The Effect of Anti-Abortion Legislation on Nineteenth Century Fertility

Joanna N. Lahey
Bush School, Texas A&M University, Mailstop 4220, College Station, TX 77845, USA
jlahey@nber.org, National Bureau of Economic Research, Cambridge, MA, USA

Abstract

Using nineteenth century legal information combined with census information, I examine the effect of state laws that restricted American women's access to abortion on the ratio of children to women. I estimate an increase in the birthrate of 4 % to 12 % when abortion is restricted. In the absence of anti-abortion laws, fertility would have been 5 % to 12 % lower in the early twentieth century.

Keywords

Nineteenth century; Abortion; Fertility; Demographic transition; Fertility control

Introduction

The early twenty-first century United States has seen a wave of state legislation aimed at curtailing the availability of abortion that in many ways mirrors earlier legislative efforts from the nineteenth century (Boland and Katzive 2008). At the same time, scholars have shown renewed interest in nineteenth and early twentieth century fertility patterns, both in terms of the fertility transition when the United States experienced one of the world's largest declines in fertility, and in terms of women's access to fertility control (e.g., Bailey 2010; Guinnane 2011). Although good estimates are available on the effects of access to fertility control on twentieth century populations in the United States (e.g., Bailey 2010, 2012; Gruber et al. 1999; Levine 2004; Levine et al. 1999; and many others) and in modern developing countries (see Guinnane 2011 for a literature review), supply-side hypotheses are largely absent from the nineteenth century U.S. fertility transition literature (Guinnane 2011; Haines 1986, 1987; Haines and Guest 2008), with a few exceptions (David and Sanderson 1986; Degler 1980; Haines and Hacker 2006; Reed 1978; Sanderson 1979; Tolnay and Guest 1984; Wahl 1986). This article brings these literatures together, examining the effect on fertility of legislation controlling access to legal abortion in the nineteenth century.

Researchers have explored many demand-side hypotheses that affect fertility through the quantity-quality trade-off for children or through the opportunity costs of women's time. They have found relationships between nineteenth century fertility and the changing roles of children, including child labor and increased educational opportunities (Carter et al. 2004;

Degler 1980; Easterlin 1976a, b; Easterlin et al. 1978; Forster and Tucker 1972; Guest 1981; Guest and Tolnay 1983a, b; Guinnane 2011; McLaren 1990; Reed 1978; Tolnay and Guest 1982, 1984; Yasuba 1962), related needs for social insurance (Guinnane 2011; Haines and Hacker 2006; Steckel 1992), and bequest motives (Carter et al. 2004; Easterlin 1976a, b; Easterlin et al. 1978; Haines 1987; Steckel 1992; Sundstrom and David 1988). Women's education and their greater labor market opportunities outside the home are also important (Easterlin 1976a; Guest 1981; Guest and Tolnay 1983a, b; Guinnane 2011; Tolnay and Guest 1982), as is literacy in general (Carter et al. 2004; Degler 1980; Guest 1981; Guest and Tolnay 1983a; Guinnane 2011; Haines 1987, 2000; McLaren 1990). Other work has stressed structural correlates, such as increasing urbanization and industrialization (Guest 1981; Haines 1987, 2000; Tolnay and Guest 1982), the role of agriculture and land availability (Carter et al. 2004; Degler 1980; Easterlin 1971, 1976a, b; Easterlin et al. 1978; Forster and Tucker 1972; Guest 1981; Guest and Tolnay 1983a, b; Guinnane 2011; Haines 2000; Haines and Guest 2008; Sundstrom and David 1988; Yasuba 1962), and changing female/male ratios (Guest 1981; Haines 2000). The percentage of the population that is immigrant is also known to be related to increased fertility (King and Ruggles 1990).

The literature on the effects of the supply of fertility control on fertility in the twentieth century is rich and growing. Bailey (2010) found that 1960s fertility would have been 8 % lower in states with nineteenth century Comstock laws curtailing access to fertility control and 4 % lower for the entire United States. Based on analysis of *Roe v. Wade* in the 1970s, Levine et al. (1999) found a decrease in fertility of at least 4 %; similarly, Ananat et al. (2009) found an initial decrease of 5.7 % in birth rates overall because of abortion law liberalization in the early 1970s. Angrist and Evans (1999) suggested that liberalizing abortion laws in the 1970s decreased teen fertility between 2.2 % for white teens and 18 % for black teens—groups that are particularly vulnerable and may have less access to outside options. Guldi (2008) explored the effects of 1970s abortion and birth control laws affecting minors directly and found a stronger drop for white teens, concluding that access to abortion leads to an 8 % to 15 % decrease in birth rates for minors in addition to the effects of adult laws. Also looking at more vulnerable groups, Bailey (2012) found that family planning programs from the 1960s and 1970s reduced childbearing among poor women by 19 % to 30 %.

This article adds information on one topic that could affect the supply of fertility control technology in the nineteenth century: laws restricting abortion access. When abortion is restricted, the birthrate increases 4 % to 12 %. In the absence of anti-abortion laws, fertility would have been 5 % to 12 % lower in the early twentieth century.

Background

Nineteenth century abortion technologies were potentially dangerous. For early-term abortions, herbal remedies of unknown efficacy and varying safety were common. Later-term abortions included membrane rupture and dilation and curettage (D&C) (Brodie 1994; Ernst 2002; King 1992; Smith-Rosenberg 1985).

Very early abortion laws functioned as malpractice laws designed to protect women but became more restrictive by the 1850s, increasingly punishing earlier-term abortions and prosecuting rather than protecting women (Brodie 1994; Degler 1980; Lader 1966; Mohr 1978; Polsky 1970). Theories for the reasons for these increased restrictions include power consolidation by the American Medical Association (AMA) (Degler 1980; Mohr 1978; Reed 1978) and worries about the high fertility of immigrants compared with natives (Smith-Rosenberg 1985).

Data and Methodology

Abortion laws were compiled from secondary sources (Dellapenna 2006; Dennett 1926; Lader 1966; Mohr 1978; Quay 1961; Storer 1860; Storer and Heard 1868) and from superseded state statutes preserved at the Harvard Law Library and the University of California–Los Angeles (UCLA) law library. Additional laws were obtained via Google Books and state law librarians. A list of the dates of these laws can be found in Table 1. In cases in which a court ruling prior to the law is mentioned in the law books, the earlier ruling is used, something that affects only Kentucky (1879 vs. 1880) and Pennsylvania (1846 vs. 1860). Results are robust to coding only the law.

Census information by state during this time period is limited. For that reason, I use one standard measure of nineteenth century fertility—the child-to-woman ratio, calculated as the ratio of the number of children aged 0–9 to the number of women of childbearing age, or 15–44. The original data come from the Haines census tables in the Historical Statistics of the United States (Carter et al. 2006), and I replace the Haines data with collapsed cells from the Integrated Public Use Microdata Series (IPUMS) 100 % sample for the 1880 census (Ruggles et al. 2010). I correct in the denominator for enumeration differences across decades with the Yasuba interpolation for 40- to 44-year-olds from data for 30- to 39-year-olds, 40- to 49-year-olds, and 50- to 59-year-olds. [1] This measure is highly correlated with total fertility (Haines and Hacker 2006) but cannot capture the nonlinear nature of annual fertility changes and is sensitive to migration and mortality. Easterlin (1976a), Guinnane (2011), Haines and Hacker (2006), Tolnay and Guest (1982), Tolnay et al. (1982), and Yasuba (1962) provided more thorough discussions of the benefits and limitations of these measures.

Controls for percentage immigrant and the ratio of women to men come from the same Haines data. The control for percentage of the population that is urban was collected from historical census tables published in 2010.[2] The percentage of those literate over age 20 by state/year was created from IPUMS (Ruggles et al. 2010).

I estimate the impact of abortion laws on the child-to-woman ratio for children between the ages of 0 and 9 and women between the ages of 15 and 44 in the years from 1850 to 1910. I do not include Arizona, New Mexico, North Dakota, Oklahoma, South Dakota, or Utah

---

[1]The interpolation formula is (A + 8B – C) / 16, where A is the 30–39 cohort, B is 40–49, and C is 50–59.
[2]The entire set of citations for these data is not included for brevity's sake. An example of the basic format of these citations can be found in the entry for the U.S. Census Bureau (2012) in the reference list.

because either they were not yet states or they lack population data. States that had legal and population information collected while they were still territories are included.

Because of limitations with decennial data, the independent variable of interest for having a law is a share of the decade for which the law was relevant to childbearing, with a one-year lag because abortions in year 0 cause a change in births in year 1. For example, for the decade ending in 1880, a law passed in 1876 would be coded as 0.4, and a law passed in 1870 or earlier would be coded as a 1.

Empirically, the specification is

$$F_{ds} = \beta_1 \quad havelaw_{ds} + \mathbf{X}\beta_2 + \delta_d + \delta_s + d\delta_s + e_{ds}, \quad (1)$$

where F_{ds} represents the fertility ratio in decade d in state s, and $havelaw_{ds}$ is a continuous indicator variable ranging in value from 0 to 1, both described previously. $\mathbf{X}$ is a vector of state-/year-level characteristics, including percentage immigrant, percentage urban, literacy rates for adults over age 20, and the ratio of women to men aged 15–44. State-specific (δ_s) and decade-specific (δ_d) fixed effects capture differences in fertility patterns across states over time as well as aggregate patterns of changing fertility preferences over time. A state-specific time trend $d\delta_s$ in some specifications captures state-specific differences that trend over time. The specification is weighted by total population in each state/decade cell to provide information on the effect on total fertility. The coefficient β_1 measures the difference in 10-year fertility ratio between states for which a law was in effect for the entire decade ($havelaw_{ds} = 1$) and states for which a law was never in effect in that decade ($havelaw_{ds} = 0$).

Results

Table 2 reports the results from Eq. (1). All these results include state fixed effects and year fixed effects to control for differences between states and years in fertility and likelihood of obtaining a law. In the base regression with the (children aged 0–9)/ (women aged 15–44) ratio as a level, shown in column 1, having a law increases the child-to-woman ratio by 111 per 1,000 women. Similarly, column 2 repeats this regression with the log of the child-to-woman ratio as the dependent variable and finds an increase of around 12 %.

Previous researchers, as noted in the literature review, have found effects of percentage immigrant, percentage urban, schooling, and female-to-male ratios on the child-to-woman ratios. Therefore, it is interesting to examine the effect of these controls in conjunction with abortion laws, keeping in mind that any variation must be at the state × year level because variation at the state level and variation at the year level are washed out by state and year fixed effects, respectively. A higher percentage of immigrants in the population should increase fertility and may encourage nativists to pass anti-abortion legislation. Column 3 adds the percentage of immigrants by state/year to the baseline regression. Controlling for the percentage of immigrants increases the effect of having an abortion law on fertility to 14 % and itself, as expected, has a positive and significant effect on the child-to-woman ratio, with a 1 percentage point change in the percentage of immigrants increasing the child-to-woman ratio by 1 %.

Column 4 provides one measure of education: the percentage of those over age 20 who are literate. Although it is insignificant and does not change the law's effect, its sign is as expected, with greater education decreasing population. Column 5 includes the female-to-male ratio and shows, as in prior literature, that a higher proportion of women decreases the child-to-woman ratio but does not change the effect of abortion laws on the child-to-woman ratio.

Similarly, previous literature would lead us to expect that a higher percentage of urban would decrease the child-to-woman ratio, although it is unclear *a priori* whether a high urban population would have an effect on passing anti-abortion legislation. Column 6 demonstrates this negative effect on fertility and also decreases the effect of having an abortion law on fertility to 5.7 %.

Column 7 shows all the controls together in one regression, for a predicted increase of 5.5 %.[3] Column 8 adds in a state-specific time trend to control for linear variation over time at the state level. These results attenuate to 4.4 % with significance at the 10 % level, although it is unclear whether this attenuation is because of the change in specification, the addition of more variables to a regression with an already small sample size, or the effects of improperly including a state-specific time trend (for a discussion, see Wolfers 2006).[4] It is important to note that the results in column 8 are not statistically different from those in columns 6 or 7.

Discussion and Conclusion

Anti-abortion legislation increased nineteenth century fertility causing the child-to-woman ratio to increase 4 % to 12 % in states with laws. As in previous literature, the percentage of the population that is immigrant is associated with increases in fertility. However, percentage of immigrants does not affect the coefficient on having an abortion law; if anything, it increases the effect of the law. Literacy is negatively correlated with fertility, although not significantly so with my measure of literacy. The female-to-male ratio is also negatively associated with fertility. Percentage of urban decreases the fertility ratio and attenuates the effect of abortion laws. These findings are all consistent with previous literature on the demand for lower fertility.

The nineteenth century demographic transition would have been even more dramatic in the absence of these laws. Table 3 provides a rough calculation that predicts what the child-to-woman ratio would have been in the absence of laws restricting abortion. Fertility would have been 5.2 % to 10.9 % lower without anti-abortion laws in 1900 and 5.7 % to 11.9 % lower in 1910. These estimates are consistent with modern results from the twentieth century, which find that greater access to birth control, abortions, and family planning during the 1960s and 1970s led to fertility increases of 2 % to 6 % overall, and up to 15 % among groups with greater need and less flexibility (e.g., teenagers and minorities). As with

---

[3]None of the controls listed significantly predict the passage of a law within the next decade using Eq. (1) and law passage as a dependent variable.
[4]Charts and tables examining the nonlinearity of the post period (available from the author) suggest this latter explanation may be correct but are not conclusive given the fragility of the data and the length of the period studied.

these worse-off groups, nineteenth century populations may have also had less ability to travel to access abortions and more dire consequences to an additional unwanted child than many modern populations. The results in this article suggest that in the nineteenth century, just as in the twentieth century, laws prohibiting fertility control had real effects on population growth. This evidence of unmet demand for fertility control suggests that the supply side is important in the analysis of fertility in the nineteenth century just as it is today.

Acknowledgments

References

Ananat E, Gruber J, Levine P, Staiger D. Abortion and selection. Review of Economics and Statistics. 2009; 91:124–136.

Angrist, J.; Evans, WN. Schooling and labor-market consequences of the 1970 state abortion reforms.. In: Polachek, SW.; Robst, J., editors. Research in labor economics. JAI Press; Greenwich, CT: 1999. p. 75-113.

Bailey MJ. Momma's got the pill. How Anthony Comstock and Griswold v. Connecticut shaped US childbearing. American Economic Review. 2010; 100:98–129.

Bailey MJ. Reexamining the impact of family planning programs on US fertility: Evidence from the war on poverty and the early years of Title X. American Economic Journal: Applied Economics. 2012; 4(2):62–97. [PubMed: 22582135]

Boland R, Katzive L. Developments in laws on induced abortion: 1998–2007. International Family Planning Perspectives. 2008; 34:110–120. [PubMed: 18957353]

Brodie, JF. Contraception and abortion in 19th century America. Cornell University Press; Ithaca, NY: 1994.

Carter, SB.; Gartner, SS.; Haines, MR.; Olmstead, AL.; Sutch, R.; Wright, G. The historical statistics of the United States. Cambridge University Press; Cambridge, UK: 2006.

Carter, SB.; Ransom, RL.; Sutch, R. Family matters: The life-cycle transition and the antebellum American fertility decline.. In: Guinnane, TW.; Sundstrom, WA.; Whatley, W., editors. History matters: Essays on economic growth, technology, and demographic change. Stanford University Press; Stanford, CA: 2004. p. 271-327.

David, PA.; Sanderson, WC. Rudimentary contraceptive methods and the American transition to marital fertility control, 1855–1915. Long-term factors in American economic growth. Engerman, SL.; Gallman, RE., editors. University of Chicago Press; Chicago, IL: 1986. p. 307-390.

Degler, CN. At odds: Women and the family in America from the revolution to the present. Oxford University Press; New York, NY: 1980.

Dellapenna, JW. Dispelling the myths of abortion history. Carolina Academic Press; Durham, NC: 2006.

Dennett, MW. Birth control laws, shall we keep them, change them or abolish them. F. H. Hitchcock; New York, NY: 1926.

Easterlin RA. Does human fertility adjust to the environment? American Economic Review. 1971; 61:399–407.

Easterlin RA. Factors in the decline of farm family fertility in the United States: Some preliminary research results. Journal of American History. 1976a; 63:600–614.

Easterlin RA. Population change and farm settlement in the northern United States. Journal of Economic History. 1976b; 36:45–75.

Easterlin, RA.; Alter, G.; Condran, G. Farms and farm families in old and new areas: The northern states in 1860.. In: Hareven, TK.; Vinovskis, MA., editors. Family and population in the nineteenth century America. Princeton University Press; Princeton, NJ: 1978. p. 22-84.

Ernst E. Herbal medicinal products during pregnancy: Are they safe? BJOG: An International Journal of Obstetrics & Gynaecology. 2002; 109:227–235. [PubMed: 11950176]

Forster, C.; Tucker, GSL. Economic opportunity and white American fertility ratios 1800–1860. Yale University Press; New Haven, CT: 1972.

Gruber J, Levine PB, Staiger D. Abortion legalization and child living circumstances: Who is the "marginal child"? Quarterly Journal of Economics. 1999; 114:263–292.

Guest AM. Social structures and U.S. inter-state fertility differentials in 1900. Demography. 1981; 18:465–486. [PubMed: 7030799]

Guest AM, Tolnay S. Urban industrial structure and fertility: The case of large American cities. Journal of Interdisciplinary History. 1983a; 13:387–409. [PubMed: 11635244]

Guest AM, Tolnay S. Children's roles and fertility: Late nineteenth-century United States. Social Science History. 1983b; 7:355–380. [PubMed: 11635975]

Guinnane TW. The historical fertility transition: A guide for economists. Journal of Economic Literature. 2011; 49:589–614.

Guldi M. Fertility effects of abortion and birth control pill access for minors. Demography. 2008; 45:817–827. [PubMed: 19110899]

Haines, MR. Comment on new results on the decline in household fertility in the United States from 1750 to 1900.. In: Engerman, SL.; Gallman, RE., editors. Long-term factors in American economic growth. University of Chicago Press; Chicago, IL: 1986. p. 426-437.

Haines, MR. Economic history and historical demography: Past, present, and future.. In: Field, AJ., editor. The future of economic history. Kluwer-Nijhoff Publishing; Boston, MA: 1987. p. 185-253.

Haines, MR. The population of the United States, 1790–1920.. In: Engerman, SL.; Gallman, RE., editors. The Cambridge economic history of the United States (Vol. II): The long nineteenth century. Cambridge University Press; Cambridge, UK: 2000. p. 143-206.

Haines MR, Guest AM. Fertility in New York State in the pre-Civil War era. Demography. 2008; 45:345–361. [PubMed: 18613485]

Haines, MR.; Hacker, JD. The puzzle of antebellum fertility decline in the United States: New evidence and reconsideration (Working Paper No. 12571). National Bureau of Economic Research; Cambridge, MA: 2006.

King CR. Abortion in nineteenth century America: A conflict between women and their physicians. Women's Health Issues. 1992; 2:32–39. [PubMed: 1628000]

King M, Ruggles S. American immigration, fertility, and race suicide at the turn of the century. Journal of Interdisciplinary History. 1990; 20:347–369. [PubMed: 11617376]

Lader, L. Abortion. Bobbs-Merril Company; New York, NY: 1966.

Levine, PB. Sex and consequences. Princeton University Press; Princeton, NJ: 2004.

Levine PB, Staiger D, Kane TJ, Zimmerman D,J. Roe v. Wade and American fertility. American Journal of Public Health. 1999; 89:199–203. [PubMed: 9949749]

McLaren, A. A history of contraception: From antiquity to the present day. Basic Blackwell; Cambridge, MA: 1990.

Mohr, JC. Abortion in America: The origins and evolution of national policy, 1800– 1900. Oxford University Press; New York, NY: 1978.

Polsky S. Legal aspects of abortion. Seminars in Psychiatry. 1970; 2:246–257. [PubMed: 5527394]

Quay E. Justifiable abortion–Medical and legal foundations. Georgetown Law Journal. 1961; 49:395–538.

Reed, J. From private vice to public virtue: The birth control movement and American society since 1830. Basic Books; New York, NY: 1978.

Ruggles, S.; Alexander, JT.; Genadek, K.; Goeken, R.; Schroeder, MB.; Sobek, M. Integrated public use microdata series: Version 5.0 [Machine-readable database]. University of Minnesota; Minneapolis: 2010.

Sanderson WC. Quantitative aspects of marriage, fertility and family limitations in nineteenth century America: Another application of the Coale specification. Demography. 1979; 16:339–358. [PubMed: 389684]

Smith-Rosenberg, C. Disorderly conduct: Visions of gender in Victorian America. Oxford University Press; New York, NY: 1985.

Steckel, RH. The fertility transition in the United States: Tests of alternative hypotheses.. In: Goldin, C.; Rockoff, H., editors. Strategic factors in nineteenth century American economic history: A volume to honor Robert W. Fogel. University of Chicago Press; Chicago, IL: 1992. p. 351-374.

Storer, HR. Criminal abortion in America. J. P. Lippincott & Co.; Philadelphia, PA: 1860.

Storer, HR.; Heard, FF. Criminal abortion: Its nature, its evidence, and its law. Little, Brown, and Company; Boston, MA: 1868.

Sundstrom WA, David PA. Old-age security motives, labor markets, and farm-family fertility in antebellum America. Explorations in Economic History. 1988; 25:164–197.

Tolnay SE, Graham SN, Guest AM. Own child estimates of U.S. white fertility, 1886–99. Historical Methods: A Journal of Quantitative and Interdisciplinary History. 1982; 15:127–138.

Tolnay SE, Guest AM. Childlessness in a transitional population: The United States at the turn of the century. Journal of Family History. 1982; 7:200–219. [PubMed: 11611792]

Tolnay SE, Guest AM. American family building strategies in 1900: Stopping or spacing. Demography. 1984; 21:9–18. [PubMed: 6714493]

U.S. Census Bureau. Population and Housing Unit Counts (CPH-2-2). U.S. Government Printing Office, Washington DC. U.S. Census Bureau; Washington, DC: 2012. Alabama: 2010.. Retrieved from http://www.census.gov/prod/cen2010/cph-2-2.pdf

Wahl, JB. New results on the decline in household fertility in the United States from 1750 to 1900.. In: Engerman, SL.; Gallman, RE., editors. Long-term factors in American economic growth. University of Chicago Press; Chicago, IL: 1986. p. 391-437.

Wolfers J. Did unilateral divorce laws raise divorce rates? A reconciliation and new results. American Economic Review. 2006; 96:1802–1820.

Yasuba, Y. Birth rates of the white population in the United States, 1800–1860: An economic study. John Hopkins Press; Baltimore, MD: 1962.

Table 1

Year of passage of first anti-abortion law

Name	Year	Name	Year
Alabama	1840	Montana	1864
Alaska	1884	Nebraska	1866
Arizona	1864	Nevada	1861
Arkansas	1838	New Hampshire	1848
California	1849	New Jersey	1849
Colorado	1861	New Mexico	1854
Connecticut	1821	New York	1829
Delaware	1883	North Carolina	1881
District of Columbia	1857	North Dakota	1877
Florida	1868	Ohio	1834
Georgia	1876	Oklahoma	1875[a]
Hawaii	1850	Oregon	1854
Idaho	1864	Pennsylvania	1846a
Illinois	1827	Rhode Island	1861
Indiana	1835	South Carolina	1883
Iowa	1838	South Dakota	1899[a]
Kansas	1855	Tennessee	1883
Kentucky	1879[a]	Texas	1854
Louisiana	1856	Utah	1876
Maine	1840	Vermont	1846
Maryland	1868	Virginia	1847
Massachusetts	1812[a]	Washington	1854
Michigan	1846	West Virginia	1847
Minnesota	1851	Wisconsin	1849
Mississippi	1839	Wyoming	1869
Missouri	1825		

Note: Laws collected from original and secondary sources.

[a]Kentucky lists an 1879 ruling prior to an 1880 law. Massachusetts has an 1812 ruling prior to an 1845 law. Although the Dakota Territory's law is 1877, South Dakota lists 1899, whereas North Dakota books use 1877. Oklahoma uses the 1875 Indian territories date. Pennsylvania has a ruling in 1846 and a law in 1860. Neither the Dakotas nor Oklahoma are included in the data set. Results are robust to coding the ruling versus the law.

NIH-PA Author Manuscript

Table 2

Abortion prohibitions and fertility

	Child:Woman				ln(Child:Woman Ratio)			
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
Have Abortion Law	111.0274** (29.4606)	0.1221** (0.0237)	0.1395** (0.0235)	0.1295** (0.0254)	0.1205** (0.0238)	0.0566* (0.0221)	0.0552** (0.0210)	0.0440† (0.0256)
Percentage Immigrant			1.0126** (0.1824)				1.4094** (0.1900)	
Percentage Literate Over Age 20				−0.1589 (0.0980)			−0.1373* (0.0691)	
Ratio of Women to Men Aged 15–44					−0.5331** (0.1066)		−0.1999† (0.1115)	
Percentage Urban						−0.0058** (0.0010)	−0.0082** (0.0009)	
Constant	1,124.0488** (32.2012)	6.9791** (0.0357)	6.6711** (0.0652)	7.2564** (0.1229)	7.1984** (0.0643)	7.2202** (0.0957)	7.5441** (0.1798)	25.7224** (5.4062)
Observations	291	291	291	247	291	291	247	291
Adjusted R^2	.8816	.9023	.9152	.8914	.9137	.9176	.9445	.9654
State-Specific Time Trend?	No	No	No	No	No	No	No	Yes

Notes: Robust standard errors are shown in parentheses. Regressions report the results from Eq. (1), the effect of a state having an abortion law on the ratio of children aged 0–9 to women aged 15–44 per 1,000 women including state and year fixed effects. Years included are 1850–1910, and states include all states extant before 1890 for which population information is available, excluding the Dakotas. The state-specific time trend in column 8 is a linear trend. Columns 4 and 7 are missing data for 1890 because the 1890 census was destroyed in a fire. An *F* test in column 7 on percentages immigrant, urban, and literate, and the ratio of women to men is significant at the 1 % level.

† $p < .10$

* $p < .05$

** $p < .001$

Table 3

Predicted fertility in the absence of laws

	1900			1910		
	Actual	**No Laws**	**No Laws**	**Actual**	**No Laws**	**No Laws**
Child:Woman	1,019.09	908.06	965.84	931.66	820.63	878.41
% Change		−10.89	−5.23		−11.92	−5.72
State Trend		No	Yes		No	Yes

Notes: Child:Woman refers to the number of children between the ages of 0 and 9 divided by the number of women aged 15–44 and multiplied by 1,000. The universe is the same as the universe used in the Table 1 regressions.