FERTILITY EFFECTS OF ABORTION AND BIRTH CONTROL PILL ACCESS FOR MINORS*

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This article empirically assesses whether age-restricted access to abortion and the birth control pill influence minors' fertility in the United States. There is not a strong consensus in previous literature regarding the relationship between laws restricting minors' access to abortion and minors' birthrates. This is the first study to recognize that state laws in place prior to the 1973 Roe v. Wade decision enabled minors to legally consent to surgical treatment—including abortion—in some states but not in others, and to construct abortion access variables reflecting this. In this article, age-specific policy variables measure either a minor's legal ability to obtain an abortion or to obtain the birth control pill without parental involvement. I find fairly strong evidence that young women's birthrates dropped as a result of abortion access as well as evidence that birth control pill access led to a drop in birthrates among whites.

Previous studies examining the impact of abortion legalization on birthrates have not recognized that at the time of abortion legalization, minors' access to abortion was limited by parental involvement laws in some U.S. states; and these studies have not considered the impact of a minor's access to the birth control pill (Levine 2004; Levine et al. 1999). Although the finding of a negative relationship between abortion legalization and birthrates is robust across studies, these results suffer from potential omitted variables bias because they do not account for minors' access to birth control pills (the Pill). More recently, authors have considered abortion legalization and legal access to the Pill in the same analysis. However, abortion access is measured by whether abortion is legal for adults in the state when a woman is a particular age (usually 18 or 21), and not by whether a minor had legal access to abortion (Ananat and Hungerman 2007; Bailey 2006; and Goldin and Katz 2002). Although these authors have found a negative relationship between early legal access to the Pill and births, the impact that minors' access to oral contraceptives had on birthrates during this period has not been studied extensively, and the contemporaneous impact of minors' legal access to abortion has not been examined. Unlike previous research, this study constructs policy variables to measure minors' legal access to abortion during the late 1960s and early 1970s and examines the impact that minors' access to abortion and the Pill have on birthrates

Laws changing minors' access to abortion or the Pill alter the costs of preventing or terminating pregnancies. These cost changes have theoretically ambiguous impacts on birthrates. Consequently, to determine the size and direction of the change in birthrates attributable to changes in minor access, data must be examined empirically.

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^{1.} An existing body of literature develops the economic theory of fertility and provides more technical detail (see, e.g., Akerlof, Yellen, and Katz 1996; Ananat et al. 2006; Becker 1960, 1981; Becker and Lewis 1973; Heckman and Willis 1975; Kane and Staiger 1996; Levine 2004; Levine and Staiger 2002; and Willis 1999). When the cost of the Pill and of abortion change simultaneously, the predicted impact on the birthrate is theoretically ambiguous and depends on (a) the cost of abortion relative to the cost of giving birth; (b) the cost of the Pill relative to its expected decrease in the probability of pregnancy; (c) the distribution of these costs across the population.

It is important to understand how large the behavioral response to the policy is because changes may affect minors' own outcomes as well as outcomes of the next generation. Recent work has shown that women's short- and long-term fertility as well as career and labor force outcomes are influenced by access to abortion and/or the Pill (Ananat, Gruber, and Levine 2007; Ananat and Hungerman 2007; Bailey 2006; and Goldin and Katz 2002). Additionally, children's outcomes—such as educational attainment, welfare use, criminal activity, and child fatal injury rates—have been associated with access to abortion and/or the Pill (Ananat et al. 2006; Charles and Stephens 2006; Donohue and Levitt 2001; Gruber, Levine, and Staiger 1999; Lott and Whitley 2007; Pantano 2007; Sen 2007). Some authors have argued that the impact on the next generation operates via a change in cohort size, while others have argued that the impact is due to a selection mechanism (Ananat et al. 2006; Lott and Whitley 2007). Still others have questioned the magnitude of the effect on the next generation (Foote and Goetz 2005; Joyce 2004). Regardless, it is important to understand how much fertility policies influence birthrates. This article explores the relative impacts of minors' access to abortion and the Pill on birthrates.

Previous work has found that abortion legalization decreased the teen birthrate by 2%–13% (Angrist and Evans 1999; Levine et al. 1999; Sklar and Berkov 1974). Other state-level research shows that laws restricting minors' access to abortion (beginning in the mid-1970s) had little effect on the birthrate (Bitler and Zavodny 2001; Blank, George, and London 1996; Cartoof and Klerman 1986; Joyce and Kaestner 1996; Joyce, Kaestner, and Colman 2006; Kane and Staiger 1996; Levine 2003; Rogers et al. 1991). However, these authors generally failed to account for access to contraception, and no author has examined the relationship between the birthrate and parental involvement laws that governed minors' access to abortion in the United States during the late 1960s and the 1970s.

This article explores the relationship among *minors* 'access to abortion, *minors*' access to the Pill, and the birthrate. The impact of state law changes on the birthrates of women ages 15–21 is analyzed using a model that controls for age, state, year, and unrestricted state-year fixed effects. I find that for whites, providing minors with abortion access and/or access to the Pill leads to a reduction in birthrates. These effects are strongest among unmarried first-time mothers.

STATE LAWS REGULATING MINORS' ACCESS TO THE PILL AND TO ABORTION

The cost of pregnancy prevention was drastically reduced when the U.S. Food and Drug Administration (FDA) approved the nearly 100%-effective birth control pill (the Pill) in 1960. Almost immediately, married women began using it to control their fertility. However, unmarried women and minors were not afforded the same access as married women. The age at which a minor could obtain contraception without the consent of her parent(s) varied by state during the late 1960s and early 1970s. For some states during this period, the age of consent was simply the age of majority; for others, it was governed by a mature minor doctrine or an explicit medical consent law for minors.² Table 1 shows the number of states where minors of a particular age had legal access to the Pill without parental involvement for each year examined in this article.³

Even with the availability of the Pill, the cost of terminating unplanned pregnancies remained high until legislative and judicial action gave *adult* women legal access to

^{2.} Bailey (2006) and Goldin and Katz (2002) discussed the legal environment related to the Pill more extensively.

^{3.} The age at which a minor could have obtained the Pill without parental involvement is, in some states, the same age at which a minor could obtain other less-effective forms of contraception without parental involvement. In this article, *access to the Pill* can be thought of as access to contraception. Therefore, the interpretation of any results in this article could be construed more broadly as access to contraception rather than simply the birth control pill.

Table 1. Number of States With Minor Access, by Age of Minor and Year Giving Birth

		1	Access Measur	e			I	Access Measur	e
Year	Age	Pill	Abortion	Both	Year	Age	Pill	Abortion	Both
1968	15	3	0	0	1972	15	14	3	0
1968	16	3	0	0	1972	16	16	3	0
1968	17	3	0	0	1972	17	16	4	1
1968	18	7	0	0	1972	18	32	7	5
1968	19	8	0	0	1972	19	35	7	6
1968	20	9	0	0	1972	20	37	7	6
1968	21	51	0	0	1972	21	51	7	7
1969	15	4	0	0	1973	15	17	14	8
1969	16	4	0	0	1973	16	20	14	9
1969	17	4	0	0	1973	17	20	15	10
1969	18	9	0	0	1973	18	43	42	38
1969	19	10	0	0	1973	19	46	44	42
1969	20	11	0	0	1973	20	46	44	42
1969	21	51	0	0	1973	21	51	51	51
1970	15	6	1	0	1974	15	17	17	8
1970	16	7	1	0	1974	16	20	18	10
1970	17	7	1	0	1974	17	20	19	11
1970	18	13	1	0	1974	18	49	48	47
1970	19	14	1	0	1974	19	51	50	50
1970	20	17	1	1	1974	20	51	50	50
1970	21	51	2	2	1974	21	51	51	51
1971	15	6	2	0	1975	15	21	22	12
1971	16	7	2	0	1975	16	24	23	14
1971	17	7	3	0	1975	17	24	24	15
1971	18	13	5	0	1975	18	50	49	49
1971	19	15	5	2	1975	19	51	51	51
1971	20	17	5	2	1975	20	51	51	51
1971	21	51	5	5	1975	21	51	51	51

(continued)

abortions beginning in the late 1960s.⁴ In 1973, the landmark *Roe v. Wade* court decision legalized abortion for adult women, although not necessarily minors, in all states. Prior to *Roe v. Wade*, some states had reformed laws to allow for abortion under a number of circumstances, such as rape, incest, severe defect of the fetus, or when the health or life of the woman was in danger (Alan Guttmacher Institute 2003). Nine of these states incorporated

^{4.} Prior authors (e.g., Bitler and Zavodny 2002; Levine et al. 1999; Merz, Jackson, and Klerman 1995; U.S. DHEW 1974) discussed the timing of legalized abortion in detail. In this article, I assume the following timing: California in 1969; Alaska, Hawaii, New York, and Washington in 1970; New Jersey and Vermont in 1972; and all other states in 1973.

(Table 1, continued)

			Access Measur	·e				Access Measur	:e
Year	Age	Pill	Abortion	Both	Year	Age	Pill	Abortion	Both
1976	15	26	26	17	1977	19	51	51	51
1976	16	28	27	19	1977	20	51	51	51
1976	17	28	28	20	1977	21	51	51	51
1976	18	50	50	49	1978	15	27	35	19
1976	19	51	51	51	1978	16	29	35	21
1976	20	51	51	51	1978	17	29	36	22
1976	21	51	51	51	1978	18	50	50	49
1977	15	27	35	20	1978	19	51	51	51
1977	16	29	35	22	1978	20	51	51	51
1977	17	29	36	23	1978	21	51	51	51
1977	18	50	50	49					

Notes: Number of states that would have allowed a minor mother giving birth at age *a* access to the Pill at the time of pregnancy or to abortion within the first three months of pregnancy. Minors acquire access when state laws enable them to obtain an abortion or the Pill without parental involvement. Across data sources, there is sometimes disagreement with regard to laws governing minor access. When this is the case, I use the age that is most consistent across sources. This necessarily results in some mismatch relative to other articles using similar policy variables. If no specific access age is given in the data source or if the minimum falls below age 14, I code the age as 14 because this is the youngest age in the data I use.

Sources: Alan Guttmacher Institute (2003, 1978); Council of State Governments (1972, 1973); Merz et al. (1995); Paul and Pilpel (1979); Paul, Pilpel, and Wechsler (1974, 1976); and Pilpel and Wechsler (1969, 1971); U.S. DHEW (1974).

a parental involvement feature into their reformed statutes. Even after *Roe v. Wade*, some states continued to enforce the parental involvement component of the existing abortion laws, at least for some period. For example, South Carolina passed a parental consent law in January 1970. Although this law was ruled unconstitutional in July 1973, a new parental consent law was passed in 1974 (Merz et al. 1995; U.S. DHEW 1974). Also, some states passed parental involvement laws very shortly after *Roe v. Wade*. For example, South Dakota had a parental consent law for abortions beginning March 1973 (Merz et al. 1995). However, the majority of states did not have explicit parental involvement laws during the early 1970s, and such legislation did not become widespread until the 1980s (Greenberger and Connor 1991; Haas-Wilson 1996; Levine 2004; Merz et al. 1995).

The absence of parental involvement laws did not necessarily mean that minors had legal access to abortion. Abortion is considered a surgical procedure. Consequently, without an explicit parental involvement law, the legal ability of a minor to consent to medical treatment governed whether a minor had legal access to abortion. For some states, the laws that determined a minor's access to abortion and oral contraceptives were the same. In other states, minors of a certain age had access to the Pill but not to abortion (e.g., California and South Carolina) or vice versa (e.g., Nebraska and Washington).

States that enacted parental consent laws during the 1970s sometimes did not include a health exception. This meant that even if a young woman's life were at risk, parental consent would still be required to obtain an abortion. In July 1976, the U.S. Supreme Court ruled this to be unconstitutional in the case of *Planned Parenthood of Central Missouri v. Danforth*. Consequently, state parental consent laws without health exceptions were invalidated and presumably unenforceable after this ruling. After this ruling, minors in a subset of states gained legal access to abortion. In contrast, state parental-consent laws with a health exception but without a judicial-bypass feature could have been enforced

until the U.S. Supreme Court decision for *Bellotti v. Baird* in July 1979 (Paul and Pilpel 1979). Table 1 shows the number of states where minors could legally consent to having an abortion, taking the Pill, or doing both without parental involvement by age for each year from 1968 to 1978.

EMPIRICAL MODEL

Vital statistics data (U.S. DHHS 1968–1979), U.S. census data (1970–1980), and state-level policy variables described in Table 1 are combined into one data set. The dependent variable is the natural log of the birthrate. The birthrate is constructed by dividing the number of births by population (in thousands) for each age, race, and state group constructed. The empirical model employs a difference-of-difference-of-difference (DoDoD) estimator (Gruber 1994; Meyer 1995), which measures the impact of access to abortion and oral contraceptives on the birthrates of young women. Regressions are of the following form:

$$\operatorname{Ln}(Birthrate)_{sat} = \beta_1 + \beta_2 Pill_{sat} + \beta_3 Abortion_{sat} + \beta_4 \delta_s + \beta_5 \tau_t + \beta_6 A_a + \beta_7 \delta_s X \tau_t + \epsilon_{sat}, \tag{1}$$

where s is state of residence, a represents age of mother at birth, and t is the year when the mother gives birth. The dependent variable is the natural log of the number of births per thousand women in an age (see Eq. (2)):

$$Ln(Birthrate)_{sat} = Ln(Number\ of\ Births_{sat}\ /\ (Population_{sat}\ /\ 1,000). \tag{2}$$

Access is measured with two variables— $Pill_{sat}$ and $Abortion_{sat}$ —and is determined by laws in place during the year in which a minor would have become pregnant (year t-1) instead of the year when she would have given birth (year t) to take account of the difference in timing between law change and birth outcome. $Pill_{sat}$ is an indicator equal to 1 if a minor age a in state s in year t was old enough in the previous year to obtain birth control pills without her parent's consent. $Abortion_{sat}$ is an indicator equal to 1 if a minor of age a in state s and year t was old enough to obtain an abortion without parental consent in year t-1.5 Summary statistics are provided in Table 2.

The differences by race in minors' responses to changes in access to either the Pill or abortion (Angrist and Evans 1999; Henshaw and Kost 1992; Levine et al. 1999; Reddy, Fleming, and Swain 2002; and Zavodny 2004) suggest that it is important to examine the impact of these policies by race rather than by averaging the effect over a less-stratified group. Therefore, I perform the analysis separately by race. Age, state, and year fixed effects, as well as state-year fixed effects (a full set of indicator variables for state and year, fully interacted, that create coefficient vector β_7), are included in all regressions to control for factors that may be correlated with the policy as well as the birthrate. The baseline specification compares different-aged individuals within states using age, state, year, and state-year fixed effects. The data are analyzed using ordinary least-squares (OLS) regression, weighted by the population of the state-year-age cell. Estimated heteroskedastic, robust standard errors take into account clustering⁶ at the state level because errors may be serially correlated within state (Bertrand, Duflo, and Mullainathan 2004).

RESULTS

Results are presented in Table 3 separately for whites and nonwhites. Each column represents a separate regression. All regressions control for age, state, and year fixed effects, as

^{5.} Alternatives to the timing used in these definitions of the policy variables are discussed later in the article.

^{6.} These standard errors are computed using the cluster command in Stata version 9.2.

	Observations	Mean	SD	Minimum	Maximum
Pill	8,568	0.480	0.500	0	1
Abortion	8,568	0.373	0.484	0	1
Age	8,568	18	2	15	21
Year	8,568	1973.5	3.5	1968	1979
Whites					
Birthrate	4,283	70.23	49.11	1.49	332.40
Ln(Birthrate)	4,284	3.89	0.99	-0.69	5.81
Population	4,284	33,154	34,876	652	192,621
Nonwhites					
Birthrate	4,194	127.19	64.86	4.20	602.57
Ln(Birthrate)	4,284	4.57	0.99	-0.69	6.40
Population	4,284	5,806	6,609	9	34,069

Notes: Each observation is at the state-year-age cell. *Birthrate* is the number of births per 1,000 women in the state-year-age cell, computed separately by race. When the birthrate = 0, $\ln(Birthrate)$ is replaced with $\ln(1/2)$. Pill = 1 if minor age a in state s in year t had access to the birth control pill without parental involvement in year t - 1. Abortion = 1 if minor age a in state s in year t had access to an abortion without parental involvement in year t - 1.

Source: As described in the text of the article, data on births come from the 1968–1979 Vital Statistics Natality Detail Files, and population estimates come from the U.S. Census Bureau. Policy Variables come from sources listed in the notes to Table 1.

well as state-year fixed effects. Among whites, a minor's access to abortion and the Pill are associated with a drop in birthrates, whereas the evidence is much weaker for nonwhites. The findings are fairly robust across different specifications for abortion access, but less so for access to oral contraceptives.

The baseline results are reported in column 1 of Table 3. Access to the Pill (*Pill_{sat}*) is associated with a 8.5% drop in whites' birthrates, which is consistent with previous work showing that access to oral contraceptives increases age at first birth (Ananat and Hungerman 2007; Bailey 2006). Abortion access (*Abortion_{sat}*) is associated with a 10% drop in whites' birthrates.⁸ This is in contrast to the near zero effect found by other authors examining 1980s state laws restricting minors' access to abortion (Bitler and Zavodny 2001; Blank et al. 1996; Cartoof and Klerman 1986; Joyce and Kaestner 1996; Joyce et al. 2006; Kane and Staiger 1996; Levine 2003; Rogers et al. 1991). The estimates in column 1 indicate that access to oral contraceptives and abortion have similar negative effects on whites' birthrates. In the baseline specification, no statistically significant relationship is found for nonwhites.

Birth Order, Nonmarital Births, and Marital Births

During the period considered, minors who were married or who were already mothers were usually emancipated, meaning that they would have had access to the Pill and/or abortion prior to many of the law changes discussed earlier in this article. Consequently, changes in laws governing minors' access would be expected to have little or no effect on the fertility decisions of minors who were already mothers or who were married when they became pregnant. This could attenuate the estimated relationship between births and access

^{7.} Including state annual crime rate, unemployment rate, and state income per capita rather than state-year fixed effects yields results that are similar to those in the baseline specification.

^{8.} The magnitude and significance of the Pill and abortion estimates do not change appreciably when they are estimated in separate regressions, rather than in the same regression.

OLS Regression Coefficients Predicting the Birthrate, by Access to the Pill, Access to Abortion, and Type of Birth Table 3.

			Births	Births Data Used to Compute Dependent Variable	pute Dependent	Variable		
	All Births (1)	Nonmarital Births (2)	First Births (3)	Nonmarital First Births (4)	Second+ Births (5)	All Births Monthly (6)	All Births (7)	All Births in Levels (8)
Whites								
Access to the Pill	-0.085* (0.041)	-0.052 (0.038)	-0.090^{\dagger} (0.045)	-0.083* (0.038)	-0.036 (0.059)	0.019 (0.032)	-0.020 (0.045)	-7.599* (3.243)
Access to abortion	-0.100^{\dagger} (0.054)	-0.172** (0.049)	-0.098 (0.063)	-0.164** (0.029)	-0.080 (0.053)	-0.155** (0.032)	-0.137** (0.037)	-14.412** (3.654)
Nonwhites								
Access to the Pill	0.009 (0.051)	0.016 (0.036)	-0.005 (0.062)	-0.048 (0.057)	0.088 (0.066)	0.051 (0.037)	0.051 (0.077)	-5.971 (3.846)
Access to abortion	-0.030 (0.058)	-0.080* (0.034)	-0.012 (0.077)	-0.001 (0.070)	0.006 (0.068)	-0.052 (0.034)	-0.104^{\dagger} (0.054)	-12.834** (3.293)
Different Between Races?								
Access to the Pill	Yes	Yes	No	No	Yes	No	No	No
Access to abortion	N _o	Yes	No	Yes	No	Yes	No	No
Age, State, Year Fixed Effects	×	×	×	×	×	×	×	×
State × Year Unrestricted Fixed Effects x	Effects x	×	×	×	×	×	×	×
Month Fixed Effects						×		
Weighted by Population?	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Number of Observations	4,284	4,284	4,284	4,284	4,284	47,124	4,284	4,284

Notes: Robust standard errors taking account of clustering at the state level are shown in parentheses. Regressions are weighted by population for each state-year-age cell. Each column in each panel represents a different regression. When birthrate = 0, $\ln(\text{Birthrate})$ is replaced with $\ln(1/2)$ except in column 8, where it is zero. Access to the Pill = 1 if minor age a in state s in year t had access to the birth control pill without parental involvement in year t - 1. Access to abortion = 1 if minor age a in state s in year t had access to abortion without parental involvement in year t - 1. Because of space constraints, the coefficient estimates for the other variables are not reported.

 $^{\dagger}p < .10; ^{*}p < .05; ^{**}p < .01$

in the current analysis. To address this issue, I first perform the analysis using only births to unmarried women to construct birthrates. Although marital status cannot be accurately measured in the vital statistics data for all states over the period, using proxies for marital status—such as fathers' characteristics reported (or not reported) on the birth certificate in conjunction with marital status information⁹—I construct birthrates of unmarried mothers. These results (column 2, Table 3) show that abortion access is associated with a larger decrease in the nonmarital birthrate (17.2% for whites; 8% for nonwhites) relative to the baseline, which is expected if the original results were attenuated by including marital births in the analysis. Access to oral contraceptives is not measured with statistical significance. Next, I examine first births (column 3, Table 3). There is weak evidence that access to the Pill decreases first birthrates for whites. However, no other conclusions can be drawn. This leads to the next specification. If the group of women most likely to have been affected by any law changes is unmarried women having first births, then the estimate for each policy variable should be least attenuated for this group. When only nonmarital first-time births are used to construct birthrates, estimates show that access to the Pill and access to abortion each have a significant negative relationship with whites' birthrates (column 4, Table 3). All estimates based on second or higher-order births are statistically insignificant (column 5, Table 3). A test of the null hypothesis that there are no differences by race indicates that when differences do exist, both access to abortion and access to the Pill have a larger (more negative) relationship with birthrates for whites than nonwhites. Taken together, these results indicate that abortion access has a slightly larger impact on birthrates than access to oral contraceptives; whites responded to laws governing minors' access to the Pill, whereas conclusions cannot be drawn for nonwhites. Finally, adjusting for birth order and/or marital status increases the magnitude of the abortion estimates.

Robustness Checks

The results from the baseline specification are compared with regressions performed on monthly data, regressions in which the dependent variable is measured in levels rather than logs, and regressions performed without weighting by population. Tightening the time period between observed policy change and observed birth, using monthly data, reduces measurement error attributable to (1) the different timing of taking oral contraceptives versus abortion technology (the Pill must be taken prior to pregnancy, whereas abortion occurs after pregnancy); and (2) the inability to observe the mother's exact birthday in the vital statistics data. Monthly policy variables are defined as whether a woman age a had access in month m-6 (abortion) or in month m-9 (the Pill). The specification also includes month fixed effects. Estimates obtained from monthly data are reported in column 6 (Table 3). The estimates for abortion access are slightly higher than those found in the baseline regression, which supports a measurement error explanation. The estimate for oral contraceptives is not statistically significant, which is a finding that I discuss in more detail later within this article. Columns 7 and 8 (Table 3) report results from unweighted regressions and regressions in which birthrate is measured in levels rather than in logs. From these three robustness checks, the finding that abortion access is associated with a decrease in birthrates is supported. However, these robustness checks reveal that the estimated relationship between access to the Pill and birthrates is more tenuous.

DISCUSSION

Using robust DoDoD methods, the results presented in this article offer evidence that birthrates fall with increases in minors' access to abortion, and that this drop is larger for whites than nonwhites. Among whites, access to oral contraceptives is also negatively related to birthrates. These results indicate that granting minors access to these means of reproductive

^{9.} I am grateful for an anonymous referee who suggested this approach.

control has an impact on birthrates above and beyond any impact that changes in adult access laws have. The magnitude of the coefficient estimates is meaningful from a policy perspective. For example, they indicate that minors' access to abortion leads to an additional 8%–15% drop in birthrates in addition to any changes resulting from legalized abortion.

The coefficient estimates for access to oral contraceptives are generally smaller in magnitude than those for abortion access. One reason that the estimated relationship between access to the Pill and birthrates is smaller in general is that oral contraceptive technology is inherently different from abortion technology. To avert a birth, abortion requires a one-time action, whereas taking the Pill requires continual action. In addition, the impact of access to oral contraceptives on birthrates may be muted by the Pill's failure rate, which is different across age and race categories (Ranjit et al. 2001). Because of technological differences, gaining access to the Pill may produce a fuzzier break in the birthrate trend than gaining access to abortion. These two features of oral contraceptive technology may work together to attenuate any observed relationship between access to the Pill and birthrates.

CONCLUSION

This article contributes to the existing literature on the Pill and abortion by empirically analyzing the relative impact of access to each on birthrates of young women. U.S. state law changes during the late 1960s and 1970s, which altered the age at which a minor could legally gain access to abortion and/or to the Pill, are used to construct new policy variables that measure abortion and oral contraceptive access differently by single year of age. When performing policy analysis, ignoring other factors that may be correlated with the policy change (such as state-specific trends) could bias estimates. To mitigate this potential source of bias, unrestricted, state-year fixed effects are incorporated into the model. Overall, the results show that laws that increased minors' access to abortion in the 1960s and 1970s had a larger impact on minors' birthrates than laws that increased oral contraceptive access. The changes in minors' abortion and oral contraceptive access brought about by the changes in state and national laws in the late 1960s and early 1970s altered the costs that young women faced when making fertility decisions. Taken together, results presented in this article indicate that abortion access has a slightly larger estimated impact on birthrates than oral contraceptive access; that the magnitude of these results are meaningful; and that the group most affected by these changes are unmarried women experiencing a first birth. Although historical, the results in this article can inform contemporary debate on minors' access to reproductive control.

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