Online Appendix

Partisan Fertility and Presidential Elections

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Appendix 1. Implementation for Pre-Election Campaign Visits

We collect Trump's campaign visits between January 2015 and November 2016 from the National Journal's Travel Tracker.[1] The data contains date, time, and city information for each visit. We map city names to county. Trump visited a total of 230 counties during his campaign; the mean and variance of these counties' fertility are reported in Table A1.

While we have the actual date of Trump's campaign visit, the natality data only records the month of the first day of a mother's last menstrual period (MLMP). This means that women whose menses occur in the second half of the month preceding a visit may be fertile when a visit occurs. Likewise, women whose menses begin in the month of a visit may not be fertile until the following month. This implies that women whose MLMP is in month -1 can also be treated by Trump's campaign visit. Similarly, women whose MLMP is in month 0 may not have been treated.[2]

We use a triple DID dynamic event study comparing fertility between Hispanic and non-Hispanic females in counties before and after Trump's first visit, using counties he will visit later as controls. We focus on Trump's *first* campaign visit to a county so as not to contaminate our estimate with the effects from prior visits. We use counties that Trump will visit in the future as controls, rather than counties he will never visit, because unvisited counties are considerably different. To implement the dynamic event study we stack our panel data as a series of 4×2 matrices (Hispanics/non-Hispanics in treatment/control counties ×

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[1]Travel Tracker compiles information from candidates' public campaign schedules and excludes events that candidates hold in their home states. This data is similar to that collected by Hungerman et al. (2018).

[2]The predicted percentage of fertile days in the month of a campaign visit (month 0) for women whose MLMP occurs in month -1, is approximately two thirds that of women whose MLMP occurs in month 0. This calculation assumes a uniform distribution of conception dates and visits throughout a month. Moreover, Google searches in Figure A7 suggest some anticipation of the campaign visit. Including anticipation would increase the percentage of fertile days for women whose MLMP occurs in month -1 to over 90% that of women whose MLMP occurs in month 0.

pre/post), and adapt the R package from Novgorodsky and Setzler (2019) to allow the triple difference.

We define counties visited in month g as cohort g and cohort-specific event time in calendar month m as $e_g = m - g$. We run the following regression:

$$
\begin{aligned}
\mathrm{Y}_{kcm} = & \sum_{g \in G} 1\{cohort = g\} * \{ \sum_{e \neq -3} \beta^H_{e_g} * Hispanic_k * Treat_{c,g} * 1\{e = m - g\} \\
& + \sum_{e \neq -3} \beta^T_{e_g} * Treat_{c,g} * 1\{e = m - g\} + \sum_{e \neq -3} \gamma_{e_g} * Hispanic_k * 1\{e = m - g\} \\
& + \sum_{e \neq -3} \delta_{e_g} * 1\{e = m - g\} + \delta_g * Hispanic_k * Treat_{c,g} + \pi_g * Treat_{c,g}\} + \epsilon_{kcm},
\end{aligned}
\tag{3}
$$

where Y_{kcm} is the fertility rate among women in ethnicity group k in county c in month m. G is the set of all months that Trump had any campaign visits. $Hispanic_k$ is one if the ethnicity is Hispanic, and zero otherwise. $Treat_{c,g}$ is one if county c belongs to cohort g and when cohort g is the treatment cohort (i.e., when $1\{cohort = g\} = 1$). We define the omitted period as month -3, because women whose MLMP occurs in month -1 may also be treated, and to allow for potential anticipation one month before the actual visit.

Under the assumption that earlier visited and later visited counties share similar fertility trends absent Trump campaign visits, we can identify the treatment effect on the fertility of Hispanics versus others in treated cohort g in event time e_g, which we label as $\beta^H_{e_g}$. Following Sun and Abraham (2020), we define the average treatment effect for event time e as:

$$
\beta^H_e = \sum_{g \in G} \beta^H_{e_g} \times w_g
\tag{4}
$$

where w_g (the aggregation weight) is the Hispanic female population in counties belonging to cohort g. For robustness, we also use the total female population in cohort g as w_g, and results are similar. We calculate clustered standard errors for β^H_e via the delta method.

All counties in our sample experience their first Trump visit by November 2016. As a result, restricting controls to be eventually-visited counties forces us to trade off the number of post periods with the number of cohorts we can estimate treatment effects for. We estimate effects for event times from -7 to +5 months. This implies that the last cohort we

can estimate effects for have their first Trump visits in April 2016.[3]

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[3]Since control counties must be visited by November 2016 and there is one month of anticipation, treatment effects can only be estimated up to September 2016. Five months before September 2016 is April 2016.

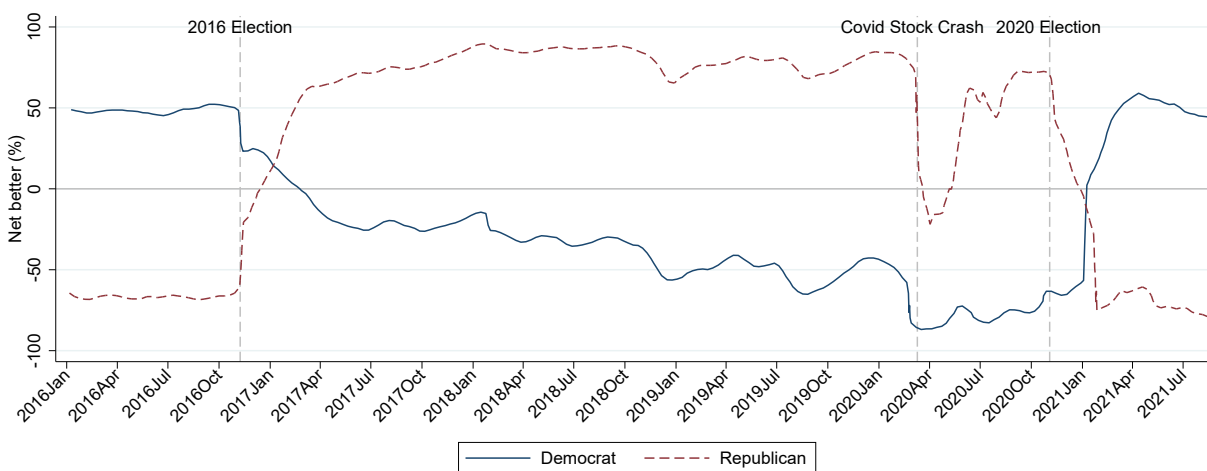# APPENDIX 2. ADDITIONAL FIGURES AND TABLES

**Figure A1:** ECONOMIC OUTLOOK BY PARTY AFFILIATION

Note: This figure plots the percentage of positive minus negative responses ("net better") to the question "Do you think the nation's economy is getting better or worse?" among registered voters. The survey is administered by CIVIQS, which uses a list-based sampling methodology to select panelists to receive online polls. They use dynamic Bayesian multilevel regression with post-stratification weights to adjust the demographics of the sample to those of the U.S. population and to smooth out day-to-day sampling variability.
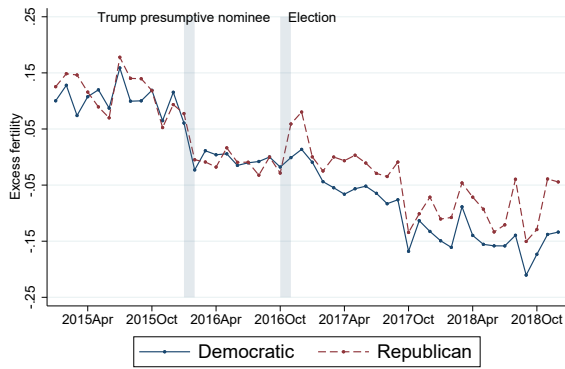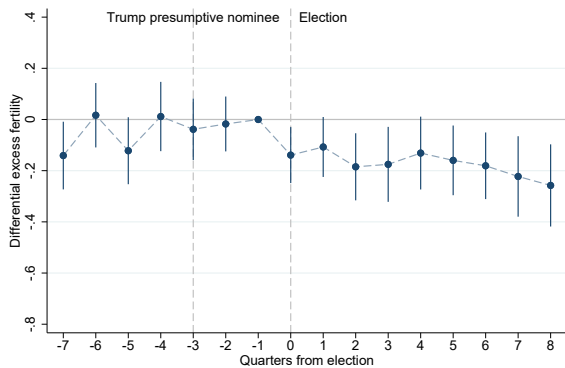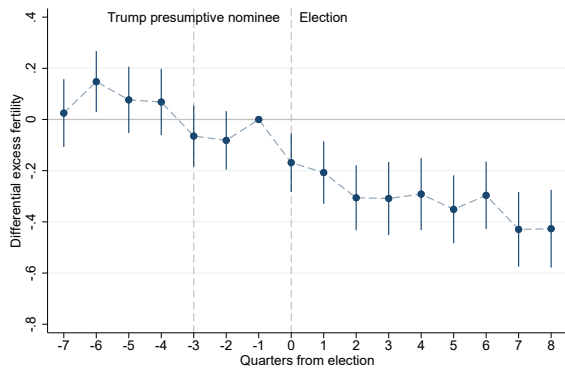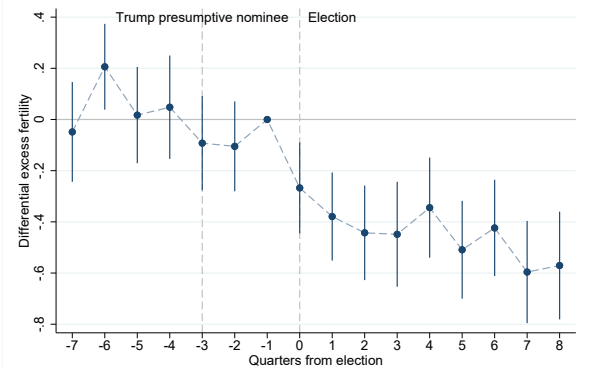
A1. By vote share
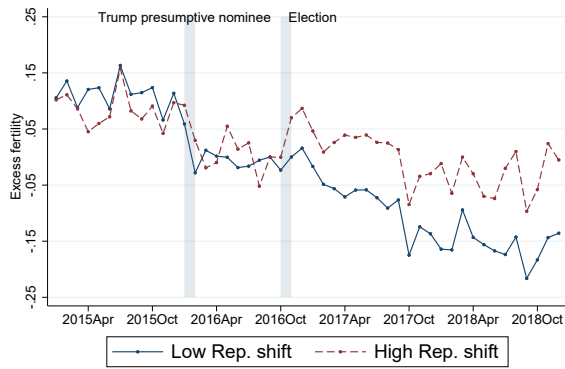
B1. By Republican shift
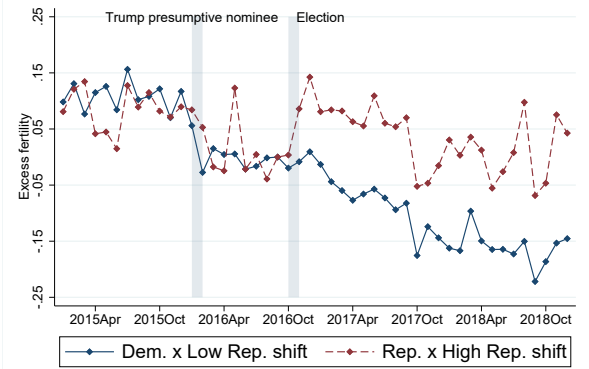
C1. By vote share × Rep. shift

A2. By vote share

B2. By Republican shift

C2. By vote share × Rep. shift

Figure A2: 2016 Presidential Election and Fertility in Democratic versus Republican Counties (Longer Pre-period)

Note: This figure extends Figure 1 panels A1 to C1 to start in January 2015, and extends panels A2 to C2 to start in quarter -7. The shaded areas, which account for partially treated months (see section 2.2), indicate the periods immediately surrounding the New Hampshire primary (January-February 2016) and the presidential election (October-November 2016). See note to Figure 1 for specifications.
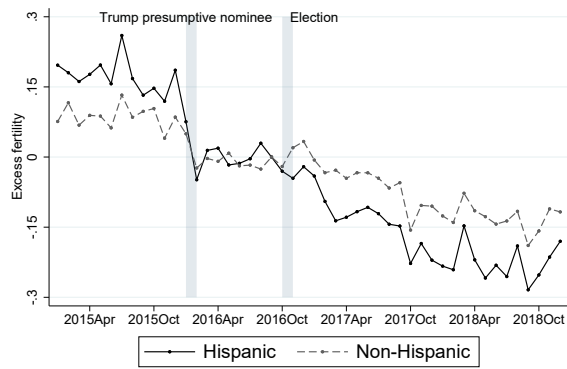
A1. Hispanic vs non-Hispanic **B1.** Hispanic vs rural white **C1.** Hispanic vs evangelical white
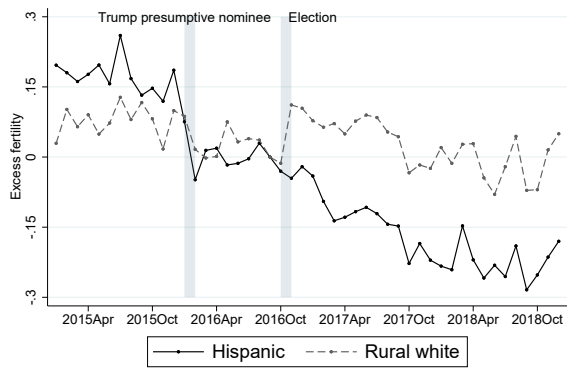
A2. Hispanic vs non-Hispanic **B2.** Hispanic vs rural white **C2.** Hispanic vs evangelical white
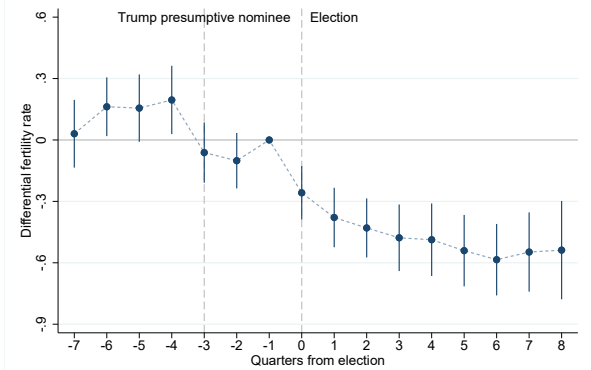
Figure A3: 2016 PRESIDENTIAL ELECTION AND HISPANIC VERSUS NON-HISPANIC FERTILITY
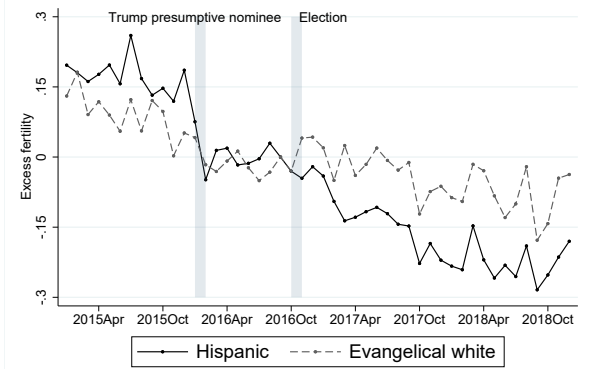(LONGER PRE-PERIOD)

Note: This figure extends Figure 2 panels A1 to C1 to start in January 2015 and extends panels A2 to C2 to start in quarter -7. The shaded areas, which account for partially treated months (see section 2.2), indicate the periods immediately surrounding the New Hampshire primary (January-February 2016) and the presidential election (October-November 2016). See note to Figure 2 for specifications.
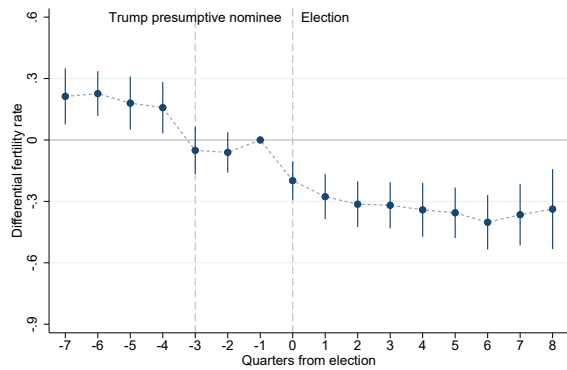
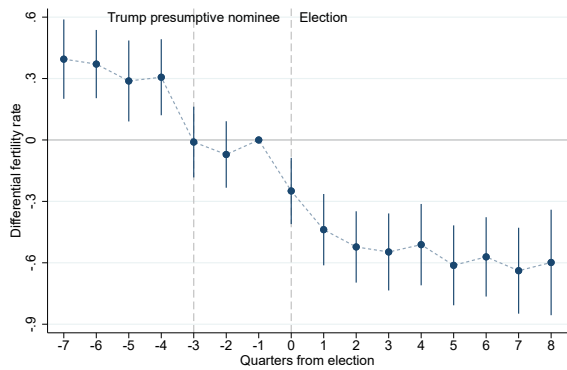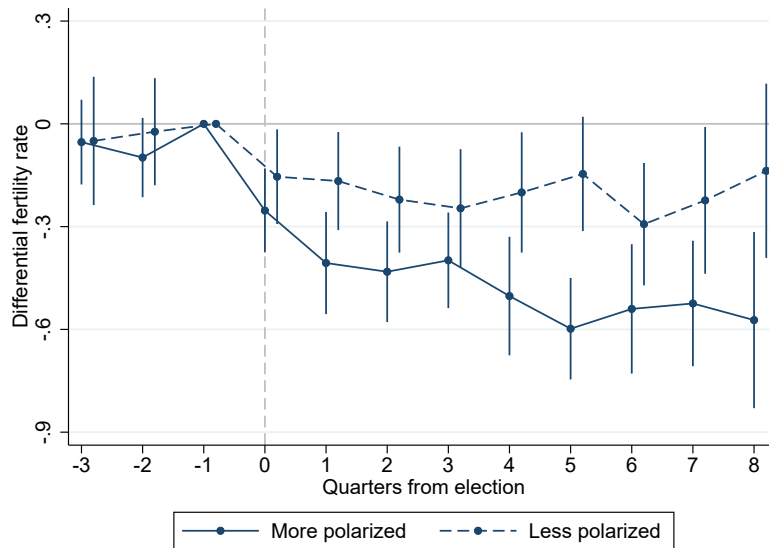**Figure A4:** 2016 Presidential Election and Fertility in More versus Less Polarized Counties

Note: This figure plots heterogeneous effects (and 95% confidence intervals) of the 2016 presidential election on the excess fertility rate among Hispanic versus non-Hispanic women in more versus less polarized counties. A county is defined as more polarized if the county experienced an above-median level of instrumented China trade shock between 2000 and 2008 following Autor et al. (2020). The omitted quarter is -1 (July-September 2016). The specification is described in section 3.4. Coefficients are slightly staggered for visual clarity.
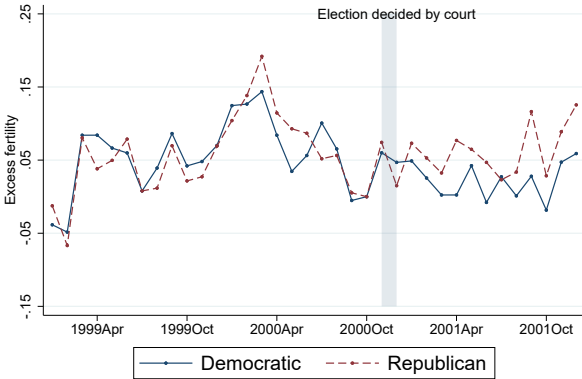
A1. By vote share
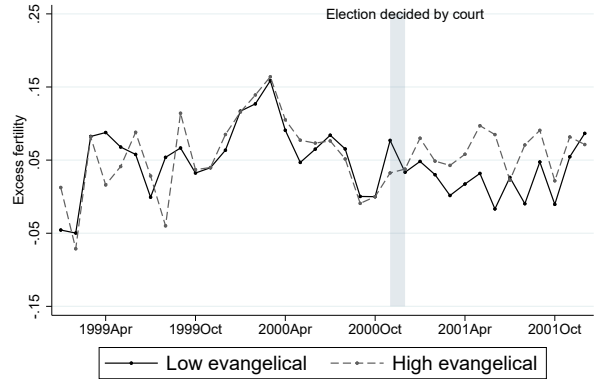
B1. By evangelical share
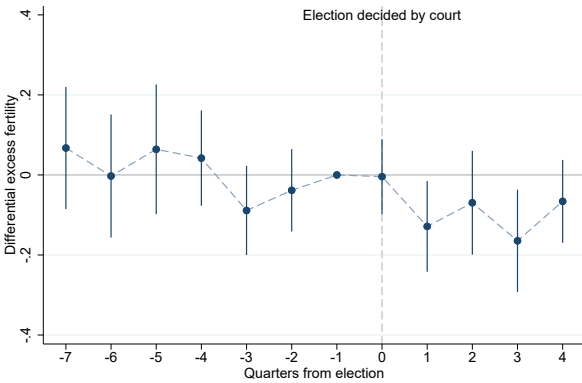
A2. By vote share
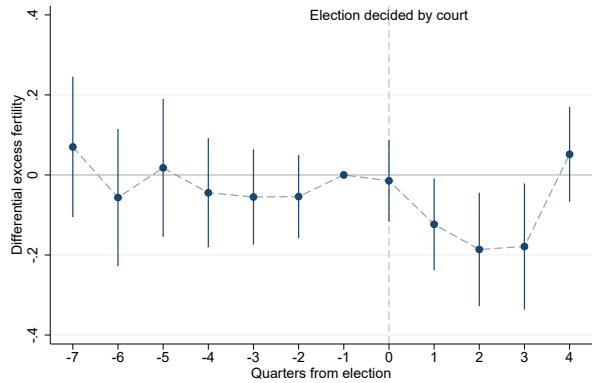
B2. By evangelical share

Figure A5: 2000 Presidential Election and Fertility
(Longer Pre-period)

Note: This figure extends Figure 3 panels A1 and B1 to start in January 1999, and extends panels A2 and B2 to start in quarter -7. Excess fertility rates in panels A1 and B1 are normalized to October 2000. The election was decided in December 2000 by the Supreme Court. As described in section 2.2, November represents a partially-treated month, so we shade November and December to indicate the onset of treatment.
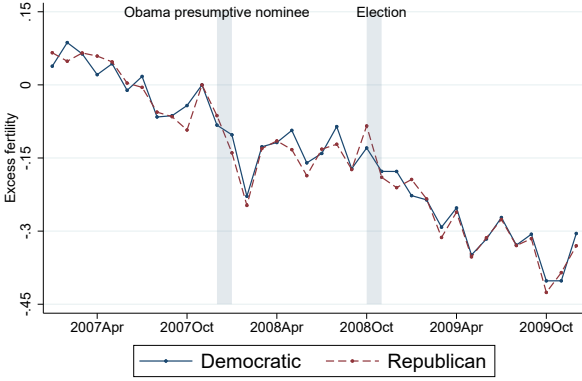
A1. Dem. vs Rep.
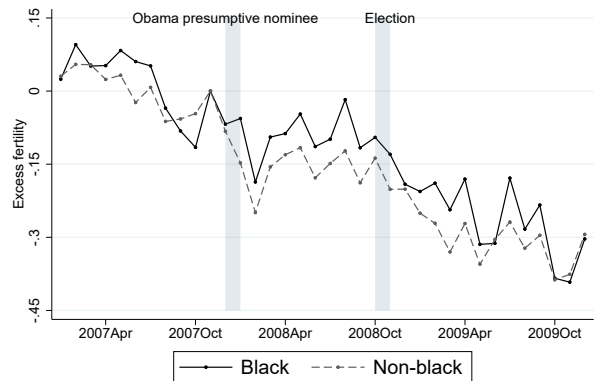
B1. Black vs non-Black
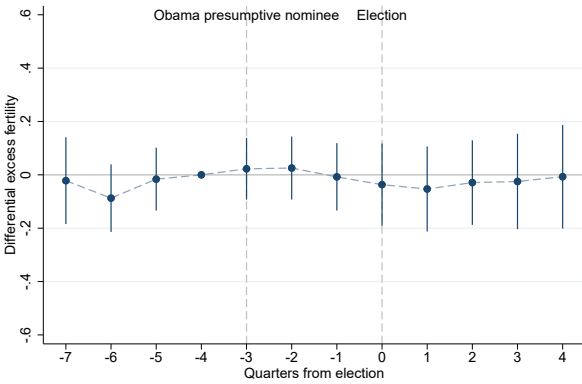
A2. Dem. vs Rep.
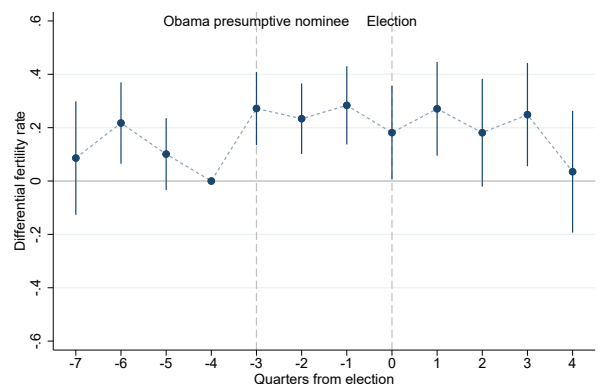
B2. Black vs non-Black

Figure A6: 2008 Presidential Election and Fertility

Note: This figure plots effects (and 95% confidence intervals) for the 2008 presidential election. Fertility rates in panels A1 and B1 are normalized to November 2007. Obama became the presumptive nominee after the Iowa Caucus. The shaded areas, which account for partially treated months (see section 2.2), indicate the periods immediately surrounding the Iowa Caucus (December 2007-January 2008) and the presidential election (October-November 2008). Panel A1 plots the excess fertility rate in counties with above-median versus below-median Democratic vote shares in the 2004 presidential election; Panel B1 the excess fertility rate for Black versus non-Black mothers (within county). Panels A2 and B2 plot the interactions between quarters and indicators for Democratic-leaning counties (equation 1) and Black mothers (equation 2). The omitted quarter is -4 (October-December 2007). Specifications mirror those in Table 1, columns (1) and (4).
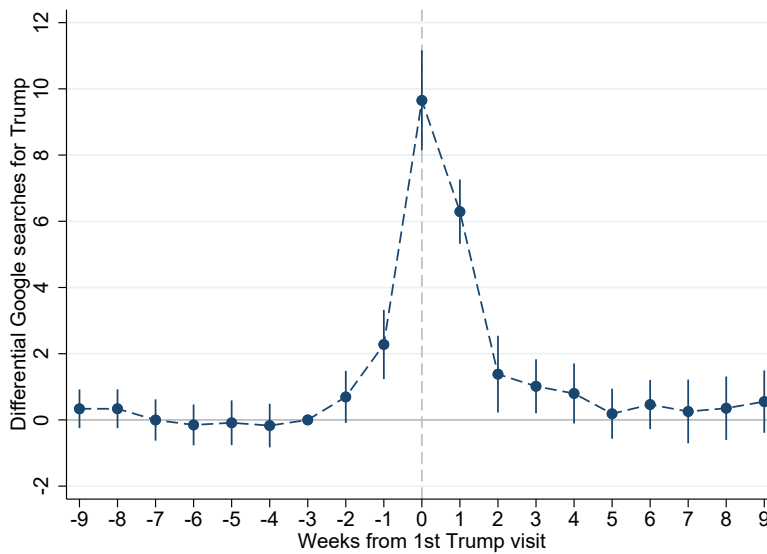
Figure A7: Google Search Index for "Trump" around Campaign Visits

Note: This figure plots dynamic treatment effects (and 95% confidence intervals) for Trump's first campaign visit to a Designated Market Area (DMA) on the weekly Google search index for "Trump" relative to DMAs with *later* visits (the omitted period is -3). This figure shows that the Google search index for "Trump" starts to rise about two weeks before Trump's first campaign visit to a DMA, peaking in the week of the visit.

Table A1: SUMMARY STATISTICS FOR 2016 ELECTION

Panel A: Election sample	Fertility rate		Excess fertility rate	
Race	Mean	SD	Mean	SD
Total	4.495	0.864	-0.137	0.499
Hispanic	5.134	1.492	-0.300	1.057
Mexican	4.726	1.835	-0.182	1.436
Non-Hispanic	4.280	0.898	-0.107	0.545
Non-Hispanic minority	4.699	1.329	-0.111	0.997
Non-Hispanic white	4.266	1.040	-0.104	0.639
N counties	2,830	2,830	2,830	2,830

Panel B: Campaign sample				
Race	Mean	SD		
Hispanic	5.159	1.064		
Non-Hispanic	4.299	0.649		
Non-Hispanic white	4.204	0.768		
N counties	230	230		

Notes: The fertility rate corresponds to monthly births conceived per 1,000 women who are between 15 and 44 years old for each race/ethnicity in a county. The excess fertility rate is calculated by subtracting the race/ethnicity × county × month-of-year mean using data from 2010 onward. Data in panels A and B cover January 2016 - December 2018 and September 2014 - September 2016, respectively.

Table A2: 2000 Presidential Election and Fertility

	(1) Dem. vs Rep.	(2) Low vs high evangelical
Treat_3	-0.089	-0.055
	(0.057)	(0.061)
Treat_2	-0.038	-0.054
	(0.052)	(0.053)
Treat_0	-0.004	-0.014
	(0.048)	(0.052)
Treat_1	-0.129**	-0.123**
	(0.058)	(0.059)
Treat_2	-0.069	-0.186**
	(0.066)	(0.072)
Treat_3	-0.165**	-0.179**
	(0.065)	(0.080)
Treat_4	-0.066	0.052
	(0.053)	(0.061)
Avg. Treat (0 to 4)	-0.087	-0.090
1999 avg. birth rate	14.311	14.315
Avg. Treat/1999 avg.	0.6%	0.6%
1999 avg. Treat-Control gap	-.822	-.357
Avg. Treat/1999 avg. gap	11%	25%
Observations	22,496	22,632
R-squared	0.487	0.487
County FE	Y	Y
Quarter event FE	Y	Y
N clusters (counties)	2,812	2,829

Note: This table reports the estimates depicted in panels A2 and B2 in Figure 3. The dependent variable is the excess fertility rate. The treatment group is the first group named in each column header. Columns (1) and (2) report interactions between quarters and a Democratic-leaning indicator from equation 1. Column (1) compares counties with above-median versus below-median Democratic vote shares in the 1996 Presidential election; column (2) counties with below-median versus above-median evangelical share. The omitted quarter is -1 (August-October 2000). Standard errors are clustered by county.
*** 1%, ** 5%, * 10% significance level

Table A3: ROBUSTNESS - 2016 PRESIDENTIAL ELECTION AND FERTILITY

	(1) Dem. vs Rep.	(2) L vs H Rep. shift	(3) Share x shift	(4) HP vs non-HP	(5) HP vs rural WH	(6) HP vs evan. WH	(7) Dem. vs Rep. p60/p40	(8) L vs H Rep. shift 12-16	(9) Mexican vs non-HP	(10) Minority vs WH
$Treat_{-3}$	-0.038	-0.064	-0.092	-0.051	-0.010	-0.062	0.004	0.016	0.039	0.025
	(0.061)	(0.061)	(0.094)	(0.059)	(0.088)	(0.075)	(0.072)	(0.061)	(0.094)	(0.074)
$Treat_{-2}$	-0.017	-0.081	-0.105	-0.061	-0.071	-0.101	-0.003	-0.022	-0.051	0.083
	(0.055)	(0.058)	(0.090)	(0.050)	(0.083)	(0.069)	(0.061)	(0.056)	(0.070)	(0.055)
$Treat_0$	-0.139**	-0.169***	-0.267***	-0.198***	-0.249***	-0.258***	-0.123**	-0.172***	-0.218***	0.045
	(0.056)	(0.058)	(0.091)	(0.048)	(0.083)	(0.067)	(0.061)	(0.057)	(0.055)	(0.053)
$Treat_1$	-0.098*	-0.198***	-0.363***	-0.275***	-0.450***	-0.379***	-0.128**	-0.243***	-0.315***	-0.142**
	(0.059)	(0.061)	(0.087)	(0.055)	(0.087)	(0.072)	(0.063)	(0.063)	(0.066)	(0.056)
$Treat_2$	-0.175***	-0.297***	-0.427***	-0.312***	-0.535***	-0.430***	-0.237***	-0.267***	-0.324***	-0.087
	(0.065)	(0.064)	(0.092)	(0.055)	(0.085)	(0.070)	(0.070)	(0.068)	(0.064)	(0.062)
$Treat_3$	-0.165**	-0.299***	-0.433***	-0.318***	-0.559***	-0.478***	-0.184**	-0.314***	-0.355***	-0.042
	(0.073)	(0.071)	(0.102)	(0.057)	(0.094)	(0.082)	(0.083)	(0.074)	(0.066)	(0.065)
$Treat_4$	-0.121*	-0.282***	-0.329***	-0.340***	-0.524***	-0.487***	-0.159**	-0.356***	-0.264***	-0.262***
	(0.071)	(0.069)	(0.097)	(0.064)	(0.097)	(0.087)	(0.078)	(0.072)	(0.071)	(0.069)
$Treat_5$	-0.136**	-0.336***	-0.469***	-0.356***	-0.657***	-0.546***	-0.195**	-0.346***	-0.145*	-0.422***
	(0.068)	(0.067)	(0.097)	(0.061)	(0.100)	(0.088)	(0.076)	(0.066)	(0.085)	(0.067)
$Treat_6$	-0.157**	-0.281***	-0.383***	-0.402***	-0.616***	-0.590***	-0.195***	-0.290***	-0.040	-0.242***
	(0.066)	(0.067)	(0.096)	(0.067)	(0.101)	(0.089)	(0.071)	(0.065)	(0.114)	(0.068)
$Treat_7$	-0.199**	-0.414***	-0.555***	-0.366***	-0.683***	-0.552***	-0.250***	-0.470***	0.019	-0.201***
	(0.079)	(0.074)	(0.102)	(0.076)	(0.108)	(0.098)	(0.088)	(0.075)	(0.176)	(0.069)
$Treat_8$	-0.234***	-0.411***	-0.530***	-0.338***	-0.643***	-0.543***	-0.309***	-0.516***	-0.011	-0.222***
	(0.080)	(0.075)	(0.105)	(0.097)	(0.128)	(0.120)	(0.091)	(0.076)	(0.212)	(0.076)
Avg. Treat (0 to 8)	-0.158	-0.299	-0.417	-0.323	-0.546	-0.474	-0.198	-0.331	-0.184	-0.175
2015 avg. birth rate	14.007	14.007	13.878	13.896	15.701	15.221	13.887	14.007	13.518	13.612
Avg. Treat/2015 avg.	-1.1%	-2.1%	-3.0%	-2.3%	-3.5%	-3.1%	-1.4%	-2.4%	-1.4%	-1.3%
2015 avg. Treat-Control gap	-1.018	-.181	-.848	2.994	1.925	2.308	-1.156	.092	1.627	1.169
Avg. Treat/2015 avg. gap	16%	165%	49%	-11%	-28%	-21%	17%	-360%	-11%	-15%
Observations	33,744	33,744	19,596	67,896	53,028	50,892	27,000	33,756	67,692	67,920
R-squared	0.369	0.370	0.397	0.315	0.248	0.273	0.372	0.370	0.290	0.269
County FE	Y	Y	Y	N	N	N	Y	Y	N	N
County × ethnicity FE	N	N	N	Y	Y	Y	N	N	Y	Y
Quarter event FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Income & industry share	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
N clusters (counties)	2,812	2,812	1,633	2,829	2,829	2,829	2,250	2,813	2,830	2,830

Note: Columns (1) to (6) parallel the specifications in Table 1 but add controls for county income, income squared, and county monthly two-digit NAICS employment share. The treatment group is the first group named in each column header. Column (7) categorizes county partisanship by whether they are above the 60th or below the 40th percentile in the 2012 Democratic vote share. Column (8) uses the shift in Republican vote share between 2012-2016 instead of 2008-2016. Column (9) replaces Hispanics (HP) as the treatment group with Mexicans, while column (10) compares non-Hispanic minorities to non-Hispanic whites (WH). The omitted quarter is -1 (July-September 2016). Standard errors are clustered by county. *** 1%, ** 5%, * 10% significance level

Table A4: 2016 PRESIDENTIAL ELECTION AND GOOGLE SEARCHES FOR "PREGNANCY TEST"

	(1) Dem. vs Rep.	(2) Low vs high Rep. shift	(3) High vs low Hisp.
Treat$_{-3}$	-1.197	0.213	1.113
	(1.158)	(1.036)	(0.949)
Treat$_{-2}$	-0.839	-0.074	-0.050
	(0.945)	(0.974)	(0.881)
Treat$_0$	-1.905**	-2.481***	-2.106**
	(0.964)	(0.938)	(0.937)
Treat$_1$	-1.197	-2.070**	-1.814*
	(1.034)	(0.893)	(0.944)
Treat$_2$	-0.664	-0.855	-0.748
	(1.166)	(1.083)	(1.077)
Treat$_3$	-0.142	-1.780	-1.478
	(1.379)	(1.199)	(1.160)
Avg. Treat (0 to 3)	-.977	-1.796	-1.537
p value	0.342	0.047	0.086
Observations	4,221	4,221	4,263
R-squared	0.252	0.255	0.256
DMA FE	Y	Y	Y
Quarter event FE	Y	Y	Y
N clusters (DMAs)	201	201	203

Note: This table reports the effects of the 2016 Presidential election on Google searches for "pregnancy test." The dependent variable is the monthly percentage of Google searches taken from a random sample of total searches and scaled by the highest monthly search rate in the same DMA during the entire extraction period. The treatment group is the first group named in each column header. Since each extraction is based on a random sample, we use the average Google search rate across 12 extractions taken between November 2020 and January 2021 as our outcome. Columns (1) through (3) report interactions between quarters and an indicator for DMAs having above-median Democratic vote shares in the 2012 election, an indicator for DMAs having an below-median change in Republican vote share from the 2012 to the 2016 election, and an indicator for having above-median Hispanic population percentage, respectively. The omitted quarter is -1 (July-September 2016). Standard errors are clustered by DMA.
*** 1%, ** 5%, * 10% significance level

Table A5: TRUMP CAMPAIGN VISITS AND RELATIVE HISPANIC FERTILITY

	Baseline	Alternative weight
Treat_{-7M}	-0.021	-0.068
	(0.055)	(0.062)
Treat_{-6M}	-0.018	-0.070
	(0.053)	(0.062)
Treat_{-5M}	0.031	0.047
	(0.050)	(0.062)
Treat_{-4M}	-0.040	-0.018
	(0.053)	(0.063)
Treat_{-2M}	0.040	0.042
	(0.051)	(0.058)
Treat_{-1M}	-0.127***	-0.108*
	(0.048)	(0.059)
Treat_{0M}	-0.093	-0.073
	(0.065)	(0.068)
Treat_{1M}	-0.166***	-0.154**
	(0.056)	(0.069)
Treat_{2M}	-0.177**	-0.157*
	(0.077)	(0.083)
Treat_{3M}	-0.060	-0.029
	(0.077)	(0.091)
Treat_{4M}	-0.004	0.009
	(0.083)	(0.087)
Treat_{5M}	0.140	0.123
	(0.100)	(0.110)
Observations	129,872	129,872
R-squared	0.412	0.412
Outcome mean	4.540	4.540
N clusters (counties)	230	230

Note: This table presents dynamic event study coefficients that compare fertility between Hispanic and non-Hispanic females (difference 1), in counties visited by Trump before and after his first campaign visit (difference 2), using counties he will visit later as controls (difference 3). The omitted period is -3. Column (1) uses the Hispanic female population in treated counties as the aggregation weight, while column (2) uses the total female population in treated counties. See Appendix 1 for implementation details; the specification corresponds to Figure 4.

*** 1%, ** 5%, * 10% significance level