



Partisan Abortions

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Abstract: We study the effect of unexpected changes in the party in government on fertility outcomes, using administrative data on births and abortions for Spain. Following a difference-in-differences strategy, we find that, after an unanticipated loss by the party in power in 2004, municipalities with strong support for this party experienced a sharp increase in abortions (of about 0.10 pregnancy interruptions per 1,000 women in the month following the election), as well as a decrease in pregnancies leading to live birth (of about 0.28 conceptions per 1,000 women, for an average monthly birth rate of 3.9). We show that the surprise election results also had an immediate effect on citizens' economic expectations along partisan lines, a plausible channel for the impact on fertility decisions.

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1. Introduction

Economists have long cared about fertility and how economic conditions may affect fertility-related decisions (Doepke et al. 2022). Having children or not, how many children to have, and their timing, are important decisions in people's lives, and researchers have long explored the role played by economic factors, at least since Becker (1960). Since fertility decisions have implications that extend long into the future, it seems reasonable to think that fertility choices may respond not only to current economic factors but also to (changes in) expectations about future economic conditions. However, this is hard to test causally since it would require exogenous shocks to economic expectations.

Recent research has explored the determinants of economic expectations (Armantier et al. 2016, 2021). A consistent finding is that individuals with different political leanings seem to react to election results by updating their expectations about the country's economy in different directions (Gillitzer & Prasad 2018, Benhabib & Spiegel 2019, Guirola 2021). In particular, supporters of the winning party become more optimistic after an election, while the opposite is true for those of the losing party. The evidence is less clear regarding whether households respond to such changes in expectations in terms of actual economic decisions (Armantier et al. 2015, Mian et al. 2021). However, Dahl et al. (2022) find that the unexpected election win by Donald Trump in the U.S. in 2016 led to changes in birth rates along partisan lines, and suggest that those effects could be due to the election results triggering changes in economic expectations.

We study the effect of (unanticipated) changes in the party in government on fertility decisions along partisan lines. We follow a similar strategy to Dahl et al. (2022) using data for Spain, where (as in the U.S.) we have access to high-quality administrative data on births. An important innovation is that we also exploit administrative microdata on the universe of registered abortions. We are thus able to analyze separately the reactions in terms of conception and abortion decisions, both of which end up affecting birth rates.

We start by identifying national elections leading to an unforeseen change in the party in government. We show that those elections had immediate effects on economic expectations. We also find an immediate spike in abortions in municipalities with strong support for the party that lost the election unexpectedly, relative to localities that supported the winning party. New conceptions also reacted along partisan lines. The changes in both abortions and conceptions led to significant effects on birth rates.

Our main case study is the 2004 election, where the social-democrats won unexpectedly by a large margin. We find that abortion rates increased by almost 0.10 per 1,000 women in conservative relative to left-leaning municipalities in the month following the election, a spike of 18% relative to the mean. We also document an increase in monthly conceptions (leading to live birth) of 0.28 per 1,000 women (for an average of 3.89), a 7% spike. Both effects are somewhat persistent, such that we can convincingly rule out that they reflect just short-term mood effects, where agents may have short-term reactions to a salient positive or negative event (Bernardi & Cozzani 2021, Fumarco & Principe 2021). Instead, they are consistent with conscious reactions in fertility decisions to changes in economic perceptions.

The size of the effects that we estimate are in the same order of magnitude as the documented impacts of a generous family benefit in place in Spain during 2007-2010. Recent research by González & Trommlerová (2023) shows that the €2,500 cash transfer conditional on childbirth decreased monthly abortion rates by 0.05-0.11, while it increased birth rates by about 0.21.

Our findings contribute to the literature on the economic determinants of fertility decisions. A number of papers have shown credibly that fertility reacts to economic shocks, such as changes in household income or wealth (Black et al. 2013, Kearney & Wilson 2018, Dettling & Kearney 2014, Lovenheim & Mumford 2013, Autor et al. 2019, Schaller 2016) or overall economic conditions (Schaller 2016, Dettling & Kearney 2014, Schaller et al. 2020, Currie & Schawandt 2014).

Given that having children has persistent effects on households, standard economic models suggest that fertility decisions should react to changes in permanent (rather than current) income. This implies that expectations about future income and economic conditions should matter (Buckles et al. 2021). However, if it is difficult to find sources of exogenous variation in (current) individual income, it is even harder to identify such variation in expectations. We propose using elections as shocks that can affect perceptions about future economic conditions.

The recent paper by Dahl et al. (2022) showed compelling evidence that births reacted to the election of Donald Trump in the U.S. We show parallel results for Spain after the unexpected election results of 2004. Our main innovation is the finding that abortions, in addition to new conceptions, reacted to the shock. Furthermore, we conduct a comprehensive analysis of all national elections between 2000 and 2020, using pre-election survey as well as poll data to determine the extent to which each result was expected or unexpected, which is crucial for identification. We are thus able to show broader evidence consistent with the hypothesis that electoral surprises lead to changes in expectations, as well as (partisan) changes in fertility.

We also contribute to the literature on the effects of economic expectations by providing new evidence that expectations affect actual economic decisions (Armantier et al. 2015, Mian et al. 2021).

The rest of the paper proceeds as follows. We first identify general elections in Spain (since 2000) that led to an unexpected change in the party in government (section 2). We then study the effects of those unanticipated election results on fertility decisions (section 3), and we show their impact on economic expectations as a plausible channel (section 4). We also discuss alternative potential channels. Section 5 documents the robustness of our main results on abortions and births to alternative specifications, and discusses the results of a variety of sensitivity analyses. We then show that our main findings are consistent with the estimated effects surrounding all other national elections

(and changes in the party in government) in Spain in 2000-20 (section 6). Section 7 concludes.

2. Identifying unanticipated government changes

We want to use national election results as a source of variation in citizens' economic expectations. We argue that individual views about future economic conditions may react to changes in the party in government. Because we aim at identifying causal effects, we are particularly interested in election results that were unanticipated, since otherwise expectations may have adjusted in advance of the election.

There were eight national elections in Spain between 2000 and 2020 (the period for which we have administrative data for both births and abortions). Only two of these elections, 2004 and 2011, led to a change in the main party in government. In 2004, the conservative party lost to the social-democrats, while in 2011 the conservatives won the office back.¹ We argue that the outcome of the 2004 election was unexpected, while the one in 2011 was not.

In Table 1, we summarize the results of all the elections, and present some summary statistics from pre-election surveys as well as polls, to illustrate the extent to which each result was anticipated or not.² Columns 2 to 4 show the fraction of voters who believed one party or the other would win, as reported in surveys conducted one month before the actual vote. We display the fraction of all (second column), social-democratic (third column), and conservative (fourth column) voters who believed the conservative or the social-democratic party would win. In both 2004 and 2011, a majority of respondents (63 and 82 percent) believed that the conservative party would win. While in 2011 voters predicted the outcome of the election correctly, in 2004 the conservatives in fact lost.

¹ The only other switch in the party in office took place in 2018, in the aftermath of a vote of no-confidence.

² We don't present the results of the 2000 election since we don't have data on abortions before 2000, which would be required for estimation.

The predictions based on electoral polls were aligned with voters' beliefs. The last column of Table 1 shows the predicted vote share for the two main parties, averaging across all polls published in the two months before the election. Figure 1 shows the evolution of polls around the 2004 and 2011 elections. In the months leading up to the election, all polls predicted a victory by the conservative party both in 2004 and in 2011. In parallel with voters' expectations, polls' predictions were successful in 2011, while the win by the social-democrats in 2004 was not anticipated by any of the published polls between June 2003 and the week before the election.

The 2004 election thus led to a surprise shift in the party in government, and this surprise was unusual, in the sense that voters typically anticipate the outcome of national elections correctly. Table 1 shows that for the other six elections (2008, 2011, 2015, 2016, and April and November 2019) both polls (last column) and the average voter (column 2) accurately predicted the winner. Their failure to anticipate the 2004 result was arguably linked to the role played by the (clearly unexpected) terrorist strikes that took place in Madrid three days before the election. The bombings likely affected the outcome of the election, as shown by Montalvo (2011). We argue that the surprise electoral victory of the social-democrats in 2004 may have affected economic expectations, possibly in different directions for left- and right-wing voters.³

To verify this, Figure 2 depicts monthly economic expectations for left- and right-leaning Spanish citizens, between 1998 and 2020, from the monthly barometer of the *Center of Sociological Research* (CIS in Spanish).⁴ The vertical lines mark election years. The survey question asks the respondent

³ In Section 5 we consider (and rule out) the possibility that the partisan effects on expectations and fertility may be driven by the terrorist attacks instead of the election results.

⁴ We classify survey respondents as left- or right-leaning based on their self-reported location on a 1 to 10 scale (where 1 is extreme left). We classify 1 to 4 answers as "left" and 6 to 10 as "right".

whether s/he thinks that, a year later, the national economic situation will be better, the same, or worse than the current one.

The first thing to note is that during the whole period, left-leaning voters appear more optimistic about the economy when the social democrats are in government, while right-leaning voters are more positive when the conservatives are in power. In particular, before 2004, with the conservatives in government, right-wing voters were more optimistic about the economy than left-wing ones, as shown by the blue line being higher than the red one. The lines cross immediately after the 2004 election, after the left-wing victory. We then observe a second crossing around the 2011 election (and a third one around the no-confidence vote of 2018).

The descriptive evidence shown in Figure 2 shows a clear contrast between changes in expectations around the 2004 and the 2011 election: in 2011, expectations start reacting (at least three) months before the election, while for 2004 the swing around the election happens only after, and is the sharpest in the whole period.

Overall, Table 1 and Figures 1 and 2 suggest that voters usually anticipate election outcomes correctly, and incorporate those results into their economic expectations. The 2004 government change was an exception in that it was seemingly unanticipated, making it a strong candidate for a plausibly exogenous shift in economic expectations around the election date. We exploit this shift to study the causal impact of economic expectations on fertility.

3. The effect of government changes on abortions and births

In this section we present our analysis of the effects of the 2004 election on fertility decisions (abortions and conceptions).

3.1. Empirical strategy

We follow a difference-in-differences identification strategy where we compare changes in fertility outcomes at the monthly level around the 2004 election, in municipalities with strong support for the party that lost the election (the conservatives), relative to those municipalities that supported the unexpected

winner (the social-democrats). Our main sample includes the years 2000 to 2006.

We estimate the following equation:

$$(1) \quad F_{it} = \sum_{t=-6}^{12} \beta_t \times \text{Conservative}_i + \alpha_t + \alpha_i + \epsilon_{it},$$

where F is a fertility outcome (abortion or conception rate) in municipality i and month t . We include municipality and month fixed-effects. Our explanatory variable of interest is an indicator for municipalities with strong support for the conservative party (PP), as measured in the previous general election (in 2000), interacted with dummies for the months surrounding the 2004 election, which took place in March 2004. We omit the first lag (February 2004).

The coefficients of interest (β) capture the differential evolution of abortion and birth rates in municipalities that supported the losing vs. the winning party in the general election. Our main identifying assumption is that the two groups of municipalities would have followed common trends in fertility outcomes, in the absence of the unexpected election results.

Our descriptive analysis of economic expectations in section 2 suggests that right-wing voters became more negative in terms of their self-reported economic expectations immediately after the 2004 election, while left-wing voters became much more optimistic as a result of the left-wing victory. Our specification is designed to capture potential differential reactions of left- and right-leaning voters in terms of fertility decisions. Since the analysis is aggregated at the municipality level, individual-level effects will be attenuated.⁵

We hypothesize that conservative voters (municipalities) may update their fertility intentions downwards as a result of the disappointing election results. This may be reflected in a (relative) increase in abortions and a decrease in new conceptions.

⁵ The analysis is conducted at the municipality rather than the individual level because the birth and abortion data do not include individual-level information on political leaning or voting behavior.

3.2. Data

The data on election results by municipality in 2000 are provided publicly by the Ministry of the Interior.⁶ We calculate the number of votes for the conservative party (which won the 2000 election but lost in 2004) as a fraction of all valid votes in each municipality in 2000, and create a binary indicator for municipalities with above-median support for the conservative party.⁷

We requested and obtained access to administrative micro data on the universe of legal abortions conducted in Spain for 2000-2020, from the Spanish Ministry of Health. These include municipality of residence of the mother, demographic characteristics, date of the abortion, and weeks of gestation. We restrict the sample to women between 18 and 44 years of age and living in Spain.

We construct the abortion rate in a municipality-month as the number of abortions per 1,000 women aged 15 to 44 (the population data are obtained from the Spanish Statistical Institute). As a second measure of the incidence of abortion, we also construct the number of abortions per 100 conceptions, which the literature refers to as the abortion ratio (where the monthly number of conceptions is calculated as the number of conceptions leading to an abortion plus the number of conceptions leading to a live birth). In our main analysis, we restrict the sample to abortions taking place between 2000 and 2006. There are 634 municipalities in our (balanced) abortion sample, and the mean monthly abortion rate in a municipality is 0.55 abortions per 1,000 women (12.8 abortions per 100 conceptions).⁸

⁶ Accessed from: <https://infoelectoral.interior.gob.es/opencms/es/elecciones-celebradas/area-de-descargas/>

⁷ The median is calculated in our main sample of municipalities (those larger than 10,000 inhabitants for the whole 2000-06 period).

⁸ Both the abortion and the birth data only provide the municipality code for localities with more than 10,000 residents.

The data on live births come from birth certificates, provided publicly by the Spanish National Statistical Institute.⁹ They include administrative micro data on the universe of (annual) live births in Spain, with information on municipality of residence of the mother, demographic characteristics of the parents, month of birth, and weeks of gestation. We again restrict the sample to mothers between 18 and 44 years of age living in Spain.

We construct the birth rate in a municipality-month as the number of births conceived per 1,000 women aged 15 to 44. We estimate the month of conception for each individual birth by combining information on month of birth and weeks of gestation. Our balanced sample contains birth rates for the same 634 municipalities (conceptions taking place between 2000 and 2006). The mean monthly birth rate in a municipality is 3.89 per 1,000 women.

Our fourth dependent variable is the conception rate, defined as the monthly number of conceptions per 1,000 women 15-44. Again, the monthly number of conceptions is calculated as the number of conceptions leading to an abortion plus the number of conceptions leading to a live birth. The mean monthly conception rate is 4.45 per 1,000 women.

Since there is seasonality in the monthly number of abortion and births, as additional dependent variables we also construct “excess” abortion and birth rates, where we subtract, for each municipality-month, the average abortion/birth rate in that calendar month and municipality, across the 7 years included in our sample.

3.3. Results

Figure 3 displays the raw monthly abortion and birth rates in the two groups of municipalities (right- and left-leaning, based on local support for conservatives and social-democrats in the 2000 election), in the months surrounding the 2004 election. Trends for the two groups of towns appear parallel before the election,

⁹ Accessed from:
https://www.ine.es/dyngs/INEbase/es/operacion.htm?c=Estadistica_C&cid=1254736177007&menu=ultiDatos&idp=1254735573002

both for abortion and birth rates. A small spike in abortions is observed the month of the election in the municipalities with strong support for the losing party. An immediate fall in new conceptions is also detectable.

Our main results for the effects of the 2004 election on fertility outcomes along partisan lines are presented in Figure 4 and Table 2.

Abortions

Panel A of Table 2 shows the results from estimating equation (1) for the abortion outcomes. Columns (1) and (2) report the results for abortions per 1,000 women (rate and excess), while columns (3) and (4) refer to the specifications for abortions per 100 conceptions. In all four specifications, the coefficients on the leads are small in magnitude, and none of them are significant at the 95% confidence level. This indicates that left- and right-leaning municipalities were on similar trends in terms of abortion rates before March 2004. This finding of parallel pre-trends is also illustrated in panel A of Figure 4.

The coefficients on the period of the election ($t=0$) are larger and statistically significant at the 99% confidence level across all four specifications, indicating a surge in abortions in right- relative to left-leaning municipalities in the month immediately after the election. The lagged coefficients remain positive (if smaller) for several months afterwards, suggesting some persistence of the effect.

The coefficient from column (1) suggests that abortion rates were elevated by almost 0.10 abortions per 1,000 women in conservative relative to left-leaning municipalities, in the month following the 2004 election. This represents a spike of 18% relative to the mean. Twelve months after the election, the difference is just 0.01 (2%).

Columns (3) and (4) show the results for abortions per 100 conceptions. The estimated coefficients indicate an immediate spike of about 2 abortions per 100 pregnancies in right- relative to left-wing municipalities the month of the election (for an average rate of 12.8, i.e. a 17% increase). Again, the effects

appear somewhat persistent, with some significant effects up to 10 months after the election.

Because the election took place on March 14 (of 2004), and since we have information on the exact date of each abortion procedure, we also estimate equation (1) at the weekly level (where week 0 starts the day after the election, i.e. March 15). If the spike in abortion rates in right-wing municipalities is related to the election results, we expect to observe it only after March 14. Moreover, we also expect a few days' delay between the abortion decision and the actual procedure (due to scheduling). The results of the analysis by week are shown in Appendix Figure A1. The spike in abortions is concentrated in weeks two to five after the election, consistent with decisions taken shortly after learning the results.

González & Trommlerová (2023) found that the introduction of a generous child benefit in Spain in 2007 decreased monthly abortions by about 0.05 per 1,000 women,¹⁰ while its later cancellation increased them by 0.11. We find that the change in government in 2004 increased monthly abortions in conservative municipalities by about 0.10 per 1,000 women, relative to municipalities supporting the social democrats. Our results are thus in the same order of magnitude as the effect of a €2,500 cash transfer.

Births and conceptions

The results for birth and conception rates are shown in panel B of Table 2. The coefficients on the leads are again consistent with parallel pre-trends across the two groups of municipalities. The main coefficient (corresponding to the election period) is now significantly negative, suggesting fewer conceptions in conservative municipalities after the election loss. These results are illustrated in panel B of Figure 4.

The main coefficient in column (1) shows a decrease in monthly conceptions leading to live birth of 0.28 per 1,000 women (for an average of

¹⁰ They estimate an effect of -0.15 on daily abortions per 100,000 women, equivalent to -0.046 monthly abortions per 1,000 women $((-0.15 \times 30.44) / 100)$.

3.89), i.e., a 7% drop. Note that this effect is about three times as large in absolute magnitude as the one on abortions (shown in panel A of Table 2). The effect on conceptions appears persistent, with sizeable negative coefficients extending up to one year after the election. This is broadly consistent with the findings by Dahl et al. (2022) for the U.S., although our magnitudes are somewhat larger.¹¹ Twelve months after the election, conceptions leading to birth were still elevated by almost 0.13 abortions per 1,000 women in conservative relative to left-leaning municipalities (3.3%).

To provide some benchmark for these magnitudes, the Spanish monthly birth rate was 4.1 per 1,000 women in 2008, at the start of the Great Recession (after a sustained increase since the late 1990's), while it had fallen to 3.5 in 2013. The difference between those two, which can be seen as capturing the effect of the cycle, is 0.64. Our estimated effect of the electoral surprise on (local) birth rates is thus almost one half of the variation in the aggregate birth rate over the business cycle.

It is perhaps more relevant to compare our estimates with the causal effects of other shocks. González & Trommlerová (2023) show that the cancelation of a generous child benefit in 2010 in Spain (which paid a lump-sum of €2,500 to new mothers) led to a decline in monthly birth-rates of about 0.21 births per 1,000 women. This is again the same order of magnitude as our estimated effects of a surprise change in government.

4. Mechanisms: Changes in economic expectations vs. other channels

We find that the 2004 election had an asymmetric impact on fertility outcomes across political geographies. A plausible mechanism driving those reactions is the shift in economic expectations that resulted from the unanticipated election

¹¹ Dahl et al. (2022) find an effect on excess birth rates of -0.139 in the first quarter. If we add up our coefficients for the first three months, we estimate an effect of -0.30, i.e. about twice as large. Their average (quarterly) effect over the first year is -0.152, compared with our -0.238.

outcome. We discuss this hypothesis and potential alternative channels in this section.

We first present additional evidence that economic expectations reacted to the surprise election results along partisan lines, and that those effects were persistent. We then consider three alternative channels: short-term moods, the terrorist attacks that took place just before the election, and changes in (non-economic) policy expectations.

4.1. Changes in economic expectations

The literature suggests that sympathy towards the party in office (i.e., partisanship) is a major determinant of economic perceptions (Gerber & Huber 2010, Bartels 2002, Mian et al. 2022), beyond current economic conditions (Guirola 2021, 2020). An unanticipated government shift can thus affect expectations, and as a result may trigger adjustments in economic behaviors, such as spending (Gillitzer & Prasad 2018, Benhabib & Spiegel 2019, Gerber & Huber 2009), investment (Meeuwis 2018, Girardi 2020) and, we argue, fertility decisions (Dahl et al. 2022).

We can show that the 2004 electoral swing in Spain had a persistent asymmetric effect on economic perceptions, as suggested by our descriptive evidence in Figure 2, such that right-leaning survey respondents adjusted their economic perceptions in the months following the 2004 electoral result, relative to left-wing voters. As in Gillitzer & Prasad (2018) and Mian et al. (2021), we conduct a dynamic difference-in-differences specification, parallel to equation (1), where the dependent variable is now a measure of economic expectations.

We rely on the CIS barometer, a monthly survey of about 2,000 observations. We measure economic perceptions through three items recovering respondents' expectations about the country's economy¹² (asked monthly), their

¹² “Do you think that, in one year from now, Spain’s economic situation will be better, worse or similar to now?”

perception of the current economic situation¹³ (asked monthly), and their retrospective evaluation of the economic situation during the previous year¹⁴ (asked every third month).¹⁵

Based on where respondents place themselves on a 1-10 scale, we classify them as either left-leaning (below 5), right-leaning (above 5), or other (non-response or 5). Panel A in Figure 5 describes the evolution of economic perceptions for right- and left-leaning respondents at the monthly level, while panel B depicts the results of the event-study regressions.

The large and immediate change in expectations along partisan lines is visible in the left panel of Figure 5 (Panel A). In the two months following the election, Panel B shows that right-wing respondents downgraded their expectations score with respect to left-wing ones by 0.6-0.8 points, and the effect persists over time. The figure also shows parallel pre-trends in economic expectations before the election.

The size of the partisan effect on expectations (0.6-0.8) is large. For example, it is larger than the variation in average expectations over the business cycle. Between 2000 and 2020 (see Figure 1), the average respondent's score ranged between 0.22 in the month of highest optimism (July 2001) and -0.35 in the most pessimistic one (May 2008), i.e. a range of 0.57.

The asymmetric response of economic perceptions to the election was persistent over time. Consistent with their pessimistic expectations about the coming year (reported the month after the election), right-wing respondents

¹³ “*With respect to Spain’s current economic situation, would you call it very good, good, fair, bad, or very bad?*”+

¹⁴ “*Do you think that the current economic situation of the country is better, similar, or worse than it was one year ago?*”

¹⁵ Following the construction of Consumer Confidence Indices, we construct a ‘neat positive’ score (see Dahl 2021 and Gillitzer & Prasad 2018), mapping responses onto a continuous scale. For the expectation and retrospective questions (with 3 options), we give answers a score of +1 if positive, 0 if neutral, and -1 if negative. For the current economic situation items, we give extreme options (very good/very bad) a score of +/-1, and intermediate non-neutral options (good/bad) a score of +/-0.5.

report significantly worse perceptions about the current state of the economy twelve months later, as well as its evolution during the previous year (see the middle figure in panel B of Figure 5). The size of the difference in their retrospective evaluation one year after the election (third figure in panel B) is -0.73, consistent with the effect found on expectations one year before (panel B left).

We conclude that the unexpected electoral swing of 2004 generated a large and persistent effect on economic perceptions, which went in opposite directions for left- and right-leaning voters. We interpret this change in economic expectations along partisan lines as a plausible channel driving the fertility effects.

4.2. Other potential mechanisms

We acknowledge that elections, and in particular the 2004 election in Spain, may also affect fertility through other channels. We discuss three alternative channels: short-term moods, the terrorist attacks that took place just before the 2004 election, and changes in (non-economic) policy expectations.

Short-term moods. The experience of victory or defeat may generate “moods” (depression, euphoria, etc) among supporters of the different parties that may alter their (short-term) propensity to engage in sexual intercourse. Rather than resulting from a conscious change in beliefs, the observed effects on fertility may thus have resulted from short-term reactions to a salient event, similar to the impact of lottery wins on consumption (Ghomi 2022) or sports outcomes on fertility (Bernardi & Cozzani 2021; Fumarco & Principe 2021).

Two pieces of evidence suggest that a temporary mood effect cannot fully explain the observed changes on fertility. First, while temporary moods may affect conceptions, they are unlikely to account for the effect that we find on abortions following the election. Pregnancy interruptions have potentially large psychological and physiological effects, and the administrative procedure, with several required visits to a doctor and a psychologist, is designed to ensure that an abortion results from a conscious decision. Second, we find evidence of

persistent effects on conceptions. Figure 4 (panel B) shows significantly lower conceptions in right-leaning municipalities spanning at least 9 months after the election, again ruling out pure short-term mood effects.

The terrorist attacks. On the 11th of March of 2004 (three days before the election), a terrorist attack in the Madrid underground killed 193 people. This event obviously had a large impact on the population, which may have affected fertility intentions and sexual activity via, for example, heightened anxiety and fear.¹⁶

We provide three pieces of evidence that suggest that our documented effects on abortions and births are not driven by the terrorist strikes. First, in section 5 we show that our effects are not driven by municipalities in the region of Madrid, where the attacks took place. We expect that the psychological impact of the attacks would have been stronger locally.

Second, it is unclear why the terrorist strikes would have affected citizens differentially along partisan lines. To explore this possibility directly, we study how citizens with different political leaning changed their concerns about terrorism around the election, in parallel to our analysis of economic expectations. The same survey that we use to analyze expectations also asks respondents about what they perceive to be the most important problems that the country faces. We construct an indicator that takes value 1 if a respondent reports terrorism to be among their top three concerns.

Figure 6 (panel A) shows the evolution of the fraction of right- and left-leaning respondents who perceived terrorism to be among their top three concerns. In the months before the 2004 election, close to half of survey respondents were concerned about terrorism, and the fraction was slightly higher among right-leaning citizens. The trends were evolving in parallel for right- and left-leaning respondents.

¹⁶ Cozzani et al. (2022) and Sherrieb and Norris (2013) find that the bombings had a negative effect on birth-weight for children born in the province of Madrid, which they attribute to maternal (prenatal) stress.

There is a clear spike in concerns about terrorism in March and April of 2004, immediately after the Madrid bombings (and the general election). Crucially, this spike is observed for both groups of voters. Panel B of Figure 6 shows the results of the event-study analysis, which confirms that the spike was not significantly different between right- and left-wing voters in the aftermath of the attacks (March and April 2004).

As a third piece of evidence, in section 6 we present estimates for the effects of all other national elections (in 2000-20) on abortions and births. Although the exercise is not quite as neat as the one for 2004, we show that fertility decisions also reacted to election results in periods when no terrorist attacks took place, in the same direction as the effects documented in 2004.

Overall, while we cannot rule out that the events of March 11, 2004 affected aggregate fertility decisions in Spain, we conclude that they cannot plausibly explain the partisan effects that we find on fertility decisions. While economic expectations changed along partisan lines after March 2004, worries about terrorism suffered a large, transitory spike in March and April of 2004, but the spike was similar for right- and left-leaning voters.

Policy expectations. Another potential channel is that the surprising election results affected expectations along partisan lines, but not only economic expectations. In particular, expectations about government policies to be implemented in the future would likely change, and supporters of the losing party may be unhappy about prospective reforms, adjusting their reproductive behaviors accordingly.

Some of those expected policy changes may have economic effects, and as such, those would be included in our main proposed mechanism. However, other policies may not have direct economic implications, such as reforms affecting the health or education system. We cannot rule out that these “policy expectations” are affected in the same direction as economic expectations, so that our fertility effects may stem from a combination of economic and policy expectations.

5. Robustness checks

In this section we show that our main results (a partisan effect of the 2004 election on abortions and births) are robust to a number of alternative specifications.

First, we explore alternative ways of classifying municipalities as right- or left-leaning. In our main specification, a municipality is classified as right-leaning if the main conservative party (PP) received more than the median fraction of votes in the previous general election (in 2000), considering all municipalities in our sample. The results are robust to using the fraction of votes for the conservative party in the 2004 election instead (see Appendix Figure 2).

Our main difference-in-differences specification uses a binary classification of municipalities as supporting one party or the other. Alternatively, we can also use a continuous variable measuring the fraction of votes obtained by the conservative party in 2000 (or 2004). The results of these alternative definitions of the partisanship variable are shown in Appendix Figures 3 and 4, and they confirm our main findings.

We also explore whether there are specific Spanish regions driving our fertility effects. Figure A5 displays the results of specifications that drop, in turn, each of the largest regions in Spain from the analysis (Andalucía, Catalonia, Madrid, and the Basque Country). The main results are not driven by the region of Madrid (which could have been a concern given the terrorist attacks of March 11). We do find that the effects on abortion rates are smaller when we exclude the region of Catalonia.

Our main specification includes all municipalities (larger than 10,000 inhabitants), split by whether support for the conservative party was above or below the median in 2000. In Figure A6, we exclude from the analysis sample municipalities that are close to the median (the middle 10, 20, or 30%). As we consider more “extreme” municipalities, our estimated effects on both abortions and births become larger, consistent with a monotonic treatment effect.

Finally, our main analysis includes data for all months in 2000-2006. Figure A7 shows that the results are robust to restricting the sample to narrower windows around the 2004 election, although they are also estimated more imprecisely.

6. Other elections

We have shown that the 2004 Spanish national election led to an unanticipated change in government. After the surprise victory of the social-democrats, left-leaning voters became much more optimistic about the economy, while right-leaning ones reported more negative expectations about future economic conditions. We also find that, following the election, abortions increased and conceptions fell in municipalities with large support for the losing (conservative) party, which may be a result of the change in economic expectations among their voters.

During 2000-2020, there were seven other national elections in Spain. None of them resulted in a surprise government change of the magnitude of 2004 but, to the extent that electoral outcomes were not foreseen, they may also have had effects on economic expectations and, in turn, fertility. In this section we document changes in economic expectations for left- and right-leaning voters around each election, relating them to election outcomes, and we show in parallel how abortions and conceptions changed during the same period, as a function of the political leaning of each municipality. If our main mechanism is present, changes in expectations along partisan lines may be accompanied by changes in fertility. Since it's harder to argue for exogenous shocks to expectations in most elections, we interpret the results in this section as descriptive evidence in support of our main mechanism.

6.1. Partially unexpected incumbent victory by the social democrats in 2008

Table 1 shows that the incumbent (the social-democrats) won the 2008 election, as anticipated by more than half of voters (second column), and as predicted by pre-election polls (last column). However, a majority of conservative voters

expected their party to win (fourth column), so that we can interpret the result as a surprise for them.

Figure A8 (Panel A, top left) shows the evolution of economic expectations around this election. Left-leaning voters were more optimistic throughout the period, and we don't see much change after the election, consistent with the results being anticipated. As for right-leaning voters, we find (bottom left) a significant relative worsening of their expectations about the future, consistent with many of them expecting a conservative win (and thus being disappointed). The magnitude of this effect on expectations is however small (about one third of the effect for the 2004 election, shown in Figure 3).

Regarding fertility in conservative relative to social-democrat-leaning municipalities, we find significant pre-trends for abortions, but not for conceptions leading to live birth (Panel A of Figure 8, right). In fact, we find some evidence of a short-term decrease in birth rates in conservative-leaning municipalities in the months following the election, which is consistent with conservative voters' increased pessimism about the economy.

6.2. Expected change in government (conservative victory) in 2011

Panel B of Figure A8 shows the results for the 2011 election, which led to the conservative party winning the government back. Table 1 shows that the government change was expected by the vast majority of voters and correctly predicted by polls. Figure A8 (panel B, top left) shows that economic expectations had been changing along partisan lines at least since the elections were announced, four months before the actual election. This is confirmed by the pre-trends shown in the event-study analysis (bottom left). We also show that these trends continue after the election. In this case, left-wing voters become more pessimistic after the electoral defeat. We also find that abortion rates increased in left-leaning municipalities (top right), consistent with our story. In this case, we do not see any relative changes in conceptions along partisan lines (bottom right).

6.3. Complicated conservative victory in 2015 (and repeat election in 2016)

The December 2015 election is more difficult to interpret. The conservative party got the largest vote share, as predicted by both voters and polls (Table 1). However, they lost the majority in the parliament while two new liberal (*Ciudadanos*) and radical left (*Podemos*) parties obtained a significant number of seats. As a result, during the two following months (January and February) the social-democrats led the attempt to form an alternative majority. This attempt failed when on March 4th 2016, the social-democratic candidate failed to gather the necessary votes, leading to a repeat election in April 2016 and the appointment of a conservative Prime Minister in October.

The complexity of the events described is a clear obstacle for a clean research design. We can distinguish two periods: the two months after the December 2015 election, when voters may have expected a government change, and the months following March, when this expectation was reversed. Panel C of Figure A8 suggests that economic expectations (top left) reacted to the expectation of a change in government. In the two months after the 2015 election, right-leaning voters became more negative after the social-democrats led the attempt to form a government, but their economic expectations recovered after the attempt failed (early March), and clearly took off after the 2016 election repetition. This is confirmed in the event-study results (bottom left), although magnitudes are relatively small.

Our fertility results show that abortions declined and births slightly increased in left- relative to right-leaning municipalities¹⁷ following the 2015 election, consistent with the worsening in expectations among conservatives. Also consistent with expectations is the reversal of fertility in March, when the left-wing coalition failed to agree, making a change in government much more unlikely. We find no further changes after the *2016 election*, but we also see very small changes in expectations around that time.

¹⁷ We define left-leaning municipalities as those where the sum of votes for the social-democrats (PSOE) and the radical-left (Podemos) was above average for that election.

6.4. The no-confidence vote in 2018 and the 2019 left-wing victory

In 2018, the left-wing parties staged a no-confidence vote which led to a change in government without a general election. Panel D of Figure A8 shows that left-leaning voters became more optimistic after this event, relative to right-leaning ones. Even though these changes in expectations are sizeable, we find no accompanying changes in abortions or births in left- versus right-leaning municipalities.

Two general elections then took place in 2019 (April and November), both won by the left wing. Figure 2 (Panel B) shows that those results were anticipated. Panel E of Figure A8 shows some changes in expectations in the expected direction (if small) after the two elections. We don't find any accompanying changes in abortion rates in left- versus right-leaning municipalities. We do find some evidence of a relative increase in births in left-leaning municipalities shortly following the April election.

Overall, our descriptive analysis of expectations and fertility surrounding general elections in Spain provides suggestive evidence consistent with our main mechanism. Large political events (national elections) are accompanied by changes in economic expectations, which go in opposite directions for the supporters of winner versus losing parties. Those changes in expectations go together with changes in fertility behaviors, including both abortions and conceptions.

7. Conclusions

We study the effect of unanticipated changes in the party in government on fertility outcomes, using administrative data on births and abortions for Spain. Following a difference-in-differences strategy, we find that, following an unexpected loss by the party in power in 2004, municipalities with strong support for that party experienced a sharp, transitory increase in abortions, as well as an increase in pregnancies leading to a live birth. We also show that the unanticipated election results had an immediate effect on people's economic

expectations along partisan lines, which we propose as a likely channel for the impact on fertility decisions. The results are robust to alternative specifications, and we provide consistent evidence from all other national elections in Spain between 2000 and 2020.

Our results suggest that shocks to economic expectations can affect fertility decisions. The changes in fertility-related decisions that we document take place in the immediate aftermath of the election outcome, before the new government has started implementing any actual policy changes. The effect is quantitatively large, extends to the choice to interrupt ongoing pregnancies, and is persistent, consistent with persistent changes in expectations more than with short-term mood effects.

Our findings also underline a channel via which political events can affect citizens' lives in polarized societies, such as Spain and the U.S. (Gidron et al. 2020). Polarization divides citizens along partisan lines, affecting their preferences and beliefs. We show that the effects of partisanship can extend beyond the public opinion sphere, including such important behaviors as fertility choices.

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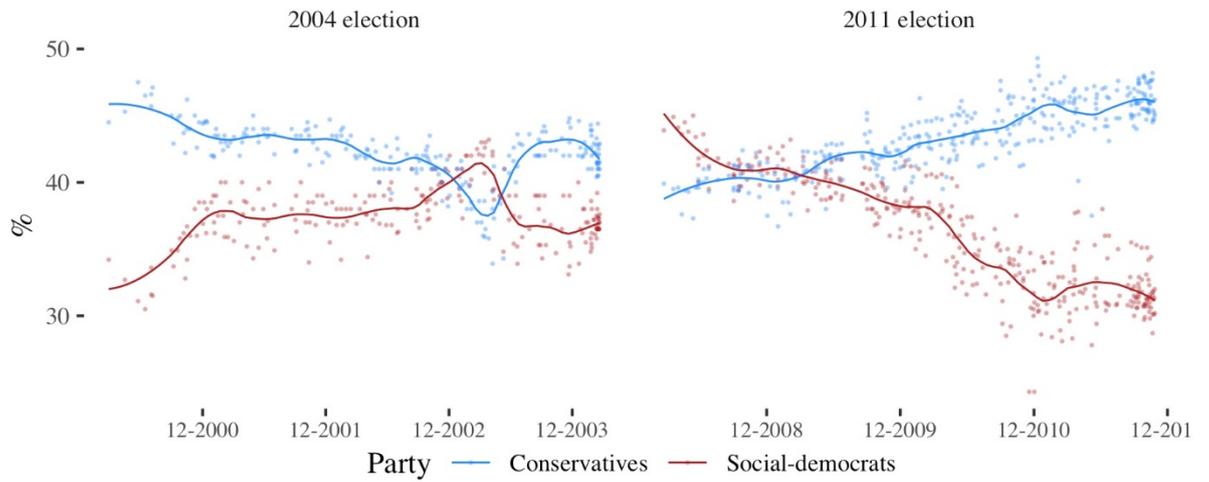
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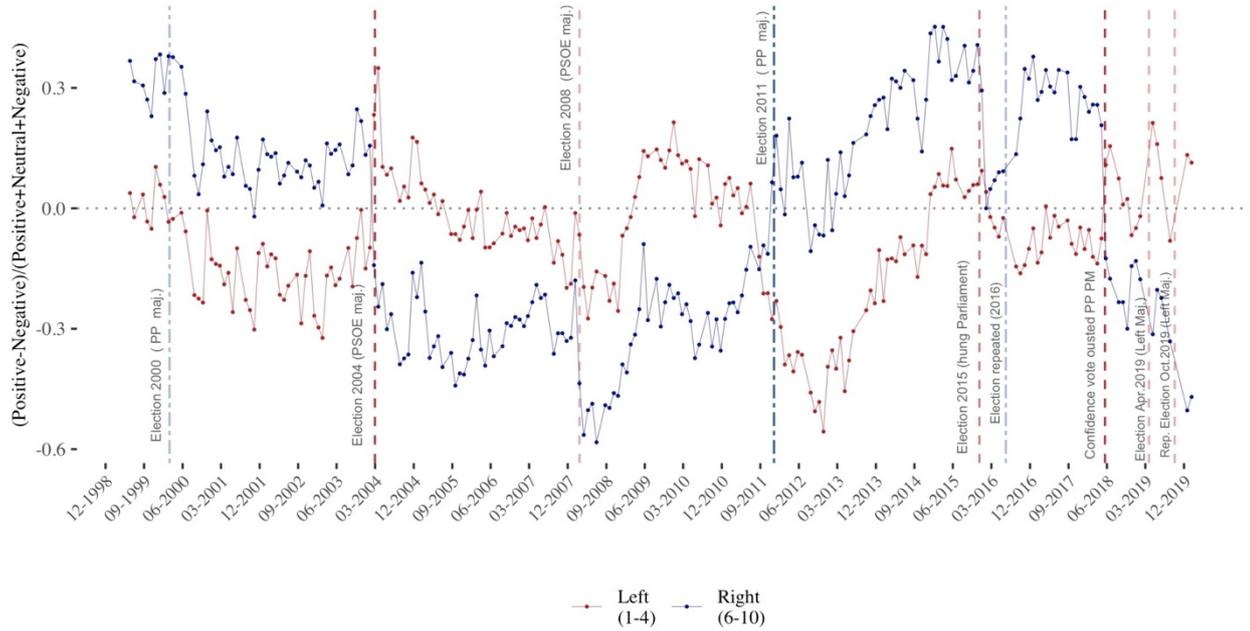
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Figure 1. Electoral polls for the 2004 and 2011 elections



Note: Dots depict the estimated vote shares of each party based on publicly released polls before the 2004 elections compile (non-public polls omitted). Solid lines depict the smoothed average. Source: Wikipedia compilation.

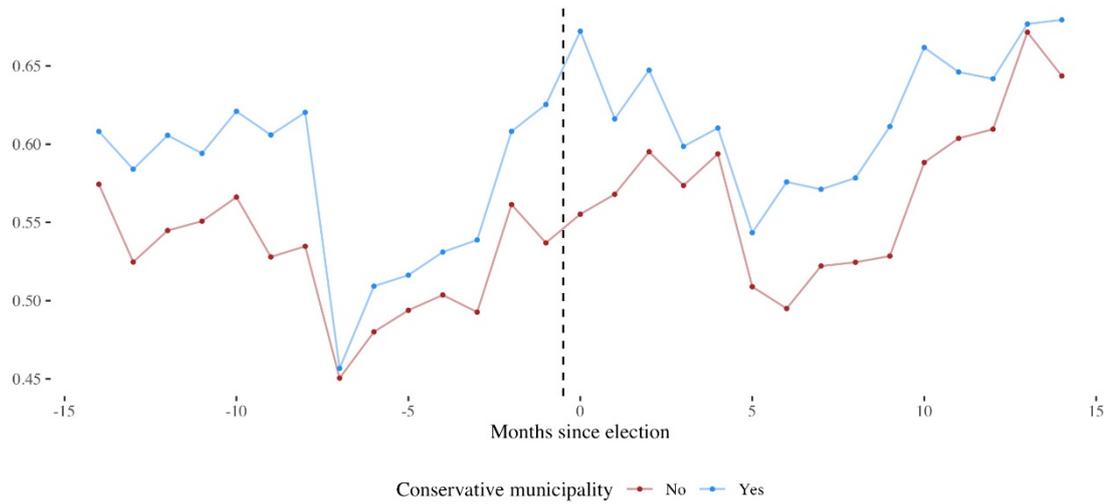
Figure 2. Expectations by partisan alignment, 2000-2020



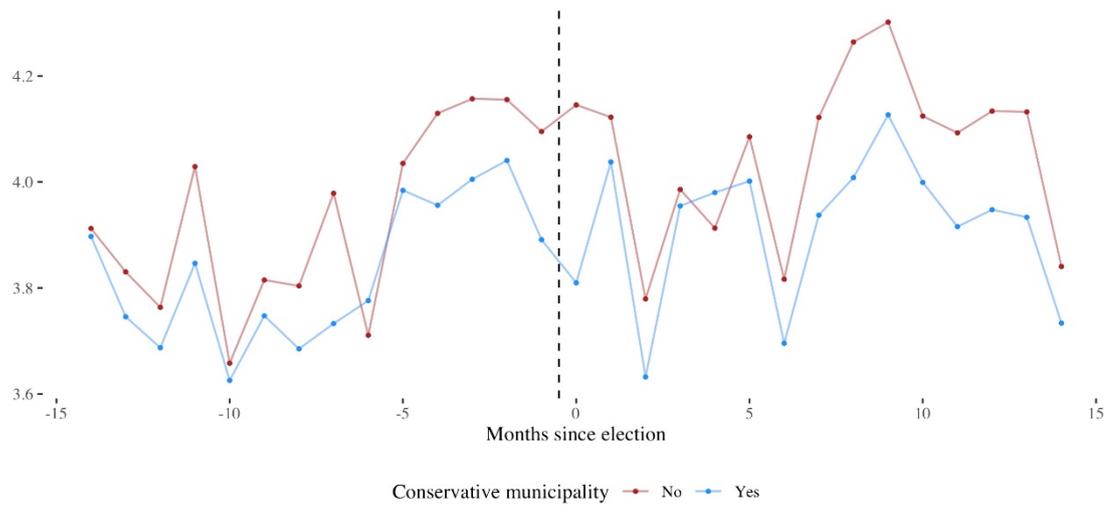
Note: Economic expectations score based on positive-negative response to the question ‘Do you think that, in one year, the economic situation will be better, worse or similar to now’ of the CIS monthly barometer. Based on their reported 1-10 left-right identification, respondents are classified as left (below 5) or right (above 5). Dark vertical lines indicate cabinet shifting elections (2004, 2011) and the 2018 confidence vote; light vertical lines show other elections.

Figure 3. Evolution of conceptions and abortions for pro-conservative and other municipalities.

Panel A. Abortions per 1,000 women (months around the 2004 election)



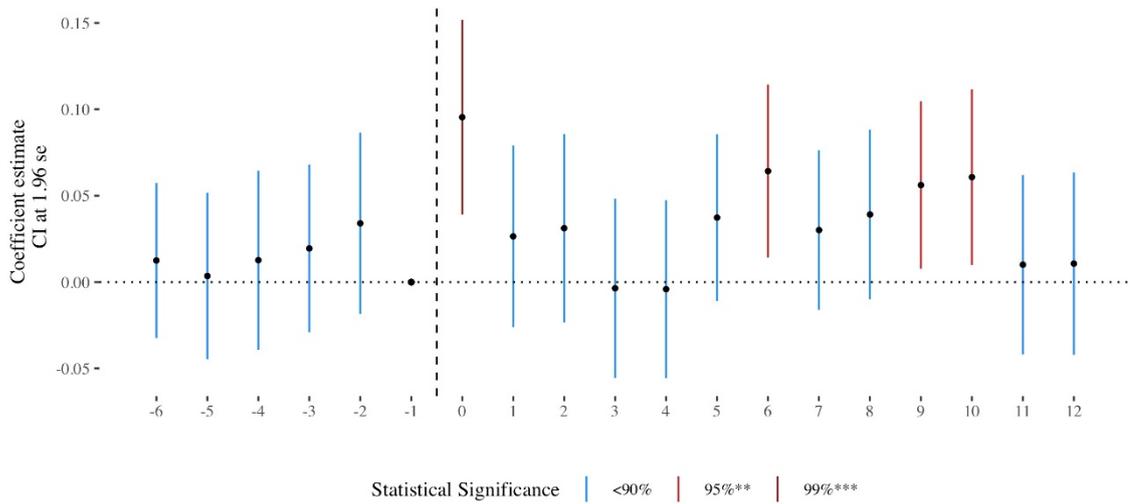
Panel B. Births per 1,000 women (by month of conception, months around the 2004 election)



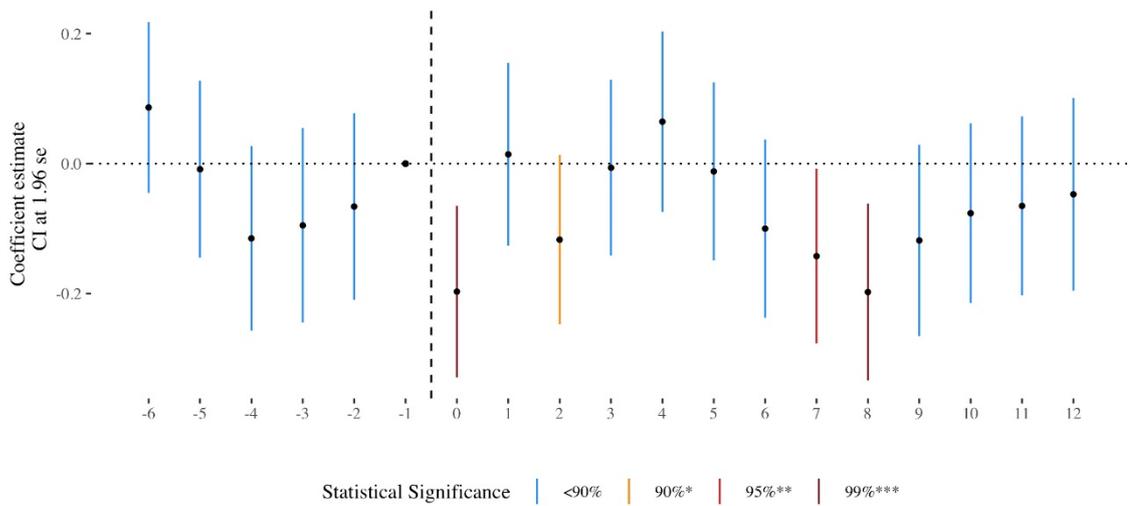
Note: Average conception and abortion rates based on whether the support for the conservative party (P.P.) in the 2000 election in the municipality was above or below the median.

Figure 4. Effect on abortions and conceptions by political leaning of the municipality

Panel A. Abortions per 1,000 women (months around the 2004 election)



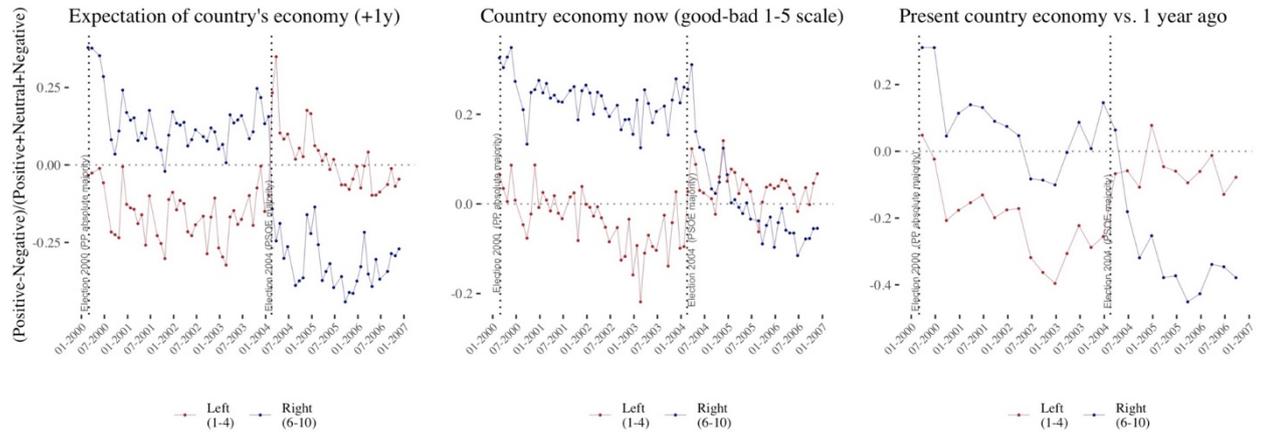
Panel B. Births per 1,000 women (by month of conception, months around the 2004 election)



Note: Dots show the coefficients on the leads and lags in a regression for the monthly excess (normalized with respect to that month's average rate) abortion and conception rates on time since the March 2004 election interacted with an indicator for right-leaning municipalities (based on support for P.P. being above median in the 2000 election). Both specifications include municipality and time fixed-effects. Vertical lines are for 1.96 se (95% CI).

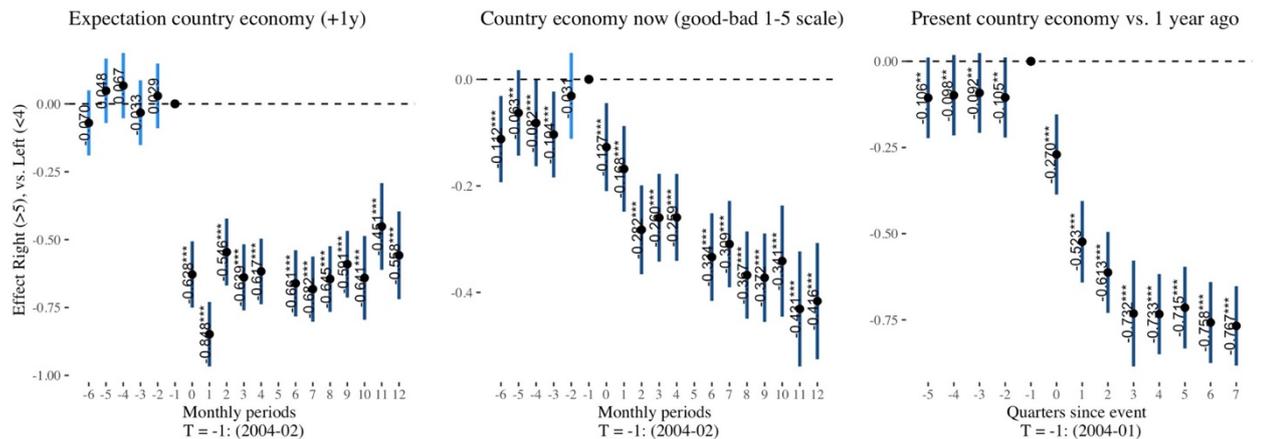
Figure 5. Economic expectations by political alignment around the 2004 election

Panel A. Expectations by political leaning



Note: Economic perceptions scores based on Center of Sociological Studies (CIS) barometers. Score are calculated based on positive-negative responses. From left-right shows economic expectations' item ('Do you think that, in one year, Spain's economic situation will be better, worse or similar to now'), perception of the present state of the country's economy (with respect to Spain's present economic situation, would you call it very good, good, fair, bad or very bad?), and retrospective situation (do you think that the current economic situation of the country is better similar or worse than one year ago?). Based on their reported 1-10 left-right identification, respondents are classified as left (below 5) or right (above 5).

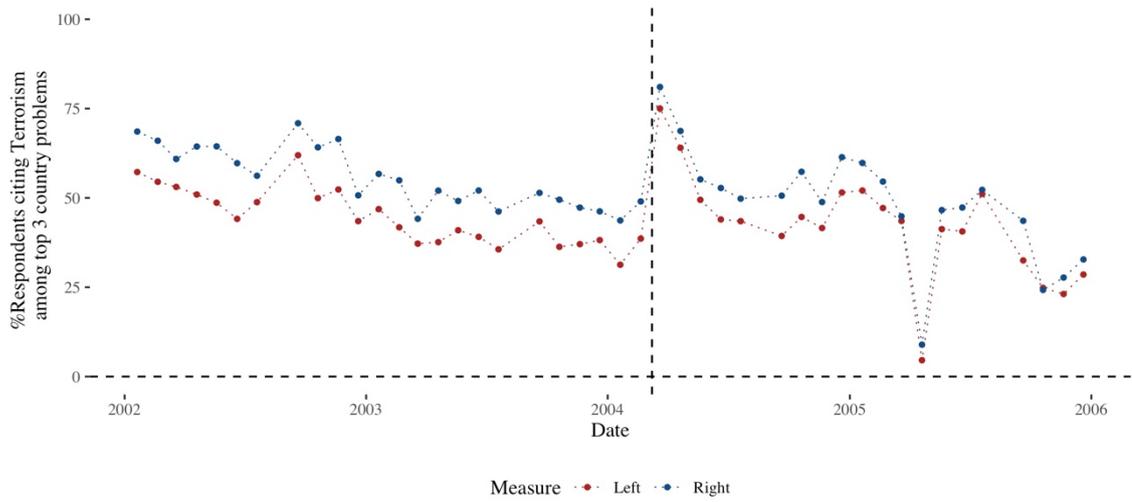
Panel B. Dynamic effects of the 2004 election on expectations by political leaning



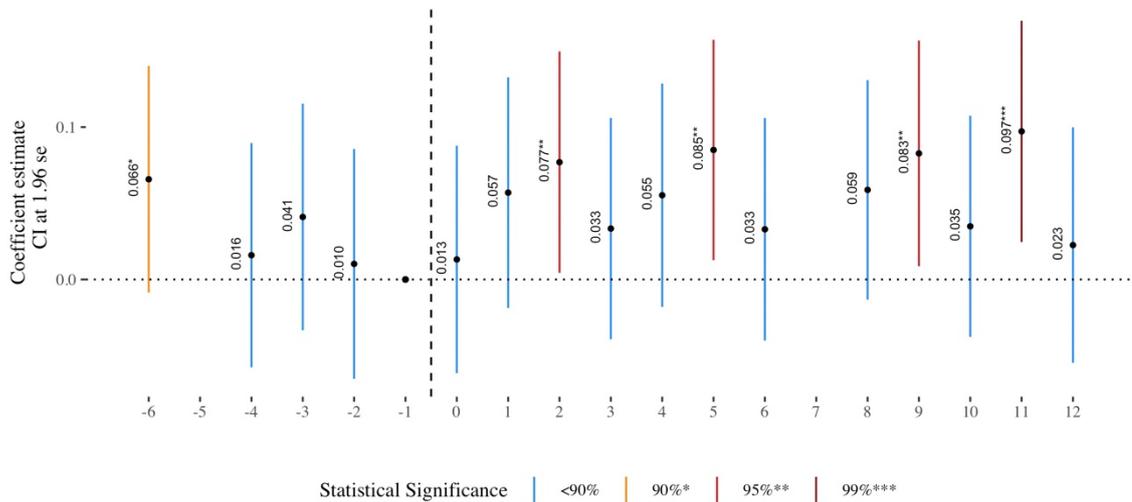
Note: Dots show the OLS estimate of the T-periods change in the OLS estimate of left-right gap in perceptions with respect to the t=-1 period (last barometers –February--

whose fieldwork took place before the election). Confidence interval shown for 99% (2.57 se) interval. Stars show *:90% significant **95% significant,***99% significant.

Figure 6: Concerns about terrorism by political leaning
 Panel A: Fraction of respondents concerned about terrorism



Panel B. Event study around March 2004



Note: The upper figure shows the % of Right-wing and Left-wing respondents citing terrorism within the three top problems of the country in the Centre of Sociological Research (CIS) monthly barometers. In the lower figure, dots show the OLS estimate of the T-periods change in the OLS estimate of left-right gap in these concerns with respect to the $t=-1$ period (last barometers –February-- whose fieldwork took place before the election). Confidence interval shown for 99% (2.57 se) interval. Stars show *:90% significant **95% significant,***99% significant.

Table 1. Unexpected electoral results: Polls and subjective expectations

Election	Voters' expected winner			Poll Average
	%All voters	% Social-democratic voters	% Conservative voters	Last 2 months
2004	Unexpected	Unexpected	Unexpected	Unexpected
Conservatives (Incumbent)	63.4	50.4	80.6	41.2
Social-democrats (Won)	11.0	24.2	2.5	37.9
2008	Expected	Expected	Unexpected	Expected
Conservatives	15.3	8.0	34.0	39.0
Social-democrats (Incumbent+Won)	52.4	68.2	32.4	42.9
2011	Expected	Expected	Expected	Expected
Conservatives (Won)	82.1	81.7	92.6	46.2
Social-democrats (Incumbent)	4.2	6.9	0.7	31.5
2015	Expected	Expected	Expected	Expected
Conservatives (Incumbent+Won)	52.4	44.9	69.6	26.5
Social-democrats	13.5	25.4	5.2	21.4
2016	Expected	Expected	Expected	Expected
Conservatives (Incumbent+Won)	67.4	64.9	79.5	29.1
Social-democrats	6.7	11.4	3.4	20.9
2019 (Apr)	Expected	Expected	Unexpected	Expected
Conservatives	20.9	18.9	39.1	19.8
Social-democrats (Incumbent+Won)	40.8	58.6	23.7	28.7
2019 (Nov)	Expected	Expected	Expected	Expected
Conservatives	6.1	3.1	17.7	20.7
Social-democrats (Incumbent+Won)	64.6	76.9	51.4	27.5

Note: Column 1 describes the outcome of each election, while columns 2 to 5 show whether it was perceived as expected or unexpected. Columns 2 to 4 show voters' expected winner, based on the percent of response to the question: 'Which party do you think will obtain more votes in the election' included in the pre-electoral survey of the 'Center of Sociological Studies' (CIS). Percentages are shown for all voters (column 2), and for each party's voters based on their vote in the previous general election (column 3 and 4). Column 5 (Poll average) reports the party vote share in the election predicted by the average of all public polls published in the nine weeks before the election (polls are banned in the last week).

Table 2. The effect of losing the general election on abortions and births (by municipality)

Panel A. Abortions

	Abortions per 1000 women				Abortions per 100 conceptions			
	(rate)		(excess)		(rate)		(excess)	
	Estimate	(S.E.)	Estimate	(S.E.)	Estimate	(S.E.)	Estimate	(S.E.)
Lead 6	0.0097	(0.0249)	0.0125	(0.0229)	0.2713	(0.6757)	0.4419	(0.6228)
Lead 5	0.0030	(0.0264)	0.0035	(0.0249)	0.4662	(0.9182)	0.4487	(0.8329)
Lead 4	0.0080	(0.0276)	0.0127	(0.0265)	-0.0873	(0.7973)	0.0363	(0.7587)
Lead 3	0.0266	(0.0263)	0.0195	(0.0247)	-0.3466	(0.7541)	-0.3017	(0.7010)
Lead 2	0.0273	(0.0286)	0.0340	(0.0268)	0.2116	(0.7654)	0.1701	(0.7227)
1[t=March 2004]x Conservative	0.0975***	(0.0303)	0.0954***	(0.0288)	2.2014***	(0.7811)	2.3058***	(0.7594)
Lag 1	0.0287	(0.0292)	0.0265	(0.0268)	0.4179	(0.8177)	0.1170	(0.7395)
Lag 2	0.0327	(0.0299)	0.0312	(0.0278)	1.4245*	(0.7556)	1.2242*	(0.7018)
Lag 3	0.0055	(0.0289)	-0.0036	(0.0265)	0.0834	(0.6906)	-0.2666	(0.6245)
Lag 4	-0.0029	(0.0276)	-0.0041	(0.0263)	-0.1845	(0.7632)	-0.0790	(0.7206)
Lag 5	0.0151	(0.0265)	0.0373	(0.0246)	-0.3313	(0.6888)	0.5535	(0.6659)
Lag 6	0.0614**	(0.0268)	0.0642**	(0.0255)	1.5299**	(0.7142)	1.7005**	(0.6716)
Lag 7	0.0296	(0.0245)	0.0301	(0.0236)	0.8979	(0.6690)	0.8804	(0.6373)
Lag 8	0.0344	(0.0273)	0.0391	(0.0251)	1.1639	(0.7464)	1.2875*	(0.6738)
Lag 9	0.0633**	(0.0278)	0.0561**	(0.0247)	1.2369*	(0.6465)	1.2818**	(0.5667)
Lag 10	0.0541**	(0.0270)	0.0608**	(0.0259)	1.8940**	(0.7664)	1.8525***	(0.7194)
Lag 11	0.0229	(0.0280)	0.0101	(0.0265)	0.7693	(0.7566)	0.2097	(0.7156)
Lag 12	0.0128	(0.0291)	0.0107	(0.0269)	0.4226	(0.7603)	0.5269	(0.7269)
N. observations	53,256		53,256		51,988		51,988	

Note: Table shows coefficients β_t from the event study (equation 1), capturing the differential evolution of abortions per 1,000 women and abortions per 100 conceptions in municipalities that supported the losing (conservative) vs. the winning party in the 2000 general election. All specifications include municipality and month fixed-effects. Standard errors are clustered at the municipality level. (Stars indicate the coefficient is significantly different from zero, confidence levels: *** 99%; ** 90%; * 90%)

Panel B. Births

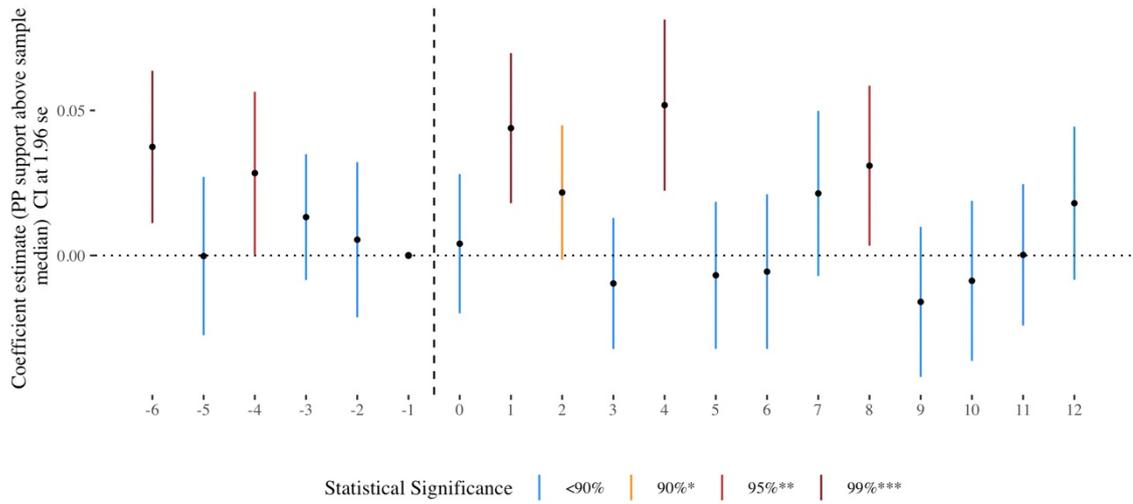
	Births per 1000 women				Conceptions per 1000 women (born+interrupted)			
	(rate)		(excess)		(rate)		(excess)	
	Estimate	S.E.	Estimate	S.E.	Estimate	S.E.	Estimate	S.E.
Lead 6	0.1237*	(0.07320)	0.0864	(0.06698)	0.1108	(0.07684)	0.0849	(0.07082)
Lead 5	0.0073	(0.07370)	-0.0086	(0.06939)	0.0035	(0.08033)	-0.0191	(0.07548)
Lead 4	-0.1153	(0.07617)	-0.1150	(0.07248)	-0.0569	(0.08088)	-0.0689	(0.07786)
Lead 3	-0.0936	(0.08102)	-0.0950	(0.07640)	-0.0471	(0.08842)	-0.0520	(0.08180)
Lead 2	-0.0567	(0.07609)	-0.0660	(0.07323)	-0.0163	(0.08129)	-0.0339	(0.07837)
1[t=March 2004]x Conservative	-0.2776***	(0.07310)	-0.1969***	(0.06732)	-0.2455***	(0.07848)	-0.1730**	(0.07209)
Lag 1	-0.0262	(0.07511)	0.0143	(0.07182)	-0.0418	(0.08367)	0.0168	(0.07965)
Lag 2	-0.0890	(0.07008)	-0.1170*	(0.06640)	-0.0272	(0.07633)	-0.0760	(0.07350)
Lag 3	0.0271	(0.07383)	-0.0063	(0.06898)	0.0250	(0.07920)	0.0040	(0.07432)
Lag 4	0.1254*	(0.07454)	0.0646	(0.07088)	0.1205	(0.08032)	0.0677	(0.07634)
Lag 5	-0.0254	(0.07929)	-0.0119	(0.06986)	0.0199	(0.08181)	0.0417	(0.07220)
Lag 6	-0.0627	(0.07585)	-0.1000	(0.06993)	-0.0315	(0.07952)	-0.0575	(0.07323)
Lag 7	-0.1263*	(0.07380)	-0.1423**	(0.06858)	-0.0544	(0.07745)	-0.0770	(0.07144)
Lag 8	-0.1978***	(0.07348)	-0.1975***	(0.06945)	-0.1452*	(0.07978)	-0.1572**	(0.07381)
Lag 9	-0.1168	(0.08195)	-0.1182	(0.07514)	-0.0853	(0.08823)	-0.0901	(0.07933)
Lag 10	-0.0670	(0.07464)	-0.0763	(0.07046)	-0.0346	(0.08248)	-0.0522	(0.07715)
Lag 11	-0.1189	(0.07417)	-0.0650	(0.07023)	-0.1348*	(0.07824)	-0.0837	(0.07344)
Lag 12	-0.1278	(0.08101)	-0.0471	(0.07566)	-0.0912	(0.08701)	-0.0187	(0.08081)
N. observations	53,256		53,256		53,256		53,256	

Note: Table shows the coefficient β_t from the event study (equation 1), capturing the differential evolution of conception leading to births and total conceptions (both born and aborted) per 1,000 women in municipalities that supported the losing vs. the winning party in the general election. All specifications include municipality and month fixed-effects. Standard errors are clustered at the municipality level. (Stars indicate the coefficient is significantly different from 0, confidence levels: *** 99%; ** 90%; * 90%)

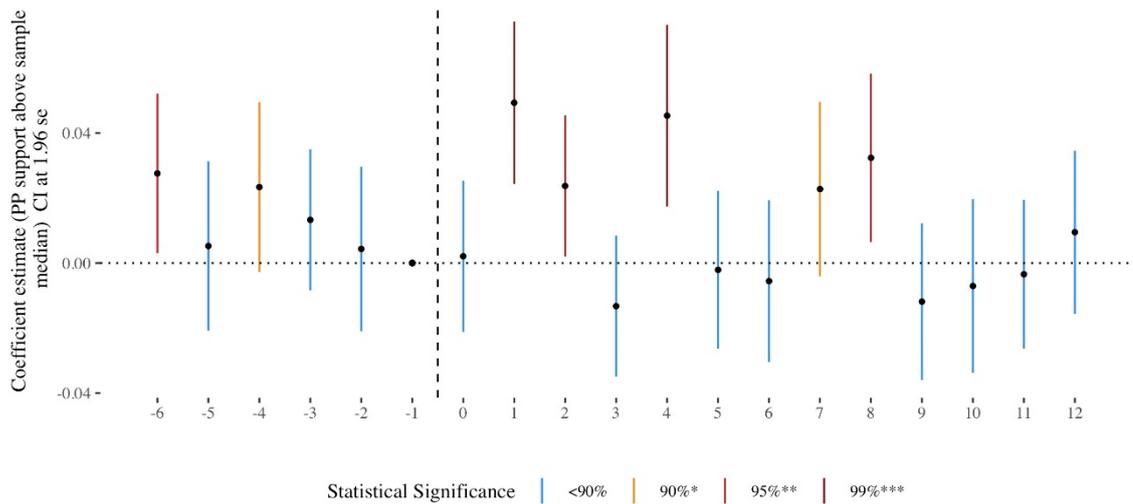
Appendix

Figure A1. Effect on abortions by political leaning of the municipality (weekly analysis)

Panel A. Abortions per 1,000 women (weeks around the 2004 election)-
Absolute



Panel B. Abortions per 1,000 women (weeks around the 2004 election)--
Excess

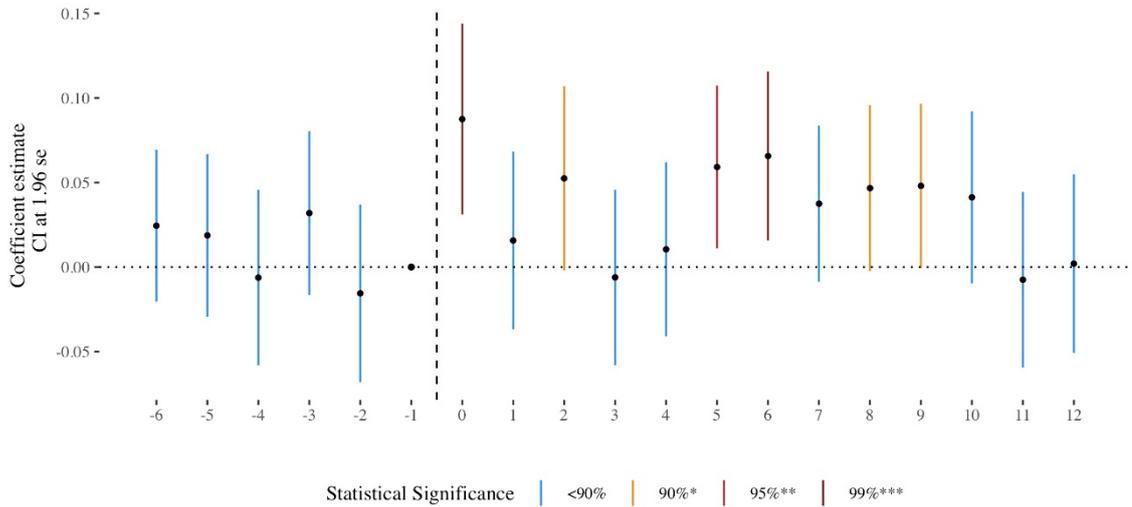


Note: Dots show the coefficients on the leads and lags in a regression for the weekly abortions rate on time since the March 2004 election interacted with an indicator for

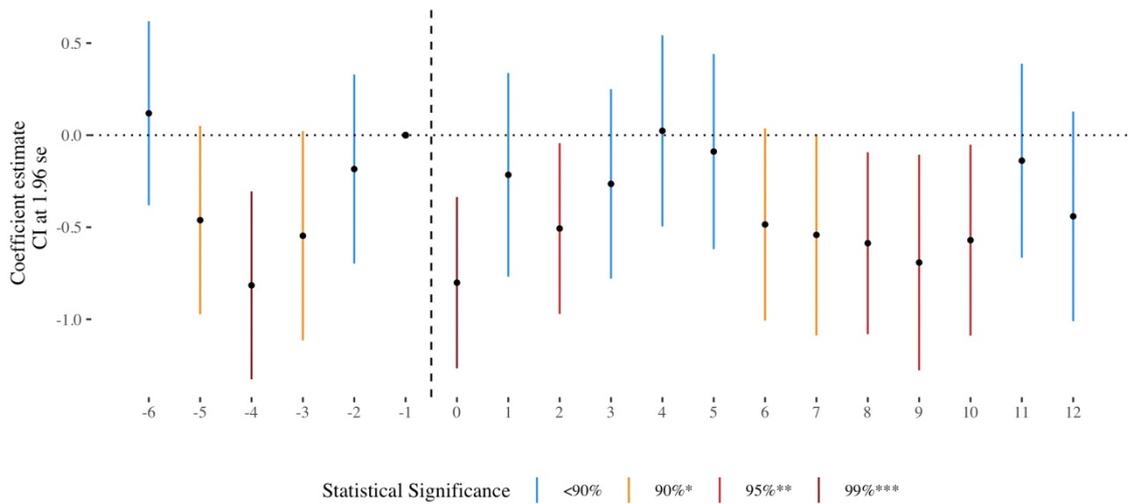
right-leaning municipalities (based on support for conservatives P.P. being above median in the 2000 election). Both specifications include municipality and time fixed-effects. Vertical lines are for 1.96 se (95% CI). Panel A shows the estimate for the simple abortions rate and Panel B shows the results for excess abortions over the week average in the sample.

Figure A2. Effect on conceptions and abortions with alternative measures of political leaning (2004 election): Support for conservatives in the 2004 election.

Panel A. Abortions per 1,000 women (months around the 2004 election)



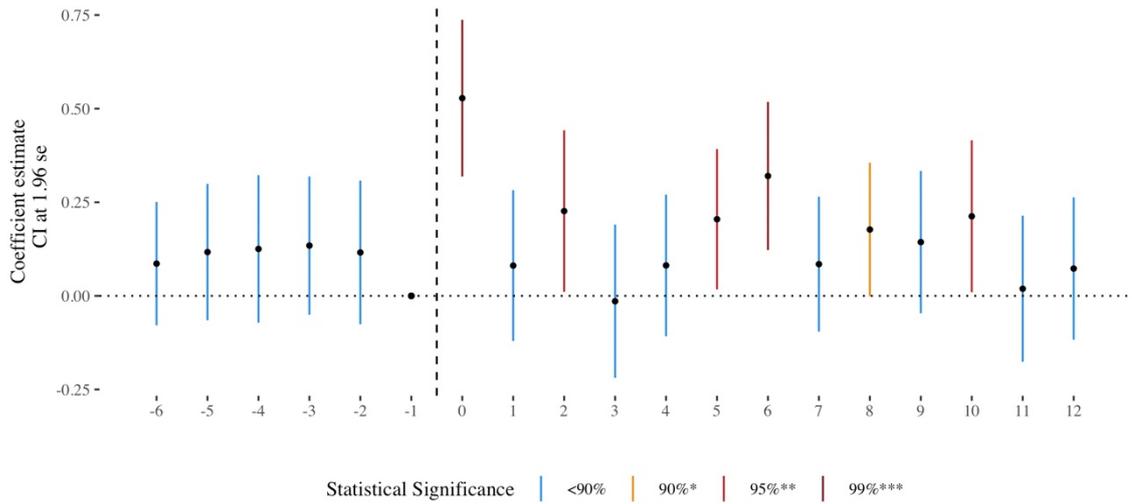
Panel B. Births per 1,000 women (by month of conception, months around the 2004 election)



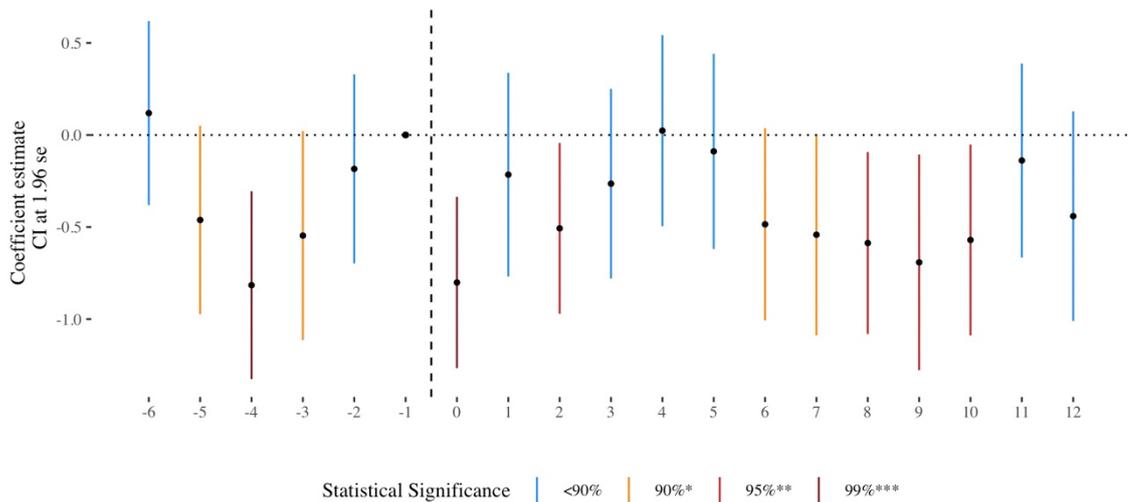
Note: Dots show the coefficients on the leads and lags in a regression for the monthly excess (normalized with respect to that month's average rate) abortion and conception rate on time since the March 2004 election interacted with an indicator for right-leaning municipalities (based on support for conservatives-P.P. being above median in the 2004 election). Vertical lines are for 1.96 se (95% CI).

Figure A3. Effect on conceptions and abortions with alternative measures of political leaning (2004 election): Vote share of conservative party in the 2000 election.

Panel A. Abortions per 1,000 women (months around the 2004 election) -- Excess



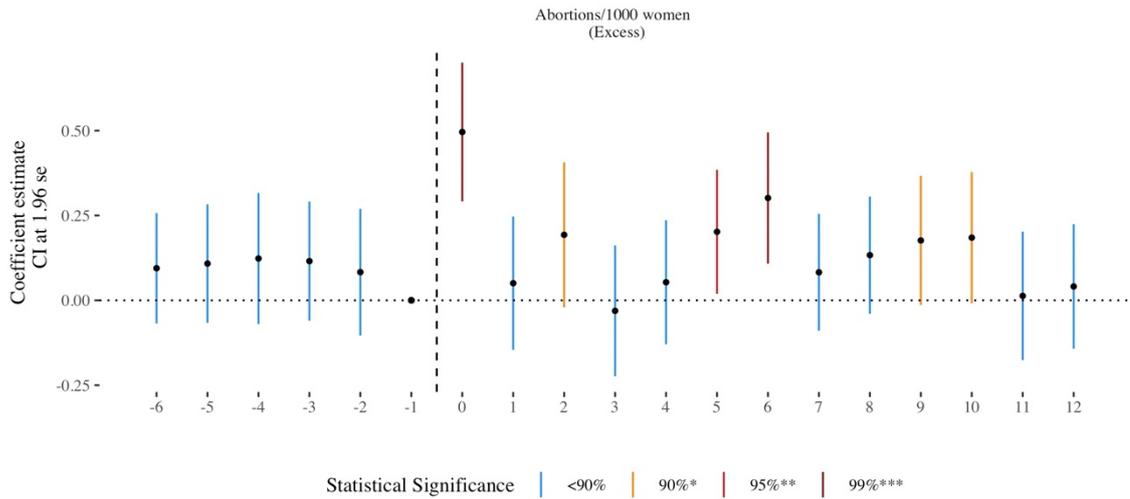
Panel B. Births per 1,000 women (by month of conception, months around the 2004 election) -- Excess



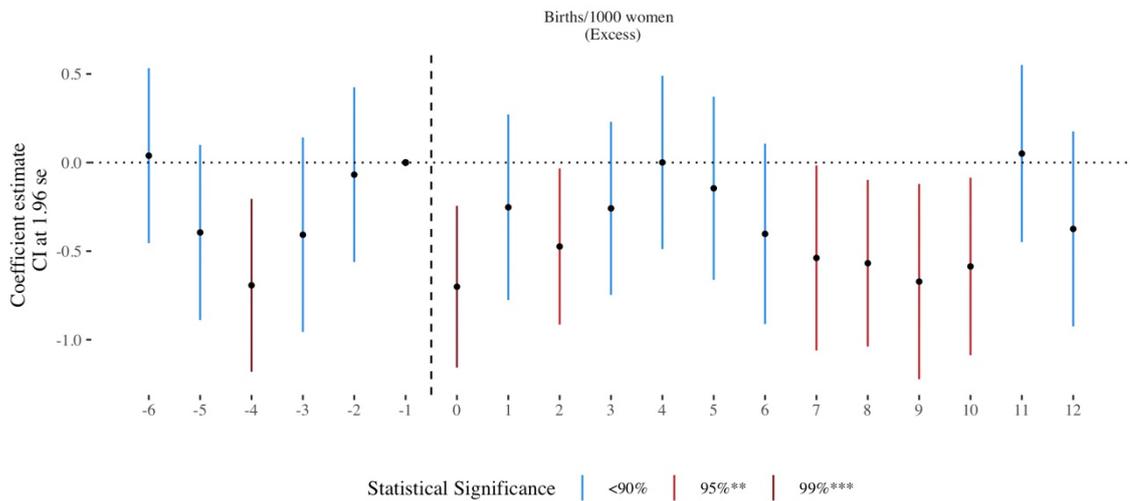
Note: Dots show the coefficients on the leads and lags in a regression for the excess monthly (normalized with respect to that month's average rate) abortion and conception rate on time since the March 2004 election interacted with the vote share of P.P. in the 2000 election. Vertical lines are for 1.96 se (95% CI).

Figure A4. Effect on conceptions and abortions with alternative measures of political leaning (2004 election): Vote share in the 2004 election.

Panel A. Abortions per 1,000 women (months around the 2004 election) -- Excess



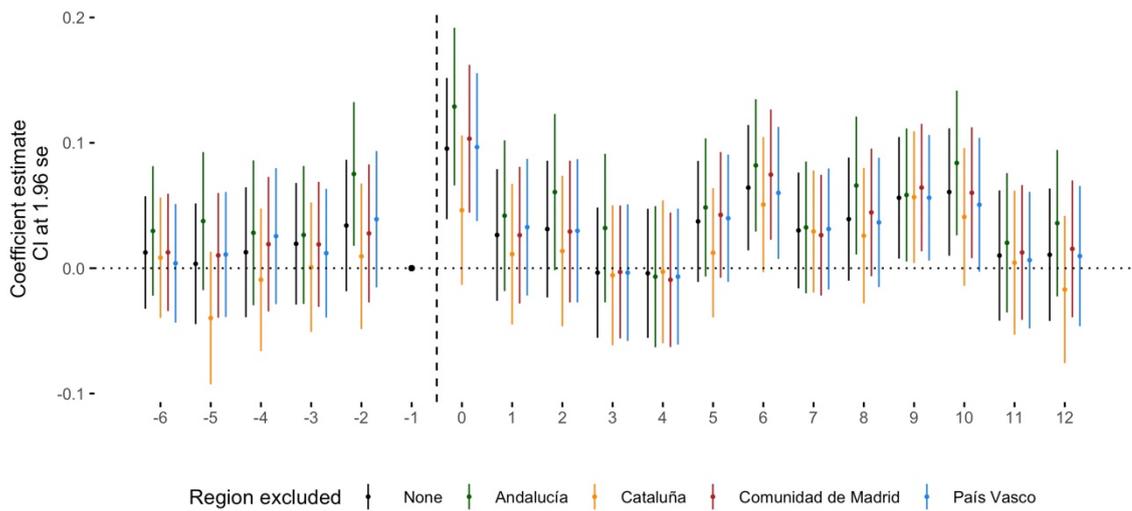
Panel B. Births per 1,000 women (by month of conception, months around the 2004 election) -- Excess



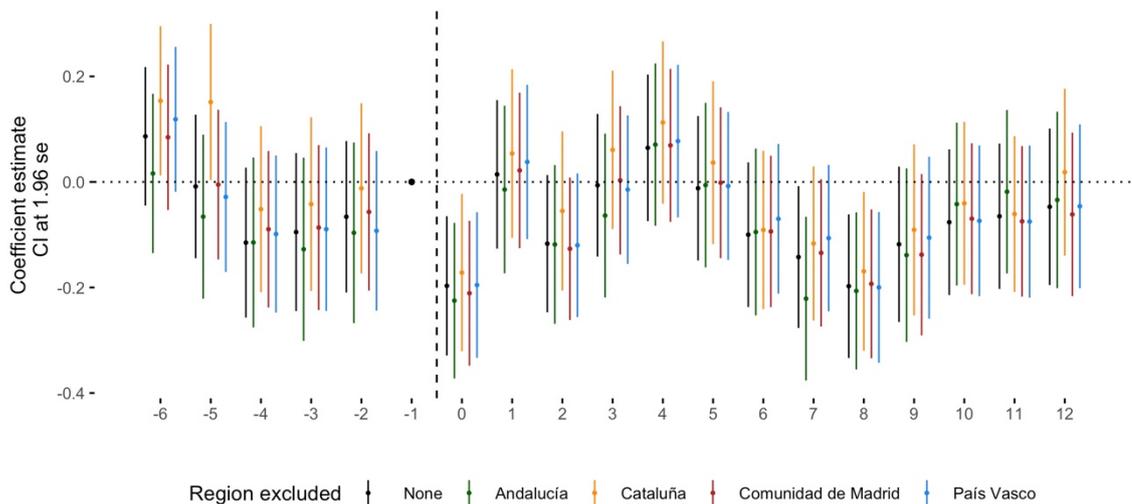
Note: Dots show the coefficients on the leads and lags in a regression for the excess monthly (normalized with respect to that month's average rate) abortion and conception rates on time since the March 2004 election interacted with the vote share of P.P. in the 2004 election. Vertical lines are for 1.96 se (95% CI).

Figure A5: Effect on conceptions and abortions by political leaning (2004 election), excluding specific regions.

Panel A. Abortions per 1,000 women (months around the 2004 election) -- Excess



Panel B. Births per 1,000 women (by month of conception, months around the 2004 election) -- Excess

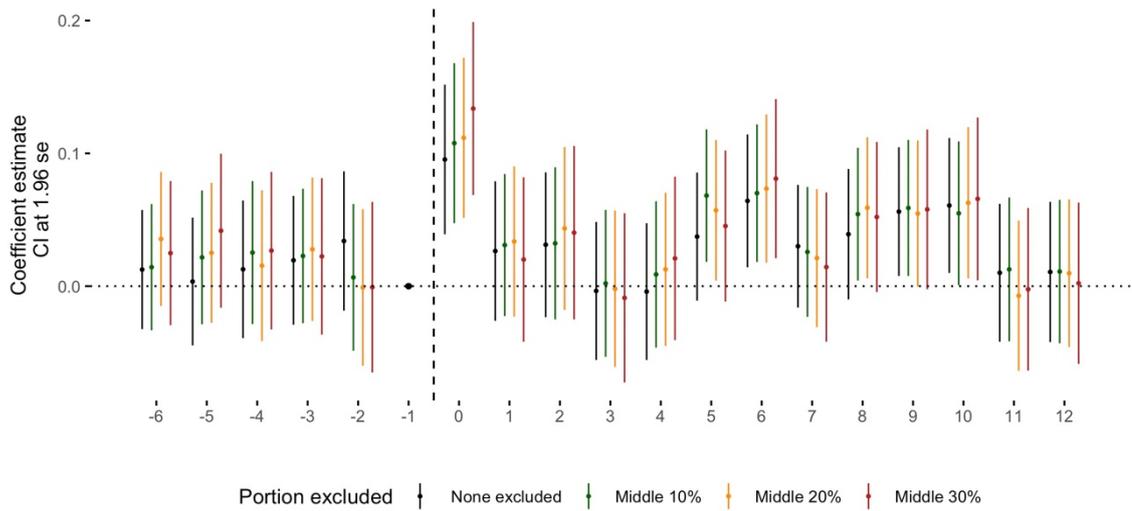


Note: Dots show the coefficients on the leads and lags in a regression for the excess monthly (normalized with respect to that month's average rate) abortion and conception rates on time since the March 2004 election interacted with an indicator for right-leaning municipalities (based on support for P.P. being above median in the 2000 election). Colors

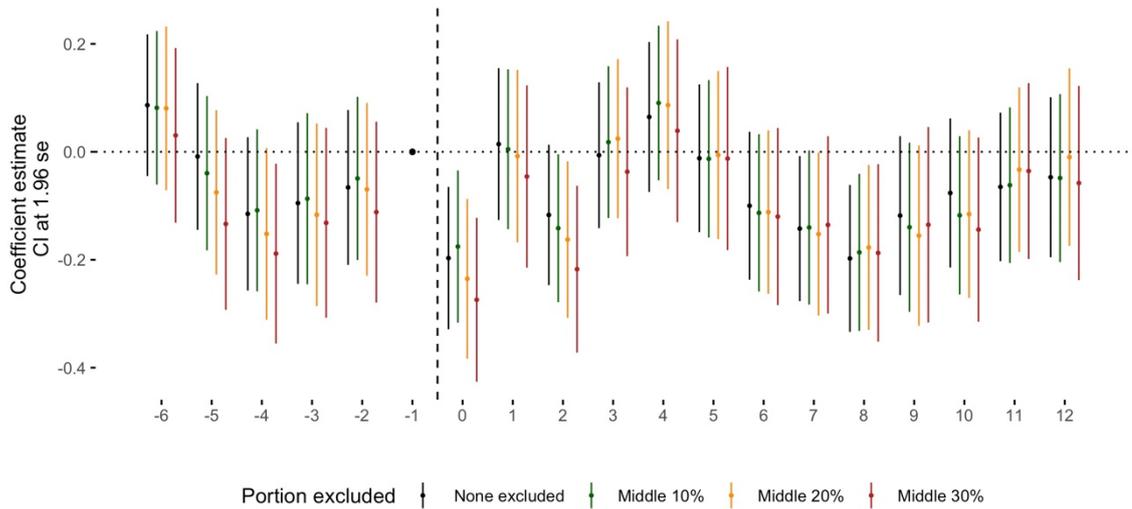
stands for specification that exclude municipalities from the largest regions in the country or those that have a specific party-party system. Vertical lines are for 1.96 se (95% CI).

Figure A6. Effect on conceptions and abortions by political leaning (2004 election), excluding middle portions of the sample.

Panel A. Abortions per 1,000 women (months around the 2004 election) -- Excess



Panel B. Births per 1,000 women (by month of conception, months around the 2004 election) -- Excess

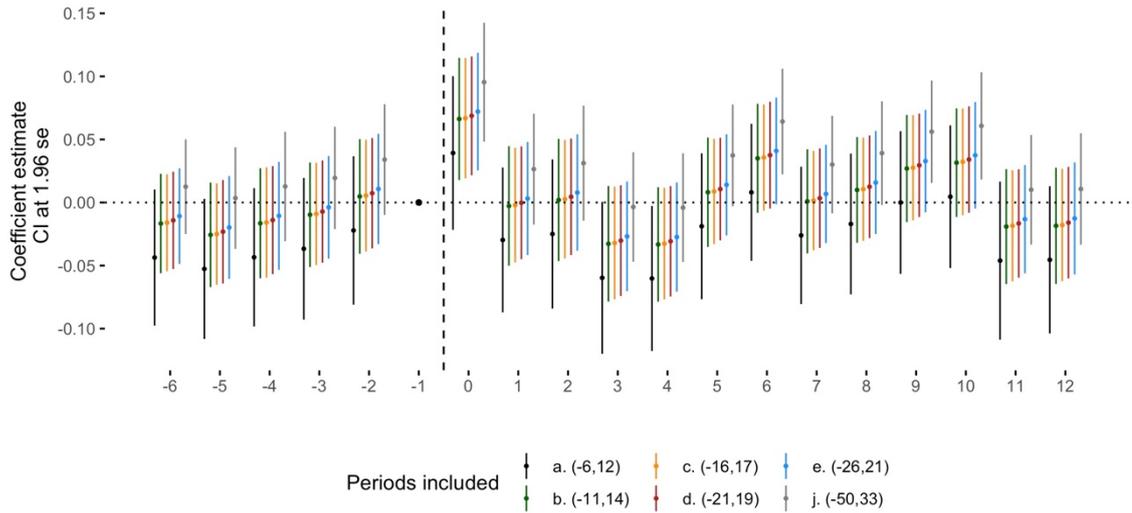


Note: Dots show the coefficients on the leads and lags in a regression for the excess monthly (normalized with respect to that month's average rate) abortion and conception rates on time since the March 2004 election interacted with an indicator for right-leaning municipalities (based on support for P.P. being above median in the 2000 election).

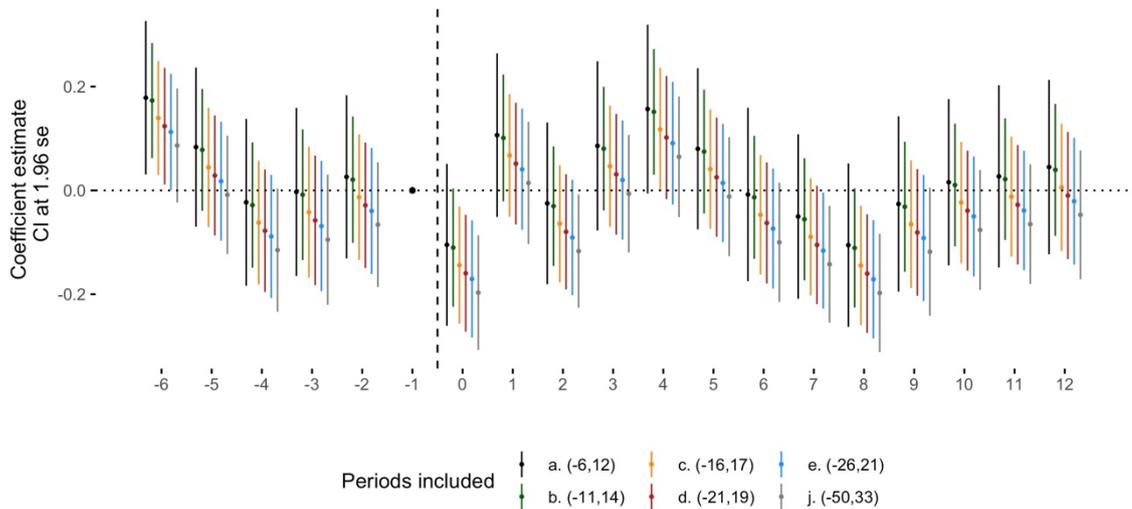
Colors stand for specifications that excludes municipalities around the median support for P.P. Vertical lines are for 1.96 se (95% CI).

Figure A7. Effect on conceptions and abortions by political leaning of the municipality (2004 election), estimated including different numbers of months around the election

Panel A. Abortions per 1,000 women (months around the 2004 election)



Panel B. Births per 1,000 women (by month of conception, months around the 2004 election)

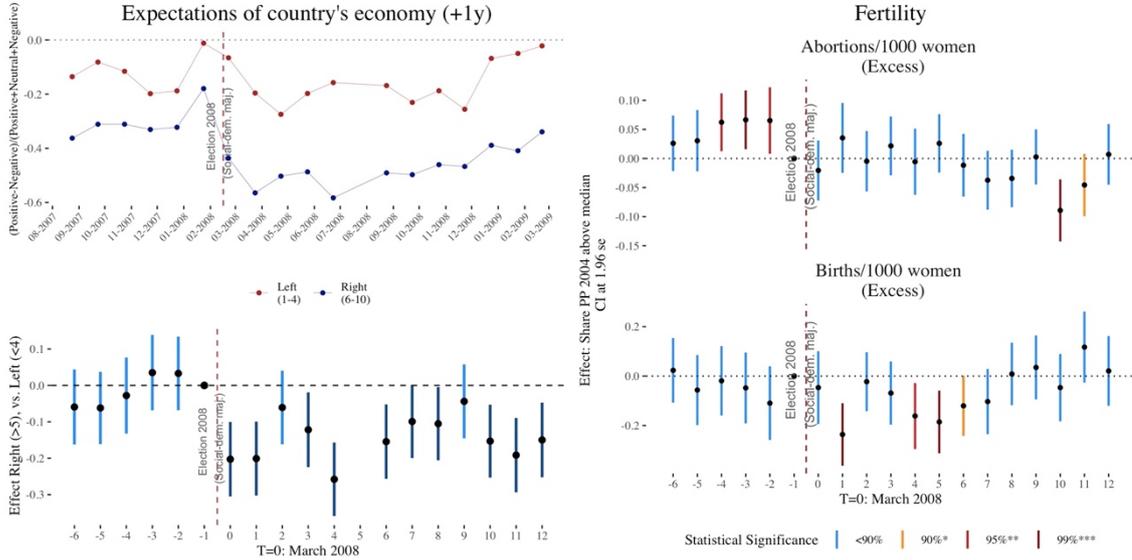


Note: Dots show the coefficients on the leads and lags in a regression for the excess monthly (normalized with respect to that month's average rate) abortion and conception rates on time since the March 2004 election interacted with an indicator for right-leaning municipalities (based on support for conservatives --P.P. being above the median in the 2000 election). Colors stands for specifications that go from including all the periods (-

50,33) to including only those for which the effects are estimated (-6,12). Vertical lines are for 1.96 se (95% CI).

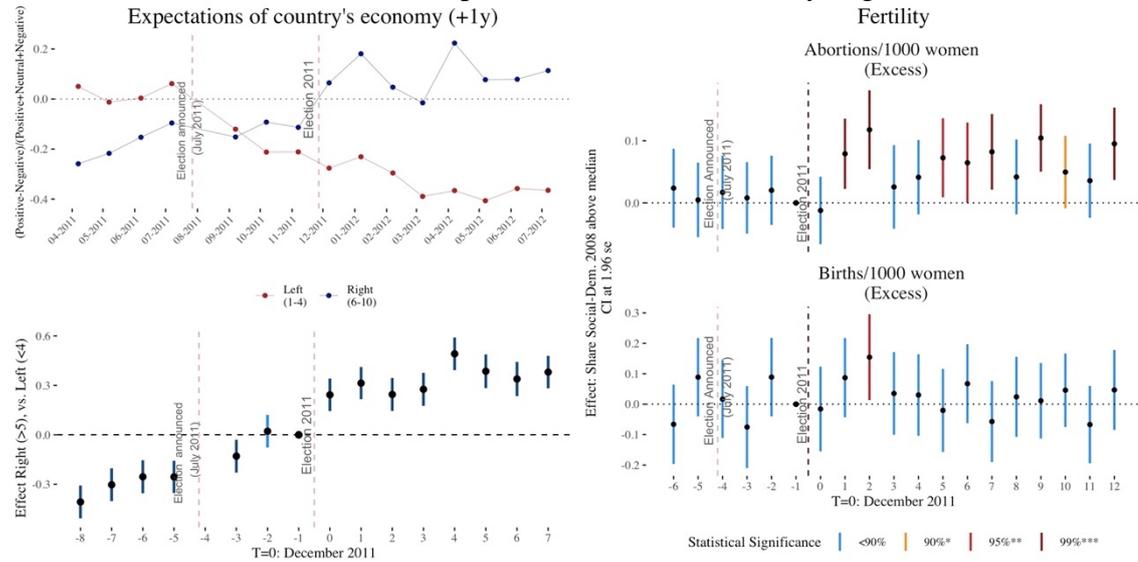
Figure A8. Other elections

Panel A. 2008 election effect on expectations (left) and fertility (right)



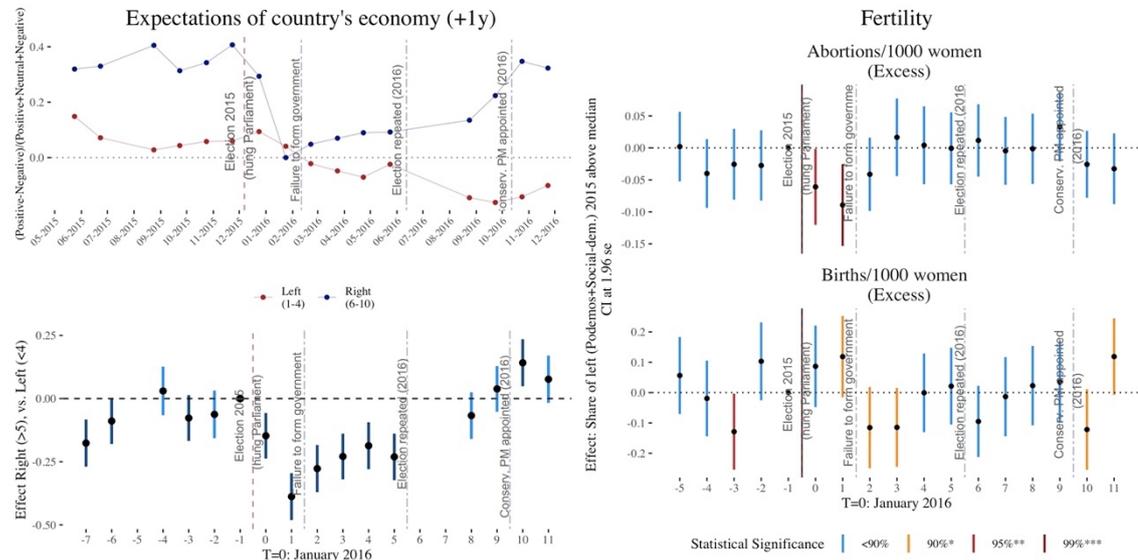
Note: The top-left figure illustrates the evolution of economic expectations around the 2008 election. In the bottom-left panel, dots show the OLS estimate of the T-period change in the OLS estimate of left-right gap in perceptions with respect to the $t=-1$ period (last barometer –February 2008– whose fieldwork took place before the election). Confidence interval is shown for 99% (2.57 se) interval. The right panels illustrate the event study with respect to fertility outcomes. Dots show the coefficients on the leads and lags in a regression for the monthly excess conception and abortion rate on time since the March 2008 election interacted with an indicator for right-leaning municipalities (based on support for conservatives-P.P. being above median in the 2004 election). Both specifications include municipality and time fixed-effects. Vertical lines are for 1.96 se (95% CI).

Panel B. 2011 election effect on expectations (left) and fertility (right)



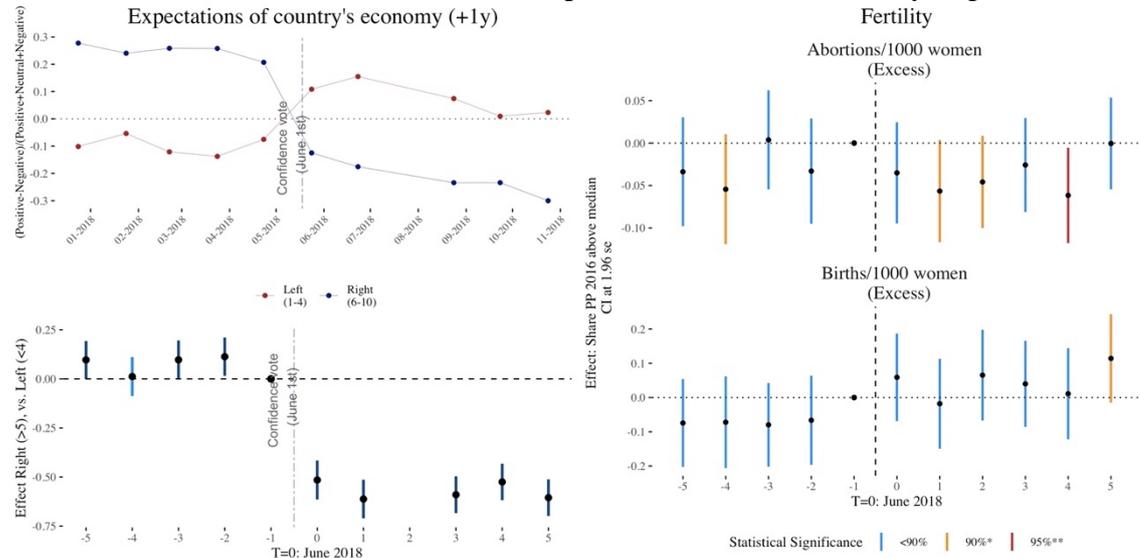
Note: The top-left figure illustrates the evolution of economic expectations around the 2011 election. In the bottom-left panel, the dots show the OLS estimate of the T-periods change in the OLS estimate of the left-right gap in perceptions with respect to t=-1 period (last barometer –November 2011– whose fieldwork took place before the election). Confidence interval is shown for 99% (2.57 se) interval. The right panels illustrate the event study with respect to fertility outcomes. Dots show the coefficients on the leads and lags in a regression for the excess monthly conception and abortion rates on time since the 2011 election interacted with an indicator for left-leaning municipalities (based on support for the incumbent Social-democrats-P.S.O.E. being above median in the 2008 election). Both specifications include municipality and time fixed-effects. Vertical lines are for 1.96 se (95% CI).

Panel C. The 2015 election effect on expectations (left) and fertility (right)
 Share of Left (Podemos+P.S.O.E.) in 2015 above median



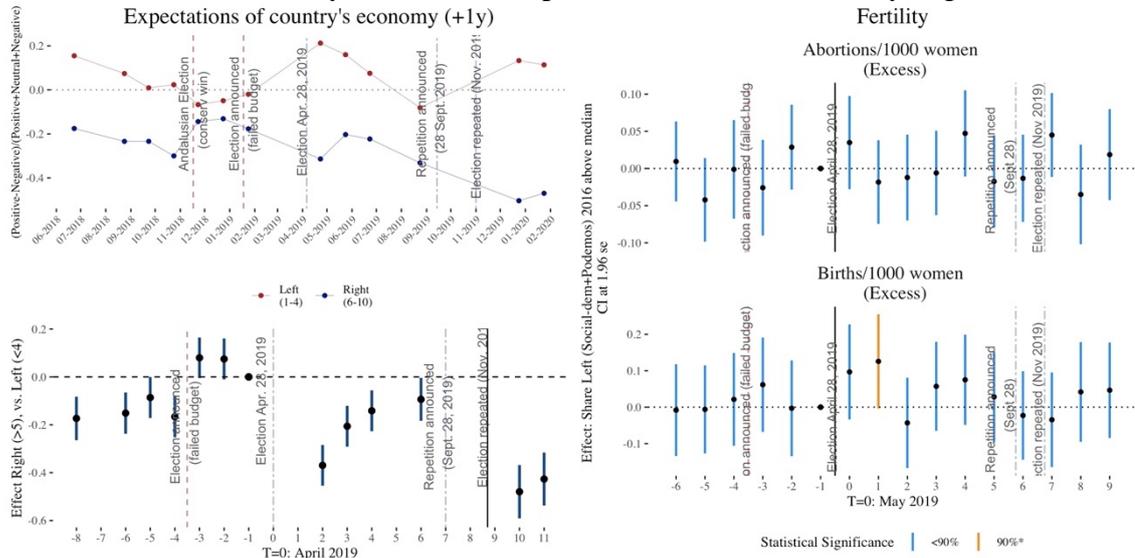
Note: The top-left figure illustrates the evolution of economic expectations around the December 2015 election. In the bottom-left panel, dots show the OLS estimate of the T-periods change in the OLS estimate of left-right gap in perceptions with respect to the $t=-1$ period (last barometers –January 2016– whose fieldwork took place before the election). Confidence interval is shown for 99% (2.57 se) interval. The right panels illustrate the event study with respect to fertility outcomes. Dots show the coefficients on the leads and lags in a regression for the monthly excess conception and abortion rates on time since the December 2015 election interacted with an indicator for left-leaning municipalities (based on share of the Left leaning parties that tried to form a coalition--*Podemos*+P.S.O.E.—being above median in the 2015 election). Both specifications include municipality and time fixed-effects. Vertical lines are for 1.96 se (95% CI).

Panel D. 2018 confidence vote effect on expectations (left) and fertility (right)



Note: The top-left figure illustrates the evolution of economic expectations around the June first 2018 no-confidence vote. In the bottom-left panel, dots show the OLS estimate of the T-periods change in the OLS estimate of left-right gap in perceptions with respect to the $t=-1$ period (last barometers –May 2016– whose fieldwork took place before the confidence vote). Confidence interval is shown for 99% (2.57 se). The right panels illustrate the event study with respect to fertility outcomes. Dots show the coefficients on the leads and lags in a regression for the monthly excess conception and abortion rates on time since the June 2018 election interacted with an indicator for right-leaning municipalities (based on the share of P.P. in 2016 above median in the 2016 election). Both specifications include municipality and time fixed-effects. Vertical lines are for 1.96 se (95% CI).

Panel E. 2019 election cycle effect on expectations (left) and fertility (right)



Note: The top-left figure illustrates the evolution of economic expectations around the April 28th, 2019 election. In the bottom-left panel, the dots show the OLS estimate of the T-periods change in the OLS estimate of left-right gap in perceptions with respect to the $t-1$ period (last barometers –April 2019– whose fieldwork took place before the election). Confidence intervals are shown for 99% (2.57 se). The right panel illustrates the event study with respect to fertility outcomes. Dots show the coefficients on the leads and lags in a regression for the monthly conception and abortions rates on time since the May 2019 election interacted with an indicator for left-leaning municipalities (based on the share of the Left –P.S.O.E.+Podemos– above the median in the 2016 election). Both specifications include municipality and time fixed-effects. Vertical lines are for 1.96 se (95% CI).