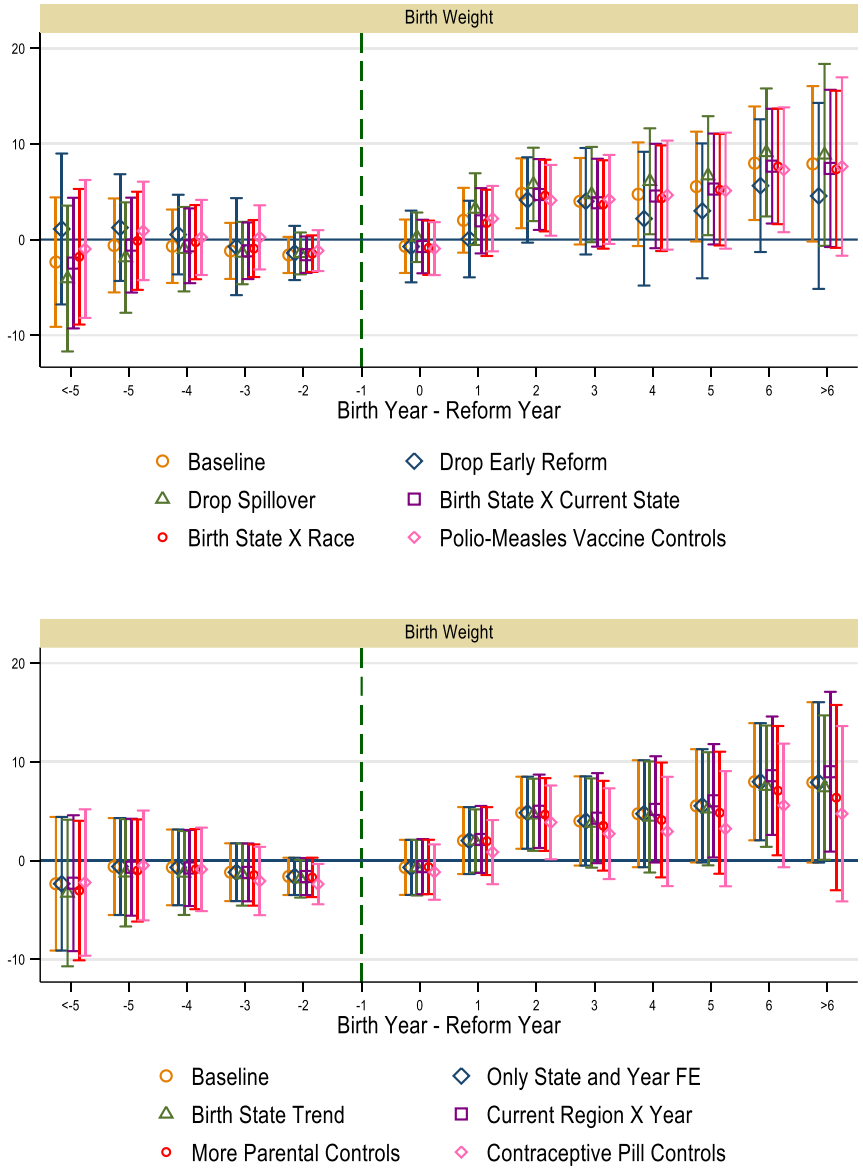
*** p<0.01, ** p<0.05, * p<0.1

Appendix Table B-19 – Placebo Test: Using Foreign-Born Mothers and Their State of Residence

	Outcomes:					
	Birth Weight	Low Birth Weight	Gestational Age	Preterm Birth	Fetal Growth	Small For Gestational Age
	(1)	(2)	(3)	(4)	(5)	(6)
Exposure	-1.67925	.00028	.00382	-.00097	-.06024*	.00084
	(1.52268)	(.00058)	(.0073)	(.00076)	(.03293)	(.00059)
Observations	753760	753760	753760	753760	753760	753760
R-squared	.35343	.09096	.22691	.09774	.39729	.1972
Mean DV	3303.010	0.068	38.818	0.110	84.893	0.098

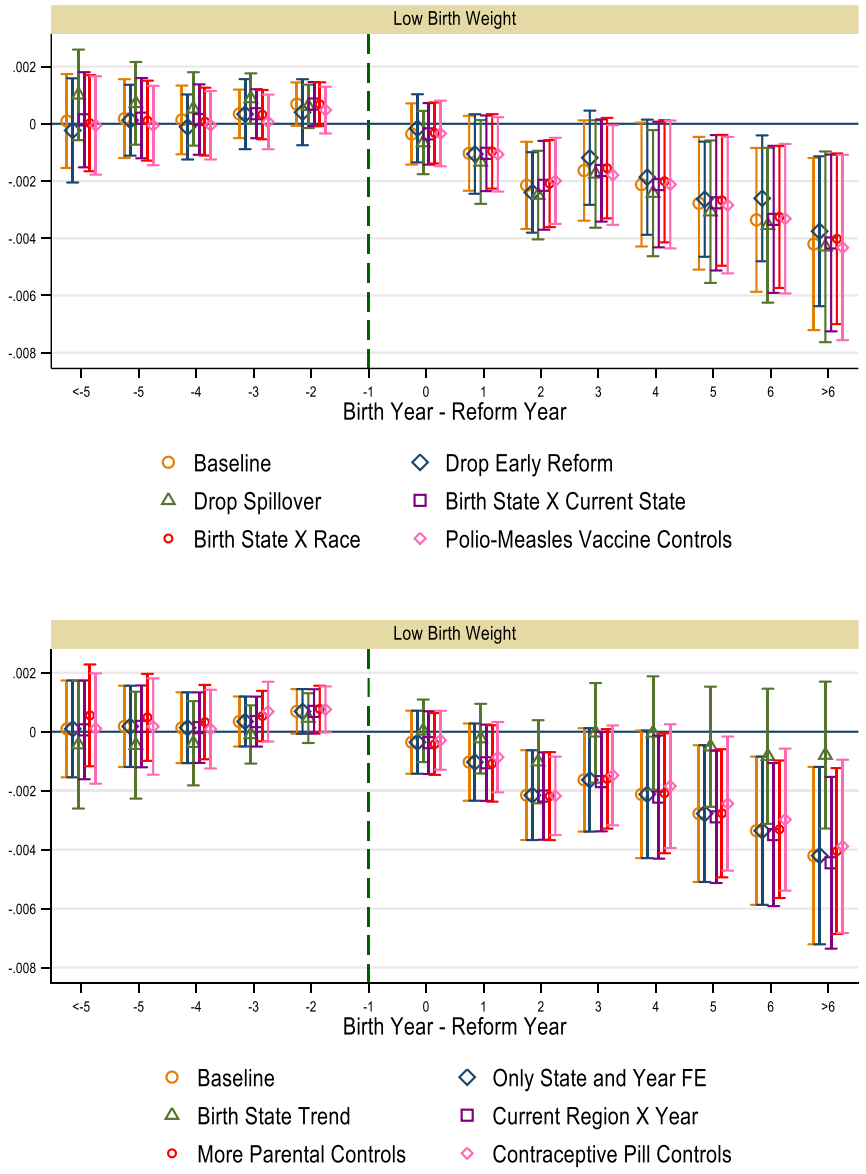
Standard errors, clustered on maternal birth state and birth year, are in parentheses. Regressions are weighted using birth counts in each cell. All regressions include maternal birth state fixed effects, maternal birth year by birth region fixed effects, child birth state fixed effects, child birth year fixed effects, maternal race, maternal education, maternal age, birth order, and child gender. Regressions also contain maternal birth state controls, including per capita income, per capita hospitals, per capita hospital beds, reported disease rates, share of women receiving AFDC, and dummies for exposure to Medicaid and FEPA. The data covers the years 1973-2017 for maternal cohorts of 1960 – 1980.

*** p<0.01, ** p<0.05, * p<0.1



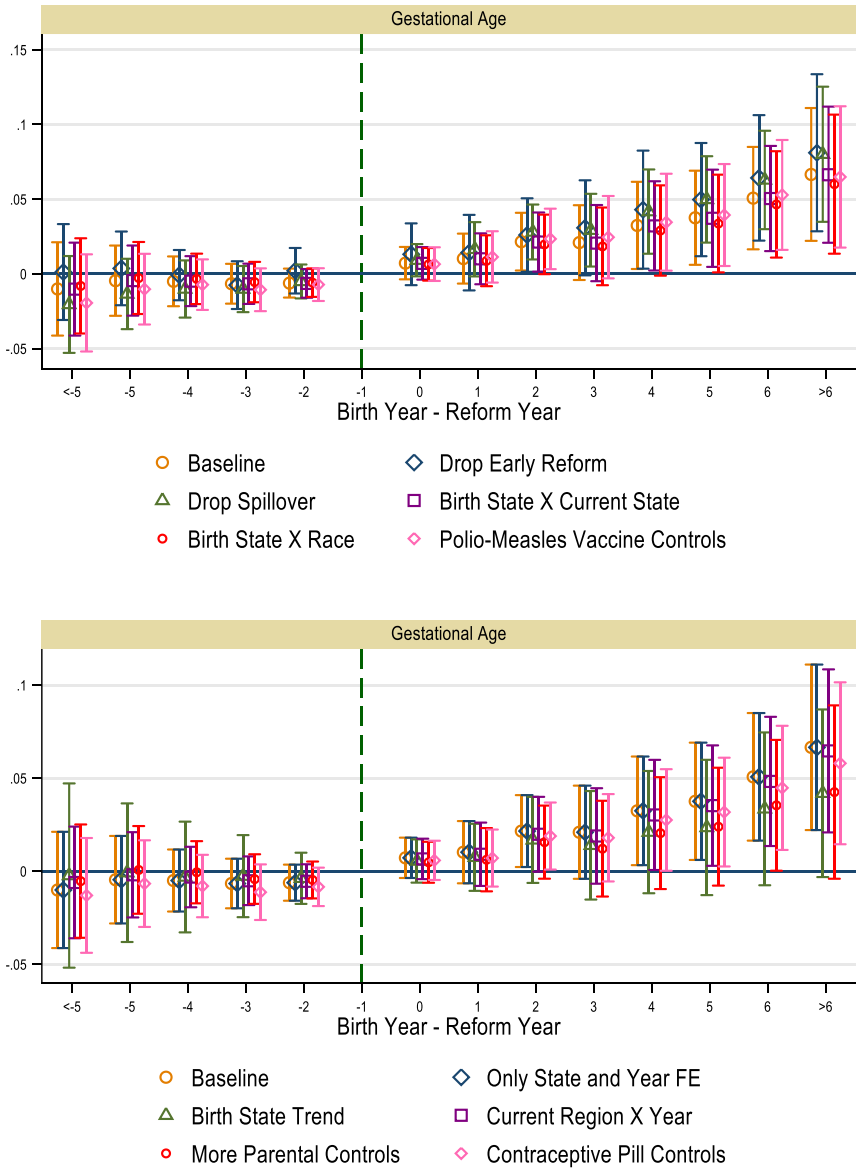
Appendix Figure B-1 - Event Study Analysis to Show the Robustness of the Results

Notes. Point estimates and 95% confidence intervals are illustrated. Standard errors are clustered on maternal birth state. Regressions are weighted using birth counts in each cell. All regressions include maternal birth state fixed effects, maternal birth year by birth region fixed effects, child birth state fixed effects, child birth year fixed effects, maternal race, maternal education, maternal age, birth order, and child gender. Regressions also contain maternal birth state controls, including per capita income, per capita hospitals, per capita hospital beds, reported disease rates, share of women receiving AFDC, and dummies for exposure to Medicaid and FEPA. The data covers the years 1973-2017 for maternal cohorts of 1960 – 1980.



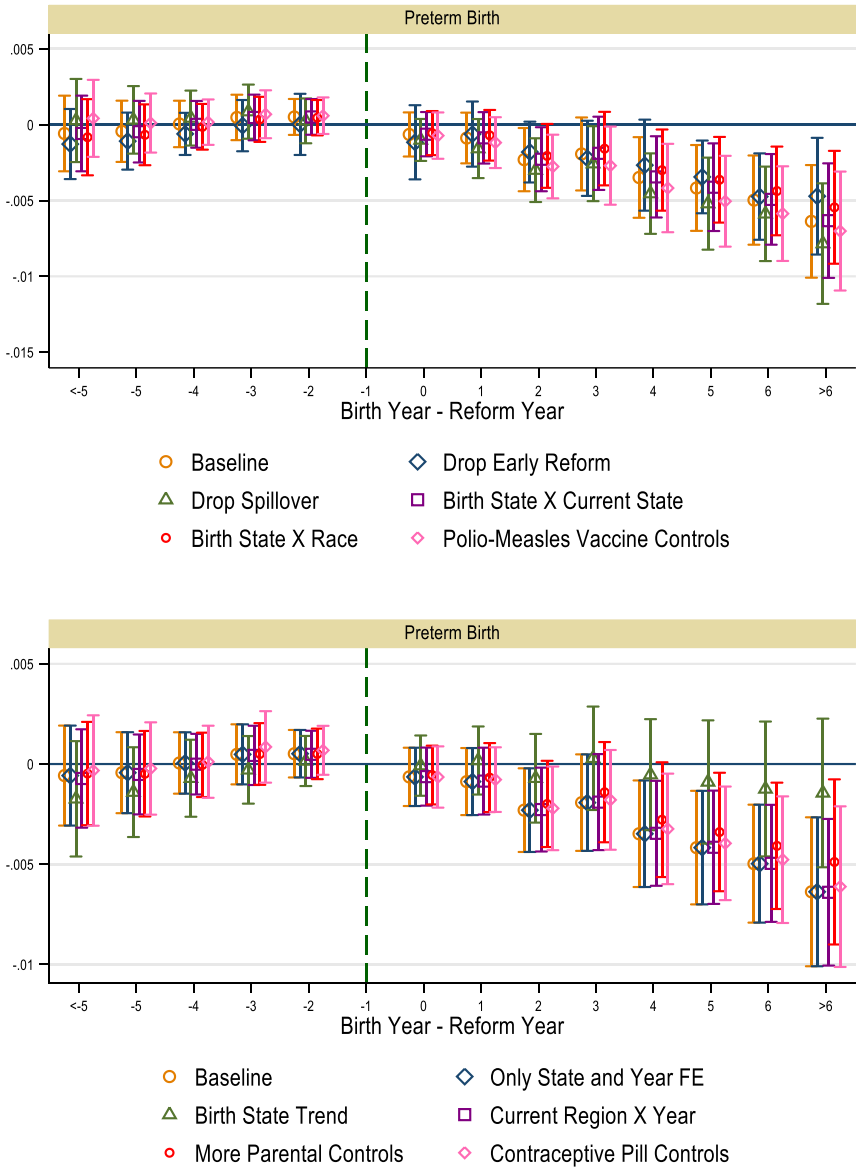
Appendix Figure B-2 - Event Study Analysis to Show the Robustness of the Results

Notes. Point estimates and 95% confidence intervals are illustrated. Standard errors are clustered on maternal birth state. Regressions are weighted using birth counts in each cell. All regressions include maternal birth state fixed effects, maternal birth year by birth region fixed effects, child birth state fixed effects, child birth year fixed effects, maternal race, maternal education, maternal age, birth order, and child gender. Regressions also contain maternal birth state controls, including per capita income, per capita hospitals, per capita hospital beds, reported disease rates, share of women receiving AFDC, and dummies for exposure to Medicaid and FEPA. The data covers the years 1973-2017 for maternal cohorts of 1960 – 1980.



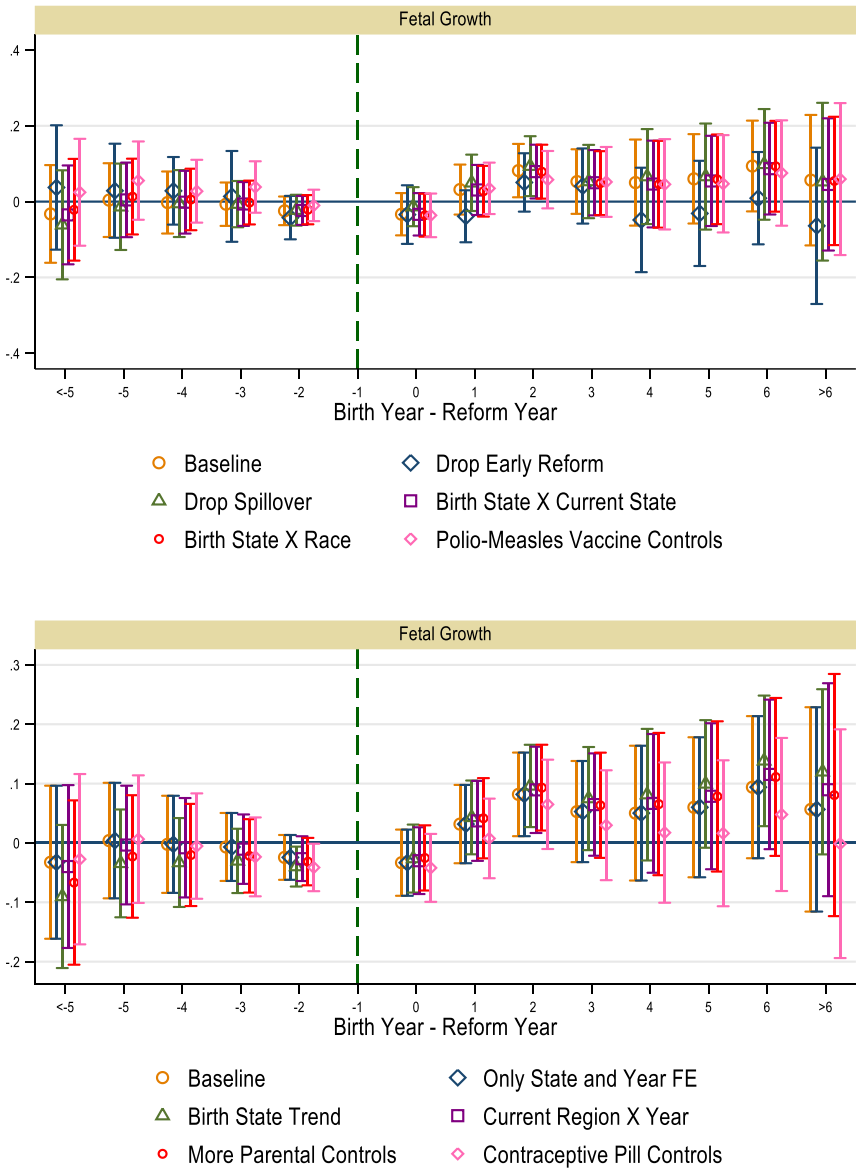
Appendix Figure B-3 - Event Study Analysis to Show the Robustness of the Results

Notes. Point estimates and 95% confidence intervals are illustrated. Standard errors are clustered on maternal birth state. Regressions are weighted using birth counts in each cell. All regressions include maternal birth state fixed effects, maternal birth year by birth region fixed effects, child birth state fixed effects, child birth year fixed effects, maternal race, maternal education, maternal age, birth order, and child gender. Regressions also contain maternal birth state controls, including per capita income, per capita hospitals, per capita hospital beds, reported disease rates, share of women receiving AFDC, and dummies for exposure to Medicaid and FEPA. The data covers the years 1973-2017 for maternal cohorts of 1960 – 1980.



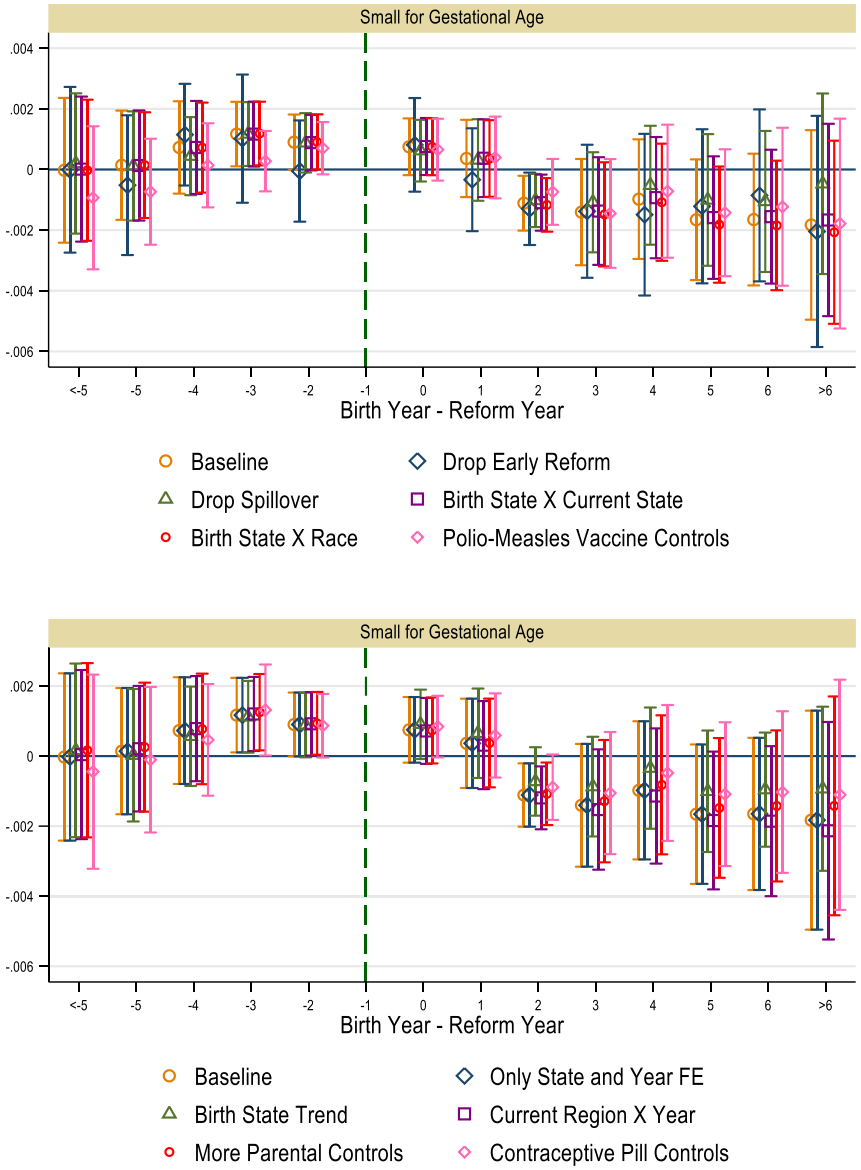
Appendix Figure B-4 - Event Study Analysis to Show the Robustness of the Results

Notes. Point estimates and 95% confidence intervals are illustrated. Standard errors are clustered on maternal birth state. Regressions are weighted using birth counts in each cell. All regressions include maternal birth state fixed effects, maternal birth year by birth region fixed effects, child birth state fixed effects, child birth year fixed effects, maternal race, maternal education, maternal age, birth order, and child gender. Regressions also contain maternal birth state controls, including per capita income, per capita hospitals, per capita hospital beds, reported disease rates, share of women receiving AFDC, and dummies for exposure to Medicaid and FEPA. The data covers the years 1973-2017 for maternal cohorts of 1960 – 1980.



Appendix Figure B-5 - Event Study Analysis to Show the Robustness of the Results

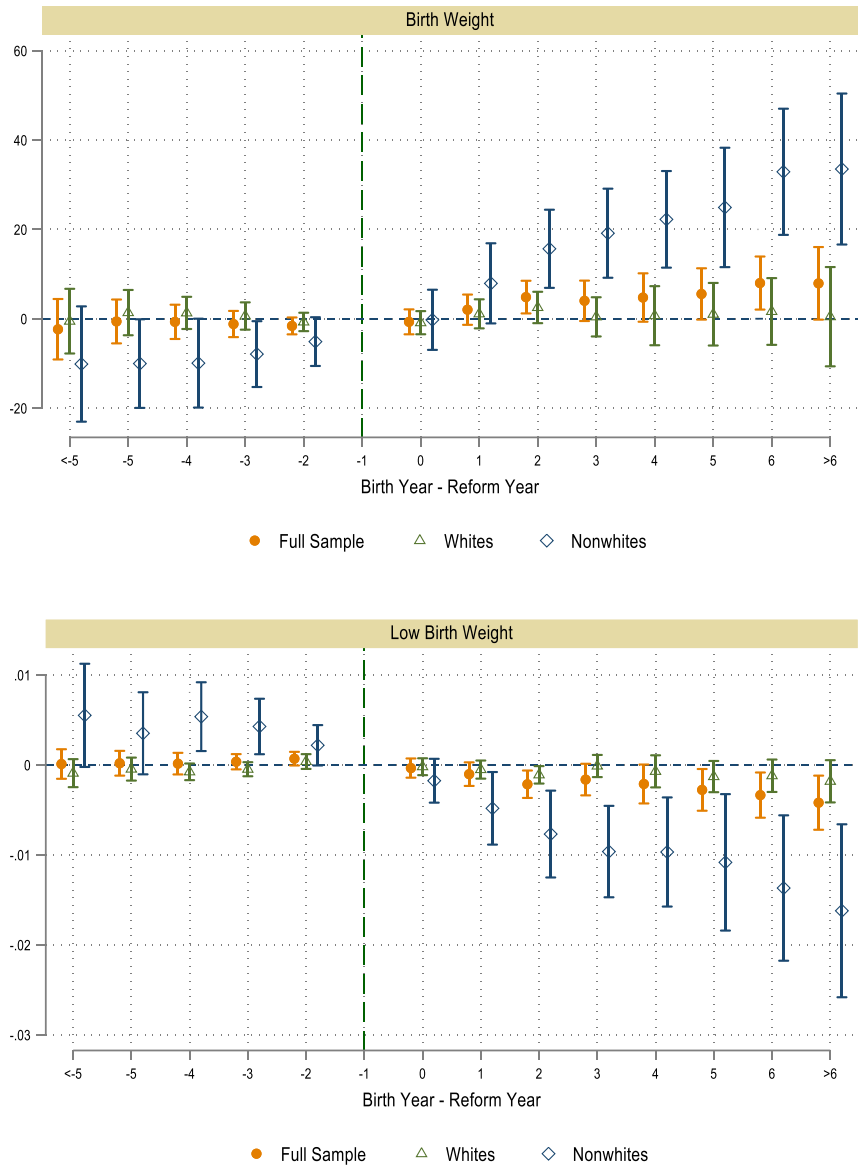
Notes. Point estimates and 95% confidence intervals are illustrated. Standard errors are clustered on maternal birth state. Regressions are weighted using birth counts in each cell. All regressions include maternal birth state fixed effects, maternal birth year by birth region fixed effects, child birth state fixed effects, child birth year fixed effects, maternal race, maternal education, maternal age, birth order, and child gender. Regressions also contain maternal birth state controls, including per capita income, per capita hospitals, per capita hospital beds, reported disease rates, share of women receiving AFDC, and dummies for exposure to Medicaid and FEPA. The data covers the years 1973-2017 for maternal cohorts of 1960 – 1980.



Appendix Figure B-6 - Event Study Analysis to Show the Robustness of the Results

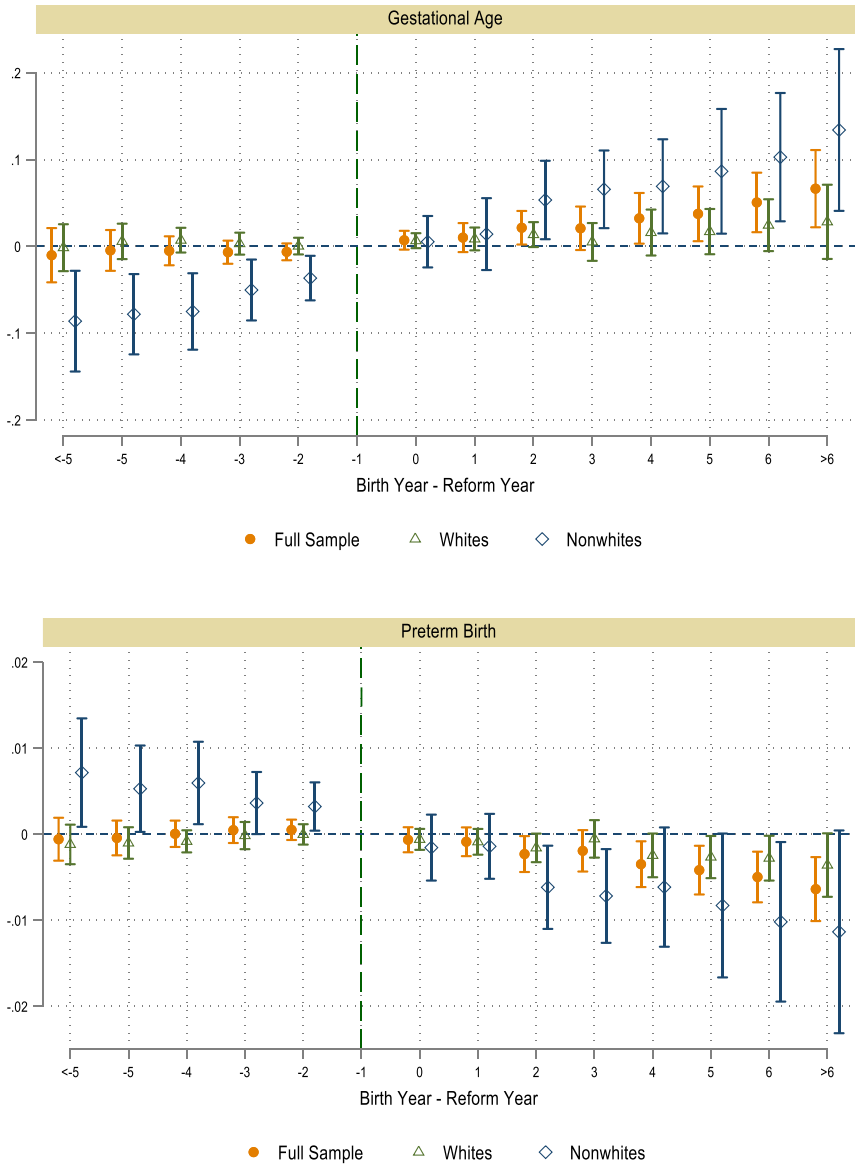
Notes. Point estimates and 95% confidence intervals are illustrated. Standard errors are clustered on maternal birth state. Regressions are weighted using birth counts in each cell. All regressions include maternal birth state fixed effects, maternal birth year by birth region fixed effects, child birth state fixed effects, child birth year fixed effects, maternal race, maternal education, maternal age, birth order, and child gender. Regressions also contain maternal birth state controls, including per capita income, per capita hospitals, per capita hospital beds, reported disease rates, share of women receiving AFDC, and dummies for exposure to Medicaid and FEPA. The data covers the years 1973-2017 for maternal cohorts of 1960 – 1980.

Appendix C



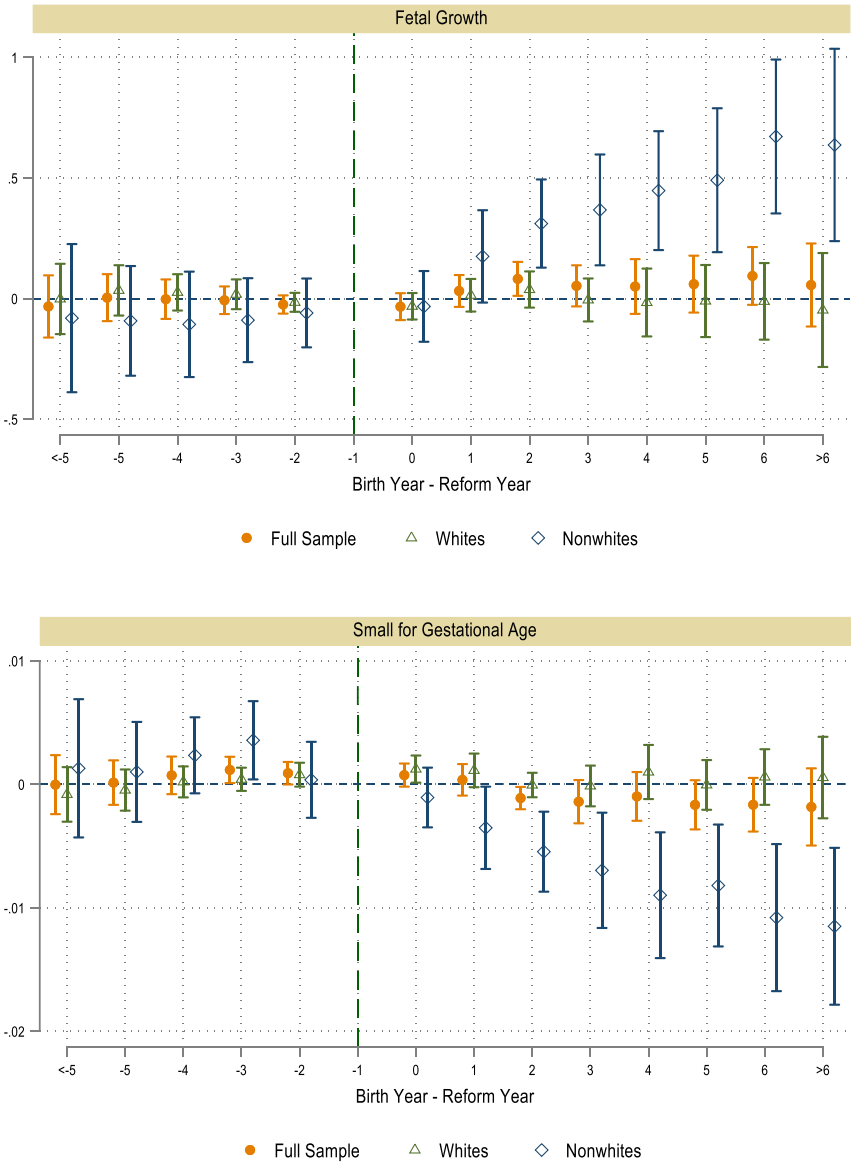
Appendix Figure C-1 - Event Study Analysis to Show the Heterogeneity by Race

Notes. The horizontal axis displays the difference between the mother's birth year and the year abortion was legalized in their state, with negative values indicating birth years prior to legalization and positive values indicating birth years after legalization. Point estimates and 95% confidence intervals are illustrated. Standard errors are clustered on maternal birth state. Regressions are weighted using birth counts in each cell. All regressions include maternal birth state fixed effects, maternal birth year by birth region fixed effects, child birth state fixed effects, child birth year fixed effects, maternal race, maternal education, maternal age, birth order, and child gender. Regressions also contain maternal birth state controls, including per capita income, per capita hospitals, per capita hospital beds, reported disease rates, share of women receiving AFDC, and dummies for exposure to Medicaid and FEPA. The data covers the years 1973-2017 for maternal cohorts of 1960 – 1980.



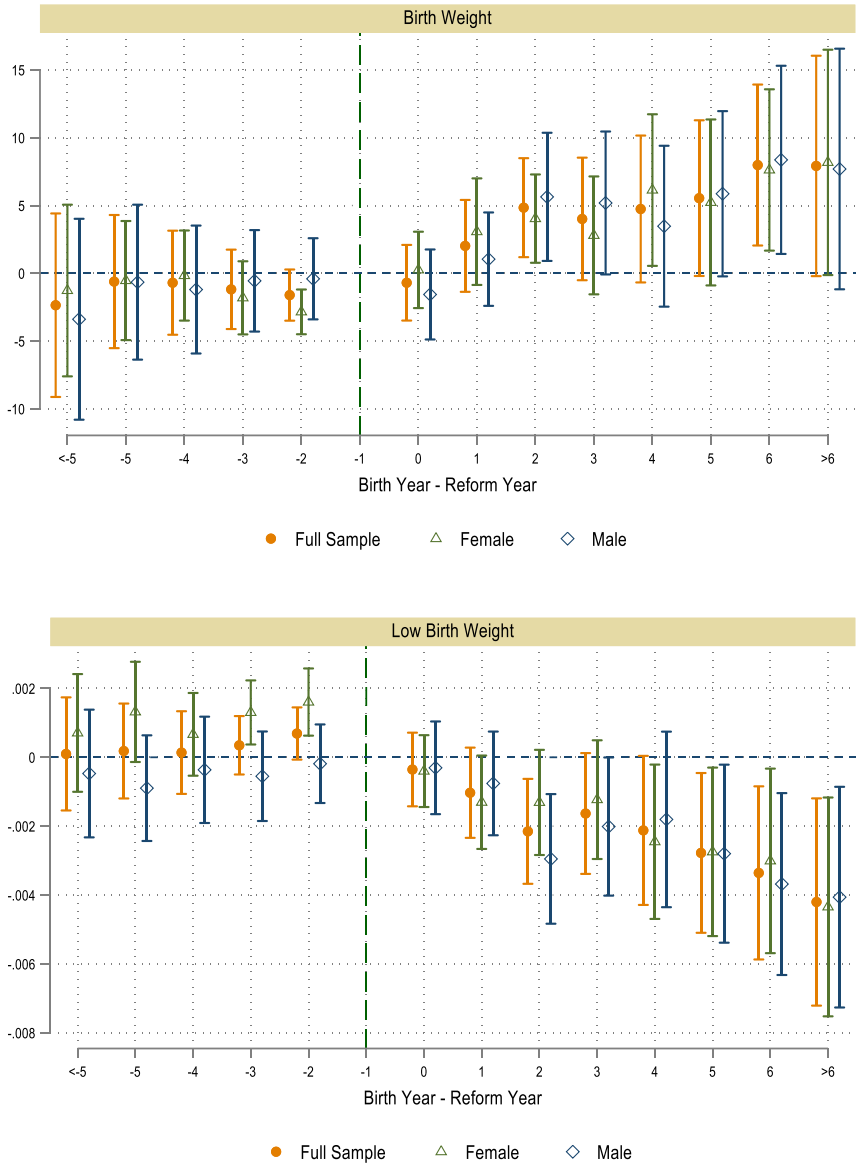
Appendix Figure C-2 - Event Study Analysis to Show the Heterogeneity by Race

Notes. The horizontal axis displays the difference between the mother's birth year and the year abortion was legalized in their state, with negative values indicating birth years prior to legalization and positive values indicating birth years after legalization. Point estimates and 95% confidence intervals are illustrated. Standard errors are clustered on maternal birth state. Regressions are weighted using birth counts in each cell. All regressions include maternal birth state fixed effects, maternal birth year by birth region fixed effects, child birth state fixed effects, child birth year fixed effects, maternal race, maternal education, maternal age, birth order, and child gender. Regressions also contain maternal birth state controls, including per capita income, per capita hospitals, per capita hospital beds, reported disease rates, share of women receiving AFDC, and dummies for exposure to Medicaid and FEPA. The data covers the years 1973-2017 for maternal cohorts of 1960 – 1980.



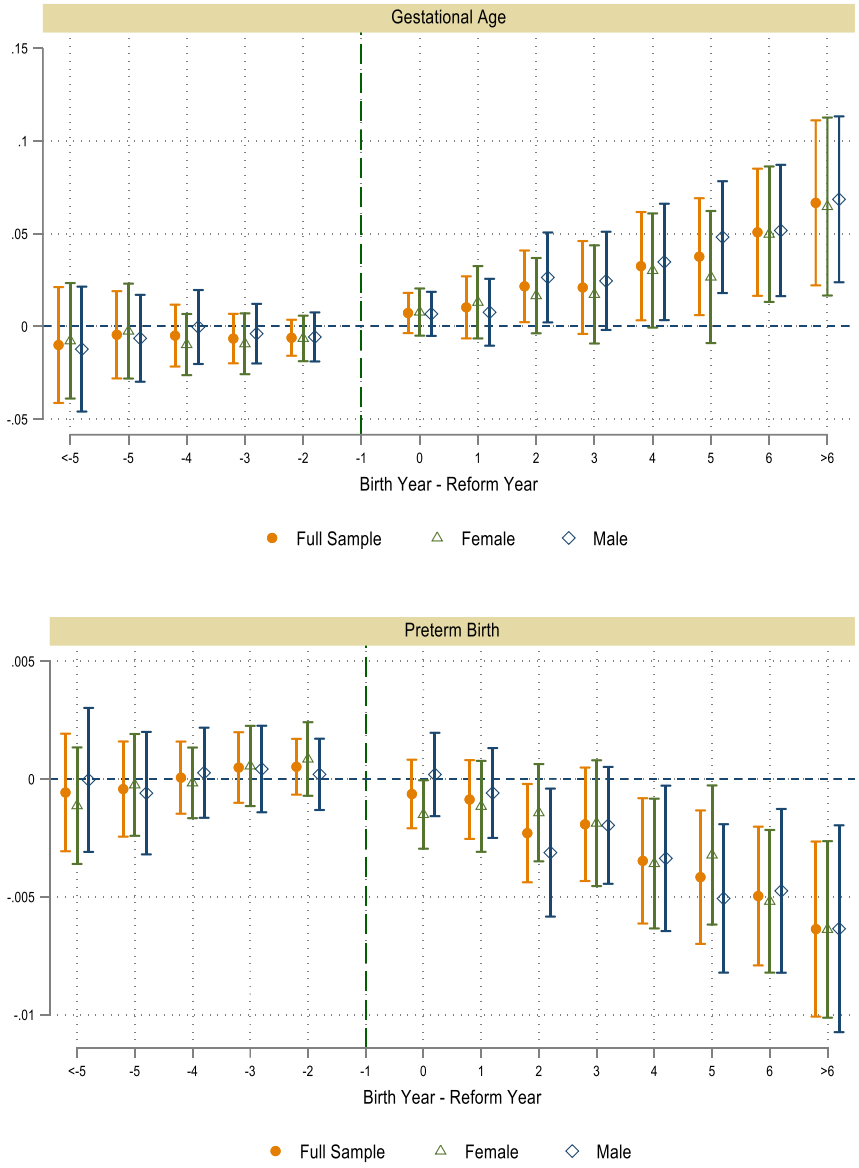
Appendix Figure C-3 - Event Study Analysis to Show the Heterogeneity by Race

Notes. The horizontal axis displays the difference between the mother's birth year and the year abortion was legalized in their state, with negative values indicating birth years prior to legalization and positive values indicating birth years after legalization. Point estimates and 95% confidence intervals are illustrated. Standard errors are clustered on maternal birth state. Regressions are weighted using birth counts in each cell. All regressions include maternal birth state fixed effects, maternal birth year by birth region fixed effects, child birth state fixed effects, child birth year fixed effects, maternal race, maternal education, maternal age, birth order, and child gender. Regressions also contain maternal birth state controls, including per capita income, per capita hospitals, per capita hospital beds, reported disease rates, share of women receiving AFDC, and dummies for exposure to Medicaid and FEPA. The data covers the years 1973-2017 for maternal cohorts of 1960 – 1980.



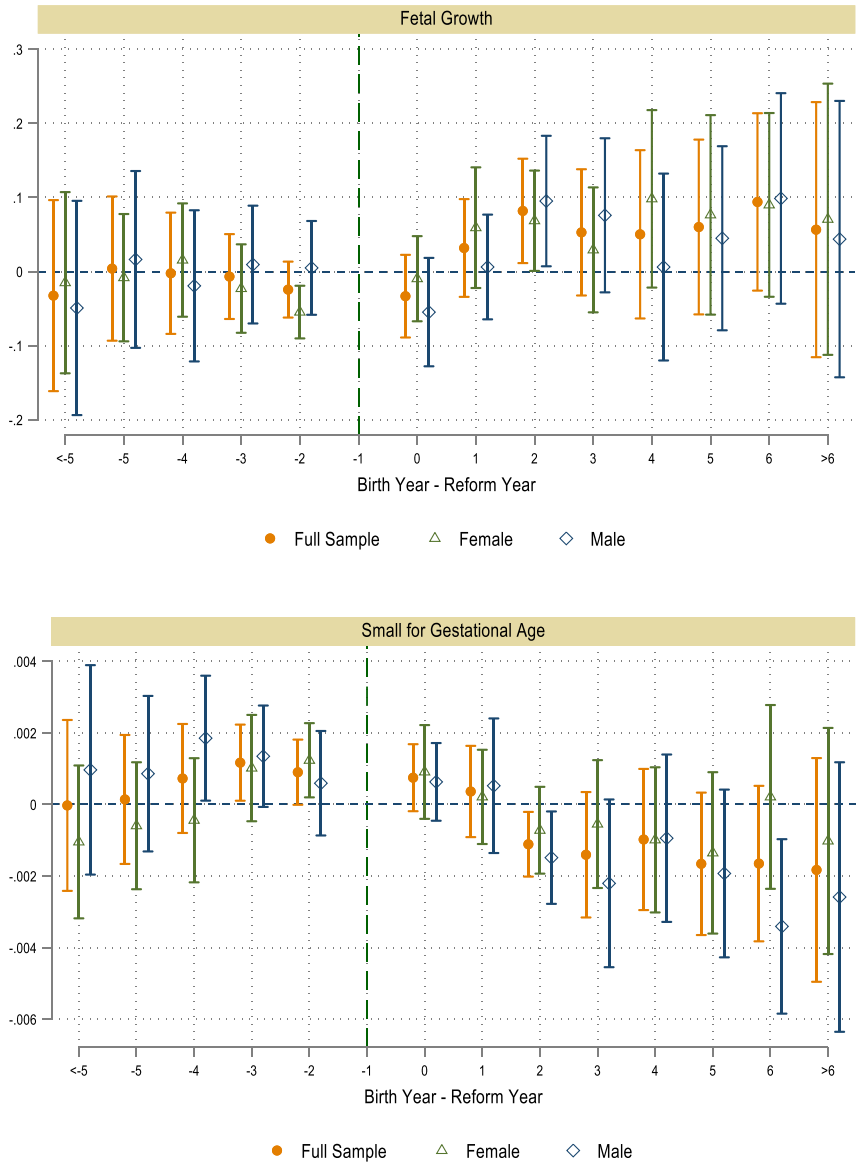
Appendix Figure C-4 - Event Study Analysis to Show the Heterogeneity by Gender

Notes. The horizontal axis displays the difference between the mother's birth year and the year abortion was legalized in their state, with negative values indicating birth years prior to legalization and positive values indicating birth years after legalization. Point estimates and 95% confidence intervals are illustrated. Standard errors are clustered on maternal birth state. Regressions are weighted using birth counts in each cell. All regressions include maternal birth state fixed effects, maternal birth year by birth region fixed effects, child birth state fixed effects, child birth year fixed effects, maternal race, maternal education, maternal age, birth order, and child gender. Regressions also contain maternal birth state controls, including per capita income, per capita hospitals, per capita hospital beds, reported disease rates, share of women receiving AFDC, and dummies for exposure to Medicaid and FEPA. The data covers the years 1973-2017 for maternal cohorts of 1960 – 1980.



Appendix Figure C-5 - Event Study Analysis to Show the Heterogeneity by Gender

Notes. The horizontal axis displays the difference between the mother's birth year and the year abortion was legalized in their state, with negative values indicating birth years prior to legalization and positive values indicating birth years after legalization. Point estimates and 95% confidence intervals are illustrated. Standard errors are clustered on maternal birth state. Regressions are weighted using birth counts in each cell. All regressions include maternal birth state fixed effects, maternal birth year by birth region fixed effects, child birth state fixed effects, child birth year fixed effects, maternal race, maternal education, maternal age, birth order, and child gender. Regressions also contain maternal birth state controls, including per capita income, per capita hospitals, per capita hospital beds, reported disease rates, share of women receiving AFDC, and dummies for exposure to Medicaid and FEPA. The data covers the years 1973-2017 for maternal cohorts of 1960 – 1980.



Appendix Figure C-6 - Event Study Analysis to Show the Heterogeneity by Gender

Notes. The horizontal axis displays the difference between the mother's birth year and the year abortion was legalized in their state, with negative values indicating birth years prior to legalization and positive values indicating birth years after legalization. Point estimates and 95% confidence intervals are illustrated. Standard errors are clustered on maternal birth state. Regressions are weighted using birth counts in each cell. All regressions include maternal birth state fixed effects, maternal birth year by birth region fixed effects, child birth state fixed effects, child birth year fixed effects, maternal race, maternal education, maternal age, birth order, and child gender. Regressions also contain maternal birth state controls, including per capita income, per capita hospitals, per capita hospital beds, reported disease rates, share of women receiving AFDC, and dummies for exposure to Medicaid and FEPA. The data covers the years 1973-2017 for maternal cohorts of 1960 – 1980.