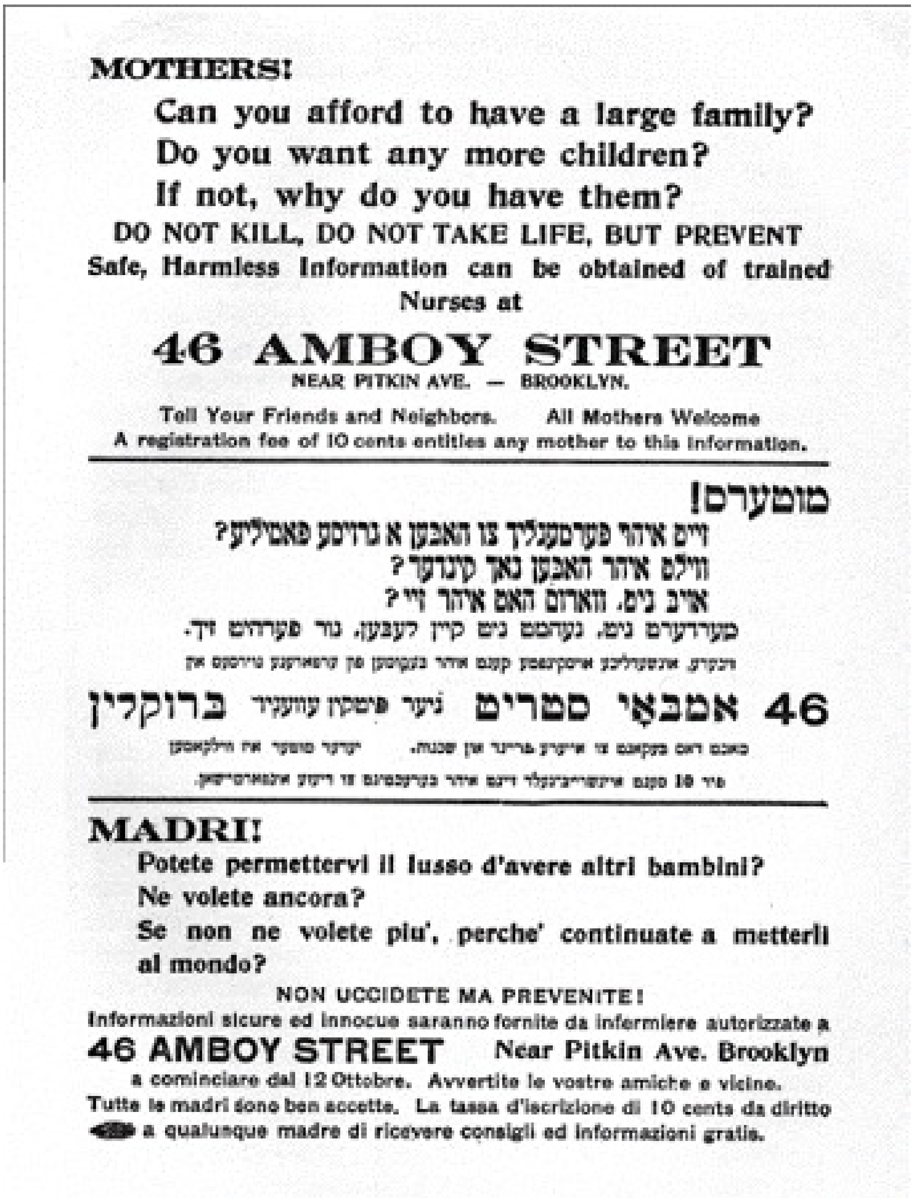
Supplemental Appendix (For Online Publication)

This Appendix provides supplementary material discussed in the manuscript "The Impact of Margaret Sanger's Birth Control Clinics on Early 20th Century U.S. Fertility and Mortality" by Stefan Bauernschuster, Michael Grimm, and Cathy M. Hajo.

A. Additional Figures


MOTHERS!

Can you afford to have a large family?

Do you want any more children?

If not, why do you have them?

DO NOT KILL, DO NOT TAKE LIFE, BUT PREVENT

Safe, Harmless Information can be obtained of trained Nurses at

46 AMBOY STREET

NEAR PITKIN AVE. — BROOKLYN.

Tell Your Friends and Neighbors. All Mothers Welcome

A registration fee of 10 cents entitles any mother to this information.

מוטערס!

ווים איהר פערמעגליך צו האבען א גרויסע פאמיליע?

ווילט איהר האבען נאך קינדער?

אויב נים, ווארום האט איהר זיי?

מערדערט נים, נעהמט נים קיין לעבען, נור פערהיט זיך.

46 אמבאי סטרים ניער פיטקין עווענױ ברוקלין

MADRI!

Potete permettervi il lusso d'avere altri bambini?

Ne volete ancora?

Se non ne volete piu', perche' continuate a metterli al mondo?

NON UCCIDETE MA PREVENITE!

Informazioni sicure ed innocue saranno fornite da infermiere autorizzate a

46 AMBOY STREET Near Pitkin Ave. Brooklyn

a cominciare dal 12 Ottobre. Avvertite le vostre amiche e vicine.

Tutte le madri sono ben accette. La tassa d'iscrizione di 10 cents da diritto a qualunque madre di ricevere consigli ed informazioni gratis.

Figure A.1 — Leaflet advertising the Sanger Clinic in 46 Amboy Street, Brooklyn

Note: The photo shows a leaflet advertising the United States' first birth control clinic in English, Yiddish, and Italian.

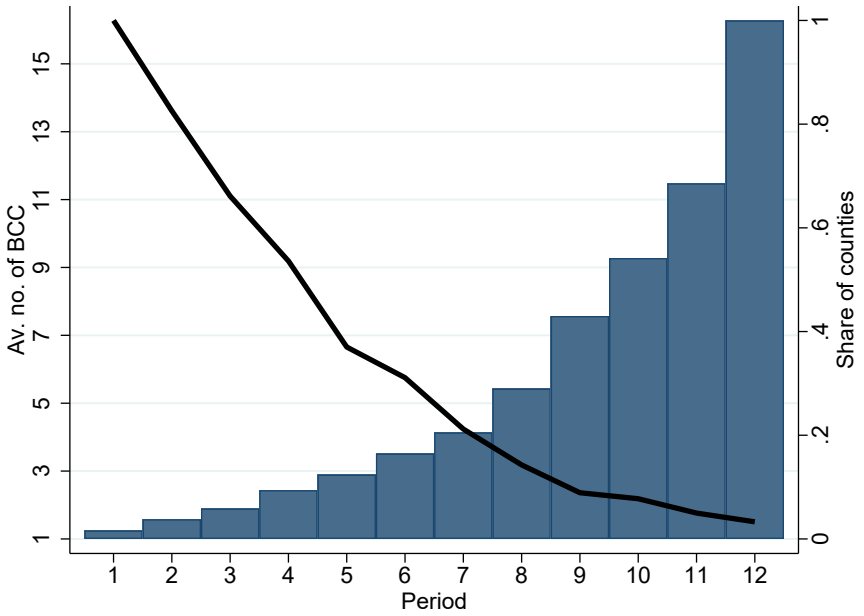


FIGURE A.2 — Birth control clinics: dynamics of the roll-out

Note: Data source: Birth control clinics statistics by Hajo (2010). The bars show the average number of birth control clinics in the own or adjacent county over the period since the first clinic was established. The black line shows the share of counties that experience the period depicted on the horizontal axis with at least one birth control clinic in the own or adjacent county. For example, in the fifth period after the establishment of the first birth control clinic, counties have on average nearly three clinics, but less than 30 percent of the counties experience five periods and more with a birth control clinic in our period of observation until 1940.

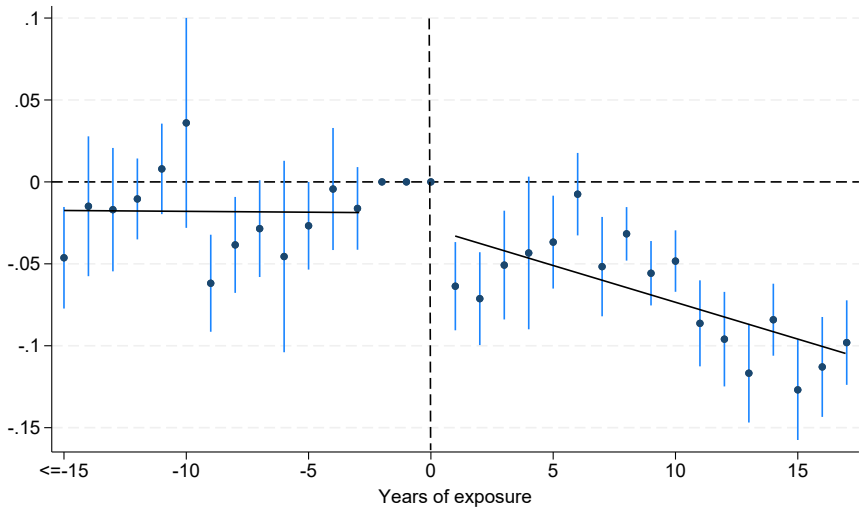


FIGURE A.3 — The impact of birth control clinics on fertility in a yearly event plot

Note: Data source: IPUMS US Census, 1920, 1930 and 1940. The figure shows event study estimates of the exposure to a birth control clinic on the number of a woman's own children below the age of five in a household. Treatment effects are estimated along the lines of Equation 2 but using single years as event time. Age fixed effects, an indicator for living in an urban area interacted with year fixed effects, literacy status, race, an indicator for being foreign born, an indicator for living in a big city, an indicator for living in a farm household, and the county's religious composition are included as controls. Standard errors are clustered at the county level. The whiskers mark the 95 percent confidence band. Lines show predicted values from linear regressions estimated for the event times $<= -2$, and > 0 respectively.

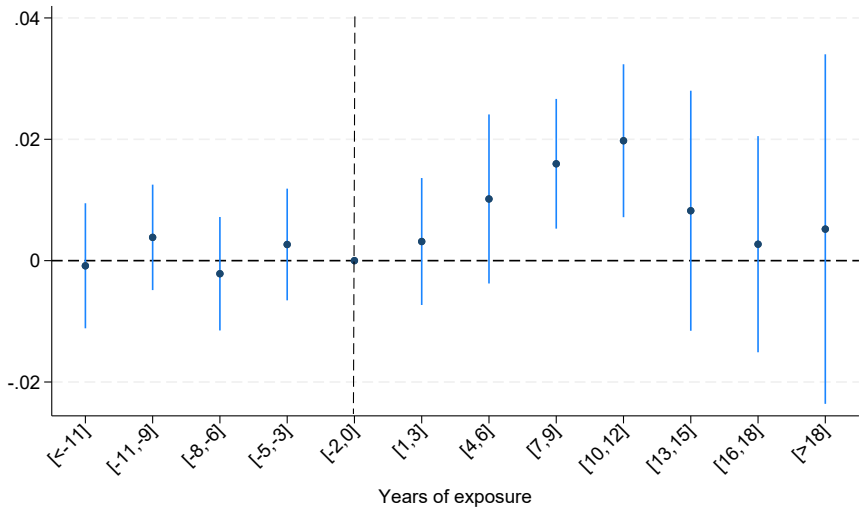


FIGURE A.4 — The impact of birth control clinics on female labor force participation

Note: Data source: IPUMS US Census, 1920, 1930 and 1940. The figure shows event study estimates of the exposure to a birth control clinic on women's labor force participation. Treatment effects are estimated along the lines of Equation 2. Age fixed effects, an indicator for living in an urban area interacted with year fixed effects,, literacy status, race, an indicator for being foreign born, an indicator for living in a big city, an indicator for living in a farm household, and the county's religious composition are included as controls. The whiskers mark the 95 percent confidence band.

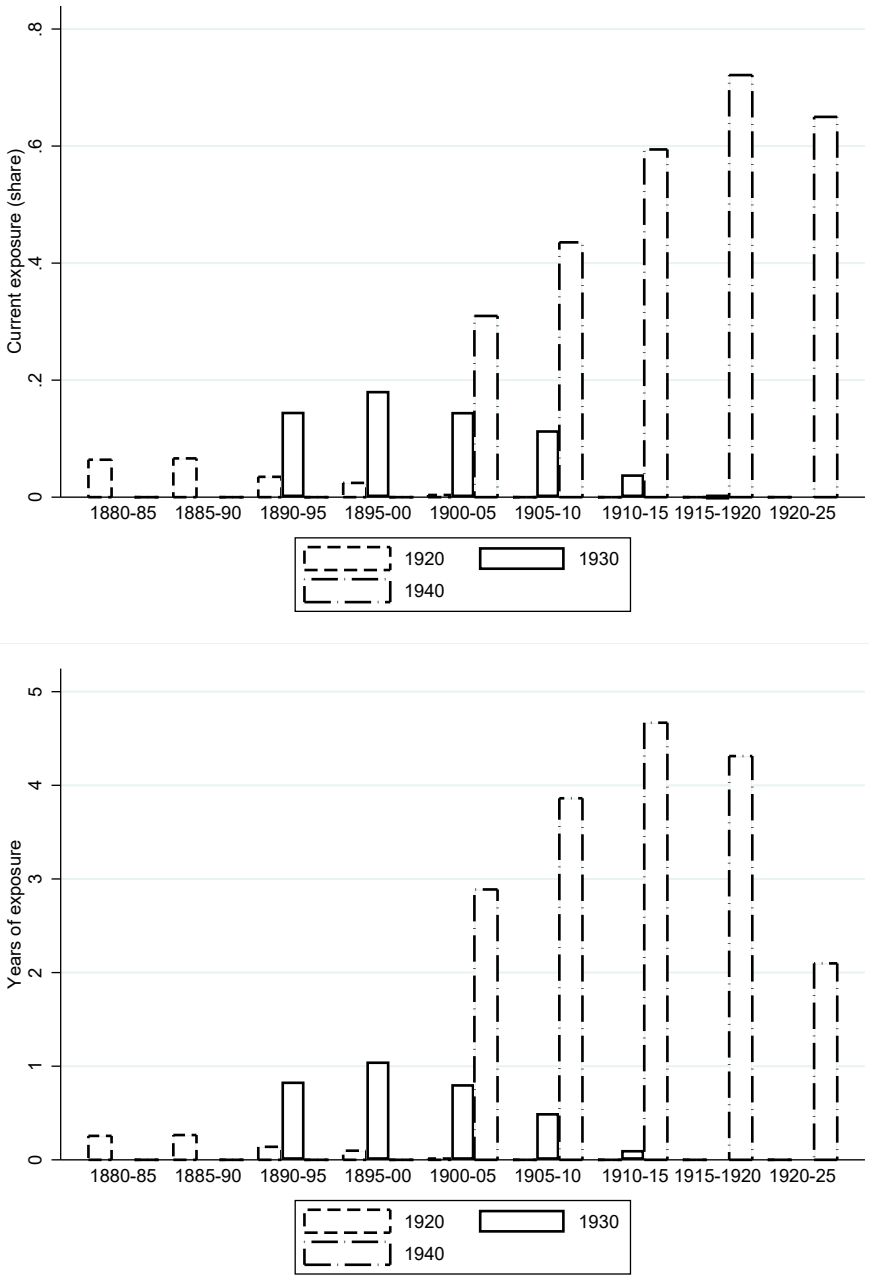


FIGURE A.5 — Exposure to a birth control clinic by cohort and year

Note: Data source: IPUMS US Census, 1920, 1930 and 1940.

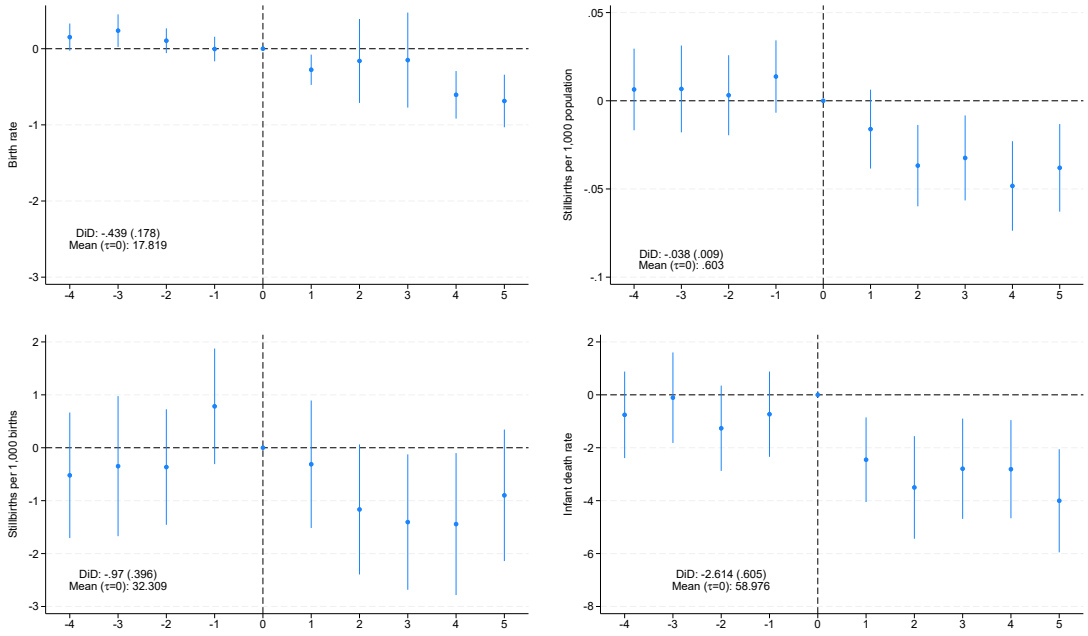


FIGURE A.6 — The impact of birth control clinics in a sample balanced in event time

Note: Data source: U.S. Vital Statistics. The figure shows the impact of the establishment of the first birth control clinic in a county (or an adjacent county) on the birth rate (births per 1,000 population, upper left panel), stillbirths per 1,000 population (upper right panel), stillbirths per 1,000 births incl. stillbirths (lower left panel) and the infant death rate (infant deaths per 1,000 births, lower right panel). Treatment effects are estimated in a conventional difference-in-differences model following Equation 3 (DiD coefficient and standard error reported in parentheses) and a TWFE event study specification following Equation 4. Apart from county and year fixed effects, the models include the following control variables: the share of women aged 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, and 45-49 in 1920, the urban population share, the population share living in farm households, the population share living in big cities with >100,000 inhabitants in 1920, the sex ratio in the population aged 15-49, the share of foreign born women, the share of literate women, the share of Black women, the share of non-White and non-Black women, the share of women in the labor force, the share of adults ever married, the population size (in 1,000), the Catholic share and the other religion share, an occupational income score (all measured in 1920), the manufacturing employment share in 1930, and the share of World War I veterans among male adults in 1930 (each interacted with year fixed effects). Treated counties are balanced in event times -5 to $+5$. Standard errors are clustered at the county level. The whiskers mark the 95 percent confidence band.

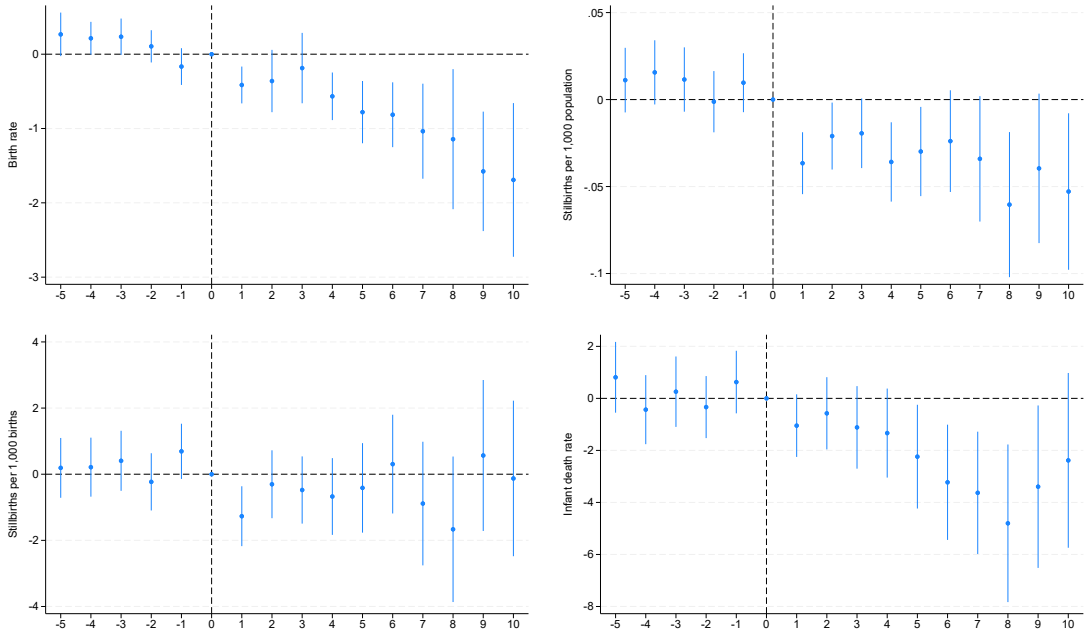


FIGURE A.7 — The impact of birth control clinics using Sun and Abraham's (2021) interaction weighted estimator

Note: Data source: U.S. Vital Statistics. The figure shows the dynamic impact of the establishment of the first birth control clinic in a county (or an adjacent county) on the birth rate (births per 1,000 population, upper left panel), stillbirths per 1,000 population (upper right panel), stillbirths per 1,000 births incl. stillbirths (lower left panel) and the infant death rate (infant deaths per 1,000 births, lower right panel). Treatment effects are derived using the interaction weighted estimator by Sun and Abraham (2021). The control group consists of never-treated counties. Apart from county and year fixed effects, the models include the following control variables: the share of women aged 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, and 45-49, the urban population share, the population share living in farm households, the population share living in big cities with >100,000 inhabitants, the sex ratio in the population aged 15-49, the share of foreign born women, the share of literate women, the share of Black women, the share of non-White and non-Black women, the share of women in the labor force, the share of adults ever married, the population size (in 1,000), the Catholic share and the other religion share, an occupational income score (all measured in 1920), the manufacturing employment share in 1930, and the share of World War I veterans among male adults in 1930 (each interacted with year fixed effects). Standard errors are clustered at the county level. The whiskers mark the 95 percent confidence band. The sample is restricted to a balanced panel of counties for the years 1925 to 1939.

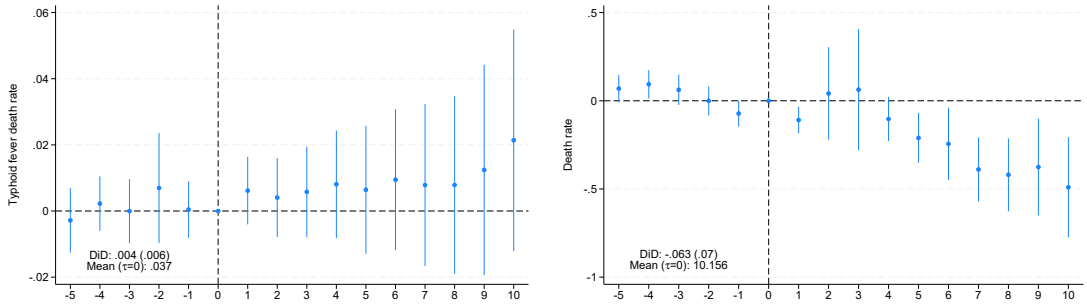


FIGURE A.8 — The impact of birth control clinics on typhoid fever mortality and all-age mortality

Note: Data source: U.S. Vital Statistics and city level causes of death data. The figure shows the dynamic impact of the establishment of the first birth control clinic in a county (or an adjacent county) on the typhoid fever death rate (typhoid fever deaths per 1,000 population) (left panel) and the all-age death rate (deaths without infant deaths per 1,000 population) (right panel). Treatment effects are estimated in a conventional difference-in-differences model following Equation 3 (DiD coefficient and standard error reported in parentheses) and a TWFE event study specification following Equation 4. Apart from county and year fixed effects, the model of the right panel includes the following control variables: the share of women aged 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, and 45-49, the urban population share, the population share living in farm households, the population share living in big cities with >100,000 inhabitants, the sex ratio in the population aged 15-49, the share of foreign born women, the share of literate women, the share of Black women, the share of non-White and non-Black women, the share of women in the labor force, the share of adults ever married, the population size (in 1,000), the Catholic share and the other religion share, an occupational income score (all measured in 1920), the manufacturing employment share in 1930, and the share of World War I veterans among male adults in 1930 (each interacted with year fixed effects). Standard errors are clustered at the county level. The whiskers mark the 95 percent confidence band. The sample in the left panel is restricted to a balanced panel of cities for the years 1920 to 1937. The sample in the right panel is restricted to a balanced panel of counties for the years 1925 to 1939.

B. Additional Tables

Table B.1 — County-level correlates of the roll-out of birth control clinics

	Cty. has BCC by 1940 Charact. of 1920 (I)	Cty. has BCC by 1940 Charact. of 1920 (II)	Cty. has BCC by 1940 Charact. of 1920 (III)	County expos. time Charact. of 1920 (IV)	County expos. time Charact. of 1920 (V)	County expos. time Charact. of 1920 (VI)
Fertility in 1920	-0.036	-0.032	-0.031	-0.233	-0.283	-0.267
	(0.033)	(0.034)	(0.034)	(0.244)	(0.260)	(0.257)
Urban pop. share	0.194	0.163	0.296**	0.898	0.710	1.624*
	(0.122)	(0.123)	(0.129)	(0.914)	(0.919)	(0.952)
Fertility in 1920 × Urban pop. share	-0.101	-0.105	-0.218	0.849	0.586	-0.830
	(0.151)	(0.152)	(0.160)	(1.133)	(1.134)	(1.176)
Population share living in farm households	-0.153***	-0.135**	-0.101	-1.024***	-0.640	-0.244
	(0.052)	(0.053)	(0.069)	(0.391)	(0.398)	(0.505)
Population living in big city (>100,000)	0.246***	0.225***	0.196*	6.572***	6.200***	2.578***
	(0.076)	(0.077)	(0.102)	(0.573)	(0.575)	(0.750)
Population share women 15-19 years old	-0.411	-0.244	-0.325	-3.058	-0.624	-1.288
	(0.404)	(0.490)	(0.511)	(3.031)	(3.660)	(3.764)
Population share women 20-24 years old	0.059	0.014	-0.134	0.244	1.279	-0.405
	(0.426)	(0.493)	(0.503)	(3.198)	(3.682)	(3.709)
Population share women 25-29 years old	0.404	0.451	0.207	2.461	4.046	1.519
	(0.482)	(0.538)	(0.542)	(3.623)	(4.018)	(3.993)
Population share women 30-34 years old	0.016	0.189	0.027	1.480	4.124	3.135
	(0.542)	(0.621)	(0.627)	(4.069)	(4.642)	(4.622)
Population share women 35-39 years old	0.664	0.695	0.564	4.455	5.401	4.826
	(0.516)	(0.577)	(0.580)	(3.875)	(4.311)	(4.270)
Population share women 40-44 years old	0.987*	1.018	0.829	8.942**	9.684**	9.997**
	(0.588)	(0.650)	(0.655)	(4.413)	(4.854)	(4.822)
Population share women 45-49 years old	1.202**	1.299*	1.112*	7.120	8.952*	9.112*
	(0.605)	(0.663)	(0.675)	(4.546)	(4.957)	(4.976)
Female to male ratio (15-49 years)		-0.045	0.005		-0.540	-0.313
		(0.054)	(0.059)		(0.405)	(0.435)
Share of women 15-49 foreignborn		0.137	0.114		3.350***	2.245***
		(0.108)	(0.113)		(0.809)	(0.831)
Share of women 15-49 literate		0.009	-0.011		0.528	0.665
		(0.137)	(0.143)		(1.021)	(1.052)
Share of women 15-49 black		-0.061	-0.090		-1.269**	-1.469**
		(0.079)	(0.083)		(0.591)	(0.608)
Share of women 15-49 non-white & non-black		-0.086	-0.079		-0.465	-0.570
		(0.147)	(0.148)		(1.095)	(1.093)
Share of women 15-49 in labor force		0.237***	0.241**		2.154***	2.296***
		(0.089)	(0.094)		(0.664)	(0.691)
Share of adults ever married			-0.104			-0.142
			(0.140)			(1.031)
Population size (in 1,000)			0.000			0.005***
			(0.000)			(0.001)
Population share protestant			Ref.			Ref.
Population share catholic			-0.018			0.252
			(0.057)			(0.420)
Share other religion			-0.092			-0.783
			(0.078)			(0.574)
WW1 veterans per male adults in 1930			0.048			-0.359
			(0.161)			(1.189)
Occupational income score			0.005			0.033
			(0.004)			(0.030)
Share manuf. empl. in 1930			-0.074			2.600**
			(0.148)			(1.090)
State-fixed effects	yes	yes	yes	yes	yes	yes
Adj. R2	0.276	0.277	0.284	0.325	0.331	0.326
Observations	3,007	3,006	2,956	3,007	3,006	2,956

Data sources: IPUMS US Census, 1920, 1930 and 1940. In cols. (I)-(III), we regress a binary variable 'having a birth control clinic in the own or adjacent county by 1940' on characteristics observed in 1920. In cols. (IV)-(VI), we regress the time a clinic existed in the own or adjacent county by 1940, again on characteristics observed in 1920 and 1940 respectively. 'Fertility' is measured by the number of a woman's own children below the age of five living in the household.

TABLE B.2 — The impact of exposure to a birth control clinic on fertility - further robustness checks

	w/t 1940	State-cohort FE	Alternative exposure measures		
	(I)	(II)	(III)	(IV)	(V)
Years of expos. to BCC (coef. × 100)	-0.784***	-0.315***			
	(0.089)	(0.064)			
ln (Years of exposure to BCC +1)			-0.019***		
			(0.003)		
Sine transf. (Years of exposure to BCC)				-0.015***	
				(0.002)	
Years of exp. since county avg. age at marr. (coef. × 100)					-0.437***
					(0.069)
Age FE	yes	yes	yes	yes	yes
Urbanity control	yes	yes	yes	yes	yes
Year FE	yes		yes	yes	yes
State-specific cohort FE		yes			
County FE	yes		yes	yes	yes
Socio-economic controls	yes	yes	yes	yes	yes
Year FE × Urbanity	yes		yes	yes	yes
Cohort FE × Urbanity		yes			
Sample mean of dep. var.	0.681	0.628	0.628	0.628	0.628
R-squared	0.094	0.089	0.093	0.093	0.093
Observations	28,337,456	45,104,489	45,120,737	45,120,737	45,104,220

Data sources: IPUMS US Census, 1920, 1930 and 1940. The table shows OLS regressions. The dependent variable is the number of a woman's own children below the age of five living in the household. Col. (I) uses only the Census data of 1920 and 1930. Col. (II) uses state×cohort effects instead of year and county fixed-effects. Col. (III) uses log exposure time. Col (IV) uses a sine-transformed exposure time. In col. (V) exposure to a birth control clinic is not measured since the age of 15 or the opening of the clinic (whichever came later), but from the counties average age at marriage or the opening of the clinic (whichever came later). For readability, the coefficient associated with the years of exposure to a birth control clinic is multiplied by 100 in cols. (I), (II) and (V). Socio-economic controls are the literacy status, race, an indicator for being foreign born, an indicator for living in a big city, an indicator for living in a farm household, and the county's religious composition. Standard errors are clustered at the county level.

TABLE B.3 — The impact of exposure to a birth control clinic on fertility by buffer zones

	20km zone (I)	50km zone (II)	50-100km ring (III)
Years of expos. to BCC (coef. × 100)	-0.373***	-0.451***	-0.309***
	(0.053)	(0.044)	(0.067)
Age FE	yes	yes	yes
Urbanity control	yes	yes	yes
Year FE	yes	yes	yes
County FE	yes	yes	yes
Year FE × Urbanity	yes	yes	yes
Socio-economic controls	yes	yes	yes
R2	0.095	0.092	0.079
Observations	31,039,248	43,597,055	25,717,160

Data sources: IPUMS US Census, 1920, 1930 and 1940. The table shows OLS regressions. The dependent variable is the number of a woman's own children below the age of five living in the household. For readability, the coefficient associated with the years of exposure to a birth control clinic is multiplied by 100. Socio-economic controls are the literacy status, race, an indicator for being foreign born, an indicator for living in a big city, an indicator for living in a farm household, and the county's religious composition. In columns (I) and (II) we drop observations that have access to a birth control clinic within the 20 to 50km and 50 to 100km ring respectively. In column (III) we drop observations that have access to a birth control clinic within the 50km buffer zone. Standard errors are clustered at the county level.

TABLE B.4 — The impact of exposure to a birth control clinic on fertility, heterogeneity (coefficients × 100)

	Yes (I)	No (II)	(I) vs. (II) p-value (III)
Black (individual level)	-0.582***	-0.278***	
	(0.056)	(0.052)	(<0.001)
	[0.523]	[0.642]	
Foreign born (individual level)	-0.156	-0.128***	
	(0.186)	(0.047)	(0.882)
	[0.719]	[0.616]	
Big cities (cities >100,000 pop.)	-0.396***	-0.608***	
	(0.088)	(0.055)	(0.041)
	[0.504]	[0.690]	
Catholic share at county level above median share	-0.384***	-0.368***	
	(0.075)	(0.049)	(0.864)
	[0.590]	[0.667]	
County vote in 1920 majority Democrats	-0.561***	-0.323***	
	(0.102)	(0.053)	(0.038)
	[0.652]	[0.620]	
County vote in 1932 majority Democrats	-0.457***	-0.162**	
	(0.070)	(0.074)	(0.004)
	[0.635]	[0.608]	
Southern states	-0.618***	-0.327***	
	(0.123)	(0.051)	(0.029)
	[0.662]	[0.617]	
Above median annual retail sales growth (1929-39)	-0.524***	-0.408***	
	(0.074)	(0.074)	(0.265)
	[0.649]	[0.628]	
Above median annual growth of social spending (1933-39)	-0.400***	-0.519***	
	(0.104)	(0.059)	(0.321)
	[0.629]	[0.651]	
Above median unemployment in 1930	-0.310***	-0.409***	
	(0.060)	(0.064)	(0.258)
	[0.574]	[0.679]	
Above median WWI veterans in 1930	-0.374***	-0.519***	
	(0.071)	(0.089)	(0.201)
	[0.566]	[0.689]	

Data sources: IPUMS US Census, 1920, 1930 and 1940, NHGIS county level data, and election data taken from Robinson (1934). Counties heavily affected by the Great Depression are counties with a below median retail sales growth from 1929 to 1939 (see Fishback *et al.*, 2005). Counties with a large prevalence of welfare benefit payments in the 1930s are defined as having above median social spending growth over the period 1933-1939 (see Fishback *et al.*, 2005). The dependent variable is the number of a woman's own children below the age of five living in the household. The sample, specification and controls used are the same than those used in Table 2, column (IV). Standard errors are clustered at the county level. Each coefficient comes from a different regression and, for readability, is multiplied by 100. Group-specific sample means in brackets.

TABLE B.5 — The impact of birth control clinics on fertility, stillbirths and infant mortality

	Crude birth rate		Stillbirths per 1,000 pop		Stillbirths per 1,000 births		Infant death rate	
	(I)	(II)	(III)	(IV)	(V)	(VI)	(VII)	(VIII)
Treatment effect	-0.491***	-0.467***	-0.040***	-0.036***	-0.850***	-0.950***	-1.604***	-1.424***
	(0.180)	(0.143)	(0.007)	(0.007)	(0.325)	(0.324)	(0.455)	(0.460)
County FE	yes	yes	yes	yes	yes	yes	yes	yes
Year FE	yes	yes	yes	yes	yes	yes	yes	yes
Age structure controls	yes	yes	yes	yes	yes	yes	yes	yes
Urbanity controls	yes	yes	yes	yes	yes	yes	yes	yes
Additional controls	no	yes	no	yes	no	yes	no	yes
R^2	0.104	0.137	0.102	0.127	0.049	0.069	0.125	0.149
Observations	23,576	23,304	23,577	23,305	23,586	23,304	23,350	23,090
Number of counties	1,808	1,784	1,808	1,784	1,808	1,784	1,808	1,784

Data source: U.S. Vital Statistics. The figure shows OLS regressions depicting the impact of the establishment of the first birth control clinic in a county (or an adjacent county) on the birth rate (births per 1,000 population, columns (I) and (II)), stillbirths per 1,000 population (columns (III) and (IV)), stillbirths per 1,000 births incl. stillbirths (columns (V) and (VI)) and the infant death rate (infant deaths per 1,000 births, columns (VII) and (VIII)). Age structure controls are the share of women aged 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, and 45-49. Urbanity controls are the urban population share, population share living in farm households, and the population share living in big cities with >100,000 inhabitants. Additional socio-economic controls are the sex ratio in the population aged 15-49, the share of foreign born women, the share of literate women, the share of Black women, the share of non-White and non-Black women, the share of women in the labor force, the share of adults ever married, the population size (in 1,000), the Catholic share and the other religion share, an occupational income score (all measured in 1920), the manufacturing employment share in 1930, and the share of World War I veterans among male adults in 1930 (each interacted with year fixed effects). Standard errors are clustered at the county level.

C. Data sources

Birth control clinic data set

Digitized data set of birth control clinics established in the U.S. before 1940 based on Hajo (2010). Hajo gathered the information from various sources, including historical issues of the Birth Control Review and press archives. For each clinic, the dataset provides information on the county in which it was located, the year of its establishment, and, if applicable, the year of its closure. The data set encompasses a total of 639 birth control clinics, which are geographically dispersed across 44 states.

For more details see: Hajo, Cathy M. (2010). Birth Control on Main Street. Organizing Clinics in the United States, 1916–1939. Champaign: University of Illinois Press.

Press coverage (www.newspapers.com)

Newspapers.com is an online newspaper archive. We recorded the number of newspaper articles published in the U.S. mentioning the term "birth control" between 1910 and 1940.

US Census Data (IPUMS USA)

Census 1920 Women's age, race, nativity, literacy, farm status, urbanity and size of place, number of own children below five in household, number of all own children in household, and labor force participation (all individual level). Population size, populage age and sex composition, sex ratio, urban population share, socio-demographic population composition, and occupation income score (all aggregated at county level).

Census 1930 Women's age, race, nativity, literacy, farm status, urbanity and size of place, number of own children below five in household, number of all own children in household, and labor force participation (all individual level). Age at marriage and World War I veteran status (all aggregated at county level).

Census 1940 Women's age, race, nativity, education, farm status, urbanity and size of place, number of own children below five in household, number of all own children in household, and labor force participation (all individual level).

For more details see: Ruggles, S., Flood, S., Goeken, R., Schouweiler, M. and Sobek, M. (2022). IPUMS USA: Version 12.0. Minneapolis, MS: IPUMS.

National Historical GIS (NHGIS) (IPUMS USA)

1915-1941 Vital Statistics: Natality & Mortality Data (States & Counties) County level data on the number of stillbirths by place of occurance 1922 to 1939.

Census of Religious Bodies: Religious Bodies Data Set 1906-1936 (county level) Percentage of different religious groups.

1930 Census: Population, Agriculture & Economic Data (county level) Percentage of unemployed workers, percentage of manufacturing workers.

For more details see: Manson, S., Schroeder, J., Van Riper, D., Kugler, T., and Ruggles, S. IPUMS National Historical Geographic Information System: Version 17.0 [dataset]. Minneapolis, MN: IPUMS. 2022.

County Longitudinal Template, 1840-1990 (Horan-Hargis)

The County Longitudinal Template is a tool that allows to account for temporal changes in the geographic boundaries of counties in the United States due to the split of counties, the merge of counties or changes in the boundaries of counties. These data provide a decade-by-decade account of the administrative status of each county, starting in 1990 and tracing each census period back through 1840. We use this template to work with constant county boundaries over the period 1920-1940. For more details, see Horan, Patrick M., and Peggy G. Hargis. County Longitudinal Template, 1840-1990 [Computer file]. ICPSR version. Athens, GA: Patrick M. Horan, University of Georgia, Dept. of Sociology/Statesboro, GA: Peggy G. Hargis, Georgia Southern University, Dept. of Sociology and Anthropology [producers], 1995. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 1995.

List of counties and adjacent counties

The United States Census Bureau provides county adjacency files that list each county, or county equivalent, and which county, or counties, are neighboring. We use the county adjacency file 2010, which is available via this link: https://www.census.gov/geographies/reference-files/time-series/geo/county-adjacency.2010.html#list-tab-1451423646

Fishback *et al.* (2005) data

We use county level data on retail sales (1929 and 1939) and per capita public works and relief spending (1933-1935 and 1933-1939). The data are provided by Fishback, P., Kantor, S. New Deal Studies. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2018-11-18 (https://doi.org/10.3886/E101199V1) under the Creative Commons Attribution 4.0 International licence.

For more details see: Fishback, P. V., Horrace, W. C., & Kantor, S. (2005). Did New Deal Grant Programs Stimulate Local Economies? A Study of Federal Grants and Retail Sales during the Great Depression. *The Journal of Economic History*, 65(1), 36–71.

Election data

County level voting outcomes of presidential elections of the years 1920 and 1932.

For more details see: Robinson, E. (1934). The Presidential Vote, 1896–1932. Stanford: Stanford University Press.

Vital statistics

U.S. County-Level Natality and Mortality Data, 1915-2007 Live births (exclusive of stillbirths), infant deaths (i.e., deaths of children below the age of one exclusive of stillbirths), total number of deaths by all ages, and total population (all 1920-1939).

For more details see: Bailey, M.J., Clay, K., Fishback, P., Haines, M., Kantor, S., Severnini, E. and Wentz, A. (2016). U.S. County-Level Natality and Mortality Data, 1915–2007. Ann Arbor, MI: Inter-university Consortium for Political and Social Research.

Causes of death data

Vital statistics of the United States annual volumes 1920-1937 (city level) We use data on puerperal deaths and typhoid fever deaths as well as female population aged 15-49 and total population. The data are provided by Ager, P., Feigenbaum, J., Hansen, C. W., Tan, H. R., & Williamson, D. (2022). Replication package for: How the Other Half Died: Immigration and Mortality in US Cities (2.0) [Data set]. Zenodo (https://doi.org/10.5281/zenodo.7506459) and can be used under the Creative Commons Attribution 4 International licence.

For more details see: Ager, P., Feigenbaum, J. J., Hansen, C. W. and Tany, H. R. (2024). How the other half died: Immigration and mortality in US cities. *The Review of Economic Studies*, 91 (1), 1–44.

TABLE C.1 — A comparison of the used main outcome measures and treatment definitions

	Census data	Vital statistics	Causes of death data
Outcome measures	Number of a woman's own children below the age of five living in the same household at the date of the census	Birth rate, i.e., births (excl stillbirths) per 1,000 population	
		Stillbirth rate, i.e., stillbirths per 1,000 population and stillbirths per 1,000 births (incl stillbirths)	Puerperal death rate, i.e., puerperal deaths by 1,000 female population aged 15 to 49
		Infant death rate, i.e., infant deaths per 1,000 population	Typhoid fever death rate, i.e., typhoid fever deaths by 1,000 population
Observation unit	Woman (individual)	County	City
Sample composition	All married white and black women aged 15-39 (excl. women in Alaska and Hawaii)	Balanced panel of counties (excl. counties in Alaska and Hawaii)	Balanced panel of cities (excl. cities in Alaska and Hawaii)
Data frequency	1920, 1930, 1940	Annual data from 1925 to 1939	Annual data from 1920 to 1937
Treatment definition	Woman's years of exposure to a birth control clinic in own or adjacent county since age 15 (assuming the woman lived in the same county at age 15 as she is observed in the census year)	County is treated as soon as the first birth control clinic opens in the county or an adjacent county	City is treated as soon as the first birth control clinic opens in the county or an adjacent county