

Using a natural experiment to estimate the electoral consequences of terrorist attacks

Laia Balcells^a and Gerard Torrats-Espinosa^{b,1}

^aDepartment of Government, Georgetown University, Washington, DC 20057; and ^bDepartment of Sociology, New York University, New York, NY 10012

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This study investigates the consequences of terrorist attacks for political behavior by leveraging a natural experiment in Spain. We study eight attacks against civilians, members of the military, and police officers perpetrated between 1989 and 1997 by Euskadi Ta Askatasuna (ETA), a Basque terrorist organization that was active between 1958 and 2011. We use nationally and regionally representative surveys that were being fielded when the attacks occurred to estimate the causal effect of terrorist violence on individuals' intent to participate in democratic elections as well as on professed support for the incumbent party. We find that both lethal and nonlethal terrorist attacks significantly increase individuals' intent to participate in a future democratic election. The magnitude of this impact is larger when attacks are directed against civilians than when directed against members of the military or the police. We find no evidence that the attacks change support for the incumbent party. These results suggest that terrorist attacks enhance political engagement of citizens.

terrorism | electoral behavior | natural experiment | Spain | conflict

Terrorism is one of the biggest challenges that threaten democracies. In democratic regimes, governments are accountable to the electorate, and terrorists may leverage this to coerce governments into concessions or to damage the legitimacy of the state. To comprehend the extent of the leverage that terrorist organizations may have on democratic regimes, social scientists have focused on the impact of terrorist attacks on election outcomes, such as changes in participation rates or in citizens' vote choices. By examining electoral outcomes, we can gain a better understanding of how citizens reward or punish governments in the aftermath of terrorist attacks and, more generally, of how terrorists' actions reinforce or erode the legitimacy of democratic systems.

However, identifying the effect of terrorist attacks on electoral behavior presents several methodological challenges. First, the perpetration of the attacks may be confounded with particular expectations about the election results or with public opinion trends (1). So estimating the actual effects of the attacks is not possible by simply looking at electoral results or polls (2, 3). Second, using postelectoral surveys to infer the electoral effects of attacks is problematic because of potential reporting bias and cognitive dissonance in retrospective questions (2). Third, because the targets and locations of attacks are often selected as a result of ideological, ethnic, or religious allegiances (4), the causal effect may not be identified by interviewing victims or their relatives or by exploring geographical variation in attacks (5, 6).

In an attempt to push the literature forward, we exploit a natural experiment in Spain in which a series of terrorist attacks took place while several nationally and regionally representative political surveys were being fielded. This setting enables a research design that allows us to estimate the causal effect of the attacks on electoral behavior. In instances in which a terrorist attack and a survey overlapped in time, being interviewed before or after the attack approximates an experimental design in which we would randomly assign exposure to terrorist attacks.

We find that terrorist attacks have an activation effect: Individuals interviewed after the attacks are between 2% and 3% points

more likely to report that they would participate in a democratic election, relative to individuals of the same province that were interviewed before the attacks. This activation effect is stronger among residents of the Basque Country [the epicenter of the Euskadi Ta Askatasuna (ETA) conflict], individuals who did not vote in the past election, center-left voters, and when the victims of the attacks are civilians or politicians. We do not find clear evidence on directional effects whereby individuals interviewed after the attacks change professed support for the incumbent party or switch the direction of their vote relative to the previous election. These null results on directional effects contrast with prior research (2, 3, 7–11). In the discussion, we reconcile our findings with the existing ones by outlining the importance of taking into consideration the political context and nature of the terrorist campaigns being studied.

The Electoral Effects of Terrorism

Terrorism has been theorized to have a significant impact on democratic regimes because the electorate might induce policy changes, including concessions to terrorists, to put an end to terror attacks (12, 13), and they might even punish incumbent governments as a response to the attacks (2, 8, 11). In theory, this makes democracies more vulnerable to terrorism than other regimes (14). But citizens may also rally behind the party in government (15), and they might even encourage governments to undertake more repressive policies against violent actors (7).

Significance

Does terrorism turn voters against governments, or do citizens “rally around the flag”? Understanding the relationship between terrorist attacks and electoral behavior is key to comprehending how terrorism impacts democracies. We estimate the causal effect of terrorist violence on electoral behavior by leveraging data from nationally and regionally representative surveys that were being fielded when Euskadi Ta Askatasuna (ETA) perpetrated terrorist attacks in Spain. We find that attacks are likely to increase individuals' intent to participate in democratic elections but not to change their vote choice as reported in the surveys. These results are relevant because they imply that terrorists may have less leverage on electoral results than previously thought. Our research design and methodology may prove useful in future studies on the impact of terrorism.

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¹To whom correspondence should be addressed. Email: gerard.torrats@nyu.edu.

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From an individual point of view, what are citizens' electoral reactions to terrorist attacks? Understanding individual-level behaviors is relevant because these behaviors aggregate up to produce potential changes in who is elected during or after terrorist campaigns.

Recent social science research has documented that direct exposure to violence and its associated trauma can induce individuals to engage in politics to overcome trauma, show discontent, and try to fix the conditions that led to victimization (3, 16, 17). This activation effect is not limited to individuals who are directly victimized, though. Individuals witnessing or hearing about violence—who perceive that they could also be victims—may also be mobilized as a result of it. In the case of terrorism, which is a type of political violence that aims to broadcast a message to a larger audience beyond those who are victimized (18), exposure to terrorism is often massive. Exposure to attacks can take place via the media (e.g., radio, newspapers, TV, Internet), and it does not have to be direct. We examine if citizens in a democratic regime are more likely to participate in elections after a terrorist attack has occurred in their country.

Some existing literature suggests that terrorist attacks will lead to changes in the direction of the vote, either increasing support for right-wing parties that advocate for more “hawkish” policies (3, 6, 10) and are perceived as more competent in dealing with terrorism (7, 19) or leading to a punishment of the incumbent government(s) regardless of their political leaning (9). We examine these so-called directional effects of terrorist attacks (3), paying particular attention to the vote for (or against) the incumbent government during the time in which terrorist attacks occur. While theories of retrospective voting and political accountability (20) would make us expect a punishment of the incumbent after the attacks, citizens might also decide to support the incumbent government as a way to confront terrorists and “rally around the flag” (15).

ETA's Terrorist Activities

ETA was a terrorist organization in favor of the independence of *Euskal Herria*, a territory that includes the regions of the Basque Country and Navarre. ETA was created in 1958 (during Franco's dictatorship in Spain), remained active until October 2011, and announced its permanent dissolution in May 2018. ETA killed a total of 829 people, 40% of them civilians (4), making it one of the most lethal terrorist organizations in Western Europe. ETA proclaimed itself a revolutionary “national liberation” organization that waged a war of attrition against the Spanish state, inflicting costs that they thought would lead to concessions in favor of the cause of independence (12). Among ETA's victims were many politicians from both the Socialist Party (PSOE) and the People's Party (PP), whom ETA viewed as similar with respect to levels of Spanish nationalism. In the Basque Country, ETA also targeted members of the conservative Basque nationalist party (PNB) as well as businessmen, who were often extorted through the so-called “revolutionary tax.”

The organization was selective with their targeting of police officers and military personnel in its early stages, but they began to target civilians and to kill more indiscriminately as their social support among the Basque population diminished (12). Although ETA's activities (including kidnappings, street violence, and intimidation) were highly concentrated in the Basque Country, the organization also perpetrated many attacks in other parts of Spain (see *SI Appendix, Fig. S2*).

Results

Activation Effects of Terrorist Attacks. In Fig. 1, we show the estimated effect of ETA attacks on electoral participation. We report estimates excluding and including controls for demographics and political behavior in the most recent national election (see *SI Appendix, Table S4* for a list of all controls).

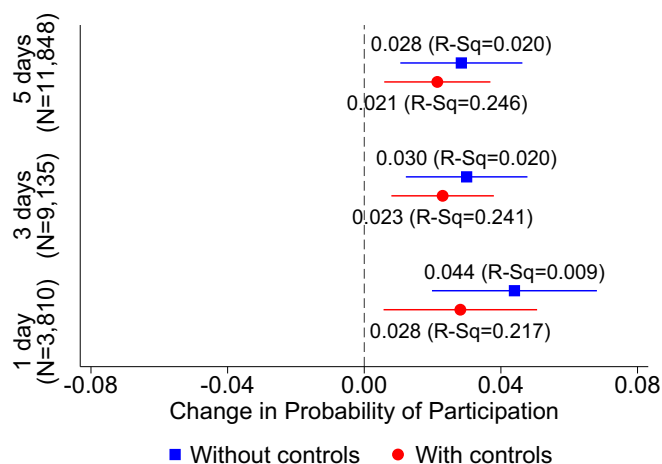


Fig. 1. Impact of the attacks on electoral participation.

We also show estimates from models that make the before/after comparisons within 1, 3, and 5 d from the attacks (see *Materials and Methods* for details on the model specifications). When we exclude the set of controls, we find that individuals interviewed after the attacks are between 2.8% and 4.4% points more likely to answer that they would vote in the next national election, as compared with those interviewed before the attacks. The magnitudes of the point estimates decrease somewhat when we account for individuals' demographic attributes and voting behavior in the previous election.

The fluctuation of point estimates across model specifications seen in Fig. 1 is within what would be expected due to statistical margin of error, as the overlap of confidence intervals shows. This consistency across point estimates indicates that any imbalance in “pretreatment” attributes does not pose a substantial threat to our identification strategy. In *SI Appendix, Fig. S3* we show that our estimates are robust to controlling only for unbalanced pretreatment covariates.

Heterogeneity of Activation Effects. In Fig. 2, we present evidence from several specifications that model heterogeneity of the activation effect by location, turnout in the prior election, direction of the vote in the prior election, and type of victim. Regarding location, we explore heterogeneous effects for residents in the Basque Country. ETA sought and needed support from the Basques, who might have reacted differently to the attacks compared with people from the rest of Spain. In addition, because many ETA attacks took place outside of the Basque Country, we explore if the effects vary depending on whether individuals were living close to the attack (i.e., same province) or farther away (i.e., different province). Examining previous absences will indicate if the activation effects are sufficiently strong to mobilize people who might have a tendency to stay at home on election day. Examining heterogeneous effects across voters of different parties is also pertinent, as attacks can provoke differential turnout across subgroups of voters, and this has implications on electoral outcomes (8). We focus on PP and PSOE, which were the two main political parties in Spain during the period under study—the PSOE occupying the center-left and left space, and the PP the center-right and right electoral space. Unfortunately, we cannot examine the vote for Basque nationalist parties because there are too few respondents voting for such parties in the survey instruments we are using. Finally, we look at differences across types of attacks distinguishing between civilian (regular citizens and politicians) and combatant (members of the military and the police force) victims (see *SI Appendix, Table S1*).

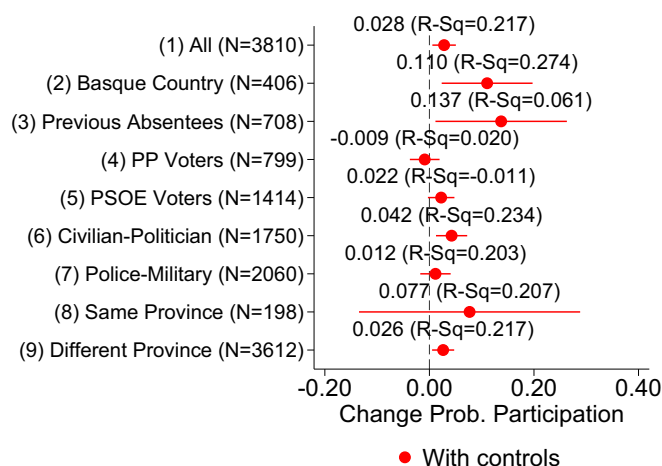


Fig. 2. Heterogeneity in activation effect, within 1 d.

All point estimates shown in Fig. 2 are from regressions with controls within 1 d from the attacks. Estimates from regressions without controls are shown in *SI Appendix, Fig. S5*, and estimates from regressions within 3 and 5 d from the attacks are shown in *SI Appendix, Figs. S6 and S7*. We find that the activation effect is stronger among residents living in the Basque Country—a 11% point increase—and among individuals who did not vote in the most recent national election—a 14% point increase. The former results indicate that geographical proximity to the ETA conflict enhanced the effects of violence. The two point estimates at the bottom of Fig. 2 explore heterogeneity by geographical proximity to the individual attacks. Here, we find that participation increases by 8% points among respondents living in the same province where the attack took place, although this effect is imprecisely estimated. The results on previous absentees are particularly interesting given that these individuals are probably those whose participation is more difficult to activate. When we examine activation effects for PSOE and PP voters separately, we find that these are stronger among PSOE voters. Because the PSOE was the political party in government during most of the period when ETA was active, it could be that PSOE voters were more supportive of their political leaders in difficult times or that PP and PSOE voters reacted differently to the attacks as a result of their political leanings (19). At the same time, it could be that those who were already disposed to vote for the party in government, the PSOE in this case, were more likely to mobilize. Previous research in the United States has documented that groups that are already disposed to support the President are more likely to rally (21).

In Fig. 2, we also observe that citizens are more responsive to attacks against civilians than against combatants: Electoral participation increases by 4% points if the victim was a civilian, but the change is indistinguishable from zero if the victim was a member of the military or the police (the difference between the effect when victims are civilians and the effect when victims are combatants is only statistically significant at the 10% level, as shown in *SI Appendix, Table S6*). Citizens are plausibly more sympathetic toward civilians (22). Those who do not carry weapons are more likely to be perceived as innocent victims, and violence against them often creates the impression that anyone could be the next victim.

Directional Effects of Terrorist Attacks. In Fig. 3, we examine the effect of the attacks on the probability of voting for the incumbent party in the election. As before, we show results when the window of observation is 1, 3, and 5 d from the attacks and when we exclude and include controls for demographics and political

behavior in the prior election. In none of the six model specifications do we find any evidence of change in the likelihood of voting for the incumbent party among those interviewed after the attacks. In *SI Appendix, Fig. S4*, we show that our estimates are robust to controlling only for unbalanced pretreatment covariates, and in *SI Appendix, Figs. S8–S10*, we show that there are not any heterogeneous effects by residence in the Basque Country, turnout in the prior election, vote in the prior election, type of victim, or residence in the same province where the attack occurred.

As an additional test of directional effects, we examine effects of attacks on vote switches, comparing vote choice in the latest national election with vote choice in a future (hypothetical) election, as reported in the same survey. We do not find significant effects of attacks on changes in the direction of the intended vote (*SI Appendix, Fig. S11*).

Changes in Attitudes and Policy Preferences After the Attacks. Why do Spanish citizens seem more likely to participate in elections right after a terrorist attack? Robbins et al. (23) argue that terrorist attacks induce anxiety among voters, who then become more worried about the political environment and are more likely to participate because they ascribe greater salience to upcoming elections. Beyond psychological and emotional reactions, the effects we find could also be driven by changes in political attitudes and preferences, making people more prone to engage in politics.

To provide suggestive evidence on the mechanisms underpinning our findings, we explore a survey that was fielded when ETA perpetrated a car bomb attack against the PP leader, José María Aznar (attack 7 in *SI Appendix, Table S1*). We focus on the answers to 15 questions that asked participants about their views on public safety and criminal justice policies, thus offering a unique opportunity to examine the impact of the terrorist attack on attitudes and preferences toward these issues (the exact wording of all questions is listed in *SI Appendix*). When necessary, we recode the answers so that higher scores mean greater concern for public safety or support for more punitive criminal justice policies. All answers have been transformed to z scores normalized to the mean and SD of the control group (preattack respondents). We combine all answers in a composite index that is an equally weighted average of all z scores (24).

Fig. 4 shows that individuals interviewed after the attack are more concerned about terrorism, are more likely to think that public safety is the most important value in society, are more supportive of “law and order” approaches to reduce delinquency,

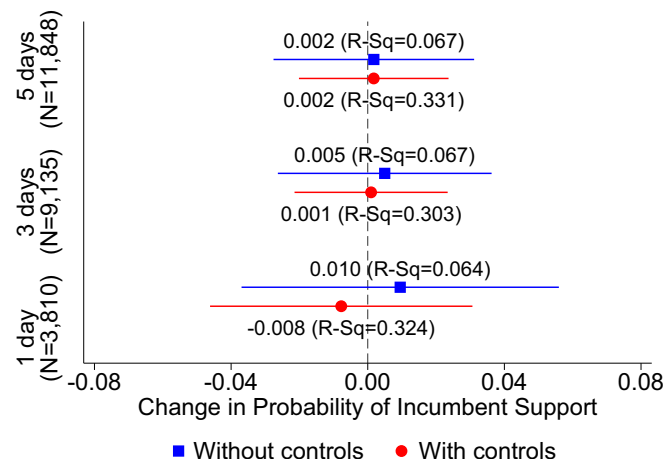


Fig. 3. Impact of the attacks on support for the incumbent party.

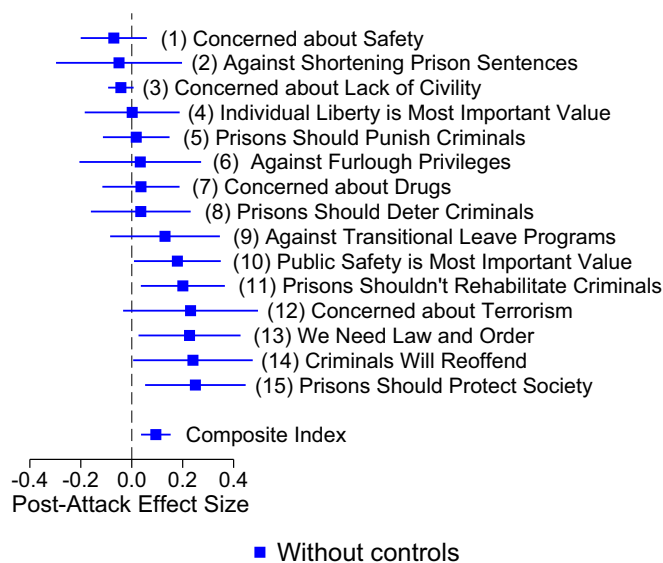


Fig. 4. Effect of attack against J. M. Aznar on views on public safety and criminal justice policies.

are more likely to think that criminals have a tendency to reoffend, and are more likely to think that the function of prisons is to protect society and not to rehabilitate criminals. Surprisingly, general concern about public safety does not become significantly greater; this may be because concerns about public safety are channelled through concerns about terrorism after a terrorist attack. On the basis of the composite index, individuals interviewed after the attack experience a 0.1 SD increase in concern for public safety or support for more punitive criminal justice policies.

The fact that people are more likely to be concerned about terrorism after a terrorist incident reflects heightened anxiety. The latter can lead to greater interest in politics (23) but also to greater willingness to participate in politics to try to achieve a sense of order and control in the face of the terrorist threat (25). At the same time, the finding that citizens are more supportive of more punitive policies and that they value public safety more after an attack reflects changes in political attitudes and preferences, which can also impact electoral participation (26). For example, voting may be an expression of support for the state as the legitimate purveyor of public order. In short, the results in Fig. 4 suggest that increased electoral participation after terrorist attacks may be driven both by psychological distress over terrorism and by changes in political attitudes and preferences regarding specific policies. In *SI Appendix, Fig. S18*, we show that these results are robust to controlling for the set of covariates included in earlier models.

Sensitivity to Unobserved Selection. The balance in pretreatment covariates (*SI Appendix, Table S4*), the stability of coefficients in controlled and uncontrolled regressions, and the knowledge that we gathered about Centro de Investigaciones Sociológicas (CIS) fieldwork protocols (see detailed information about the CIS fieldwork methodology in *SI Appendix*) make us confident that the assumptions needed to validate the natural experiment hold. However, to assess the potential that our results are driven by selection bias, in Fig. 5, we present results from a sensitivity analysis proposed by Oster (27) in which we estimate the level of unobserved confounding that would make our results go away.*

*We thank one of the reviewers for making this suggestion.

The sensitivity test takes as an input the R^2 (x axis) from a hypothetical regression of the outcome on treatment, observed controls, and unobserved covariates (Oster denotes this as R^2_{max}). For each value of R^2_{max} , we estimate the degree of unobserved selection into treatment, defined as the ratio of selection on unobservables to selection on observables (y axis), that could be driving our estimate, given that the true effect is of a different magnitude. We present sensitivity results from model specifications that estimate effects within 3 d from the attacks.

The solid line in Fig. 5 shows that for the range of R^2_{max} values that is between 0.35 and 0.70, the omitted variable that would be driving our participation estimates would imply a ratio of selection on unobservables to selection on observables between 1.5 and 5.9. In other words, for us to find a 2.3% point increase in electoral participation after the attacks, when the true effect was in fact 0, individuals interviewed after the attack should be selecting into treatment on the basis of an unobserved attribute that is 1.5 to 5.9 times stronger than electoral behavior in the past election, gender, age, education, employment status, and size of the municipality. We find this omitted variable bias scenario highly implausible. Only if we allow for an R^2_{max} of 0.94 in participation models do we reach a ratio of selection on unobservables to selection on observables of 1, which would mean that the unobservables are as important as the observables. Measurement error and idiosyncratic variation in this type of outcome lead us to believe that such R^2_{max} is unlikely to be found in any empirical study.

The dashed line shows that the ratio of selection on unobservables to selection on observables that would be driving our null result on incumbent support, given that the true effect was a 2% point decline in support, would have to be between 2.8 and 13.3. Even if we allow for an R^2_{max} of 1, the ratio of selection on unobservables to selection on observables still remains above 1. In *SI Appendix, Fig. S12*, we demonstrate that our effects are not driven by a single outlier attack, and in *SI Appendix, Fig. S13*, we show that our results are not an artifact of some provinces or surveys having disproportionately higher weights in the fixed effects estimation (28).

Discussion

Our results show that terrorist attacks lead to a significant increase in intended electoral participation and that they do not seem to imply an electoral punishment of the incumbent government(s) or changes in citizens' professed vote choices. Due to our research design, these findings are based on survey responses and

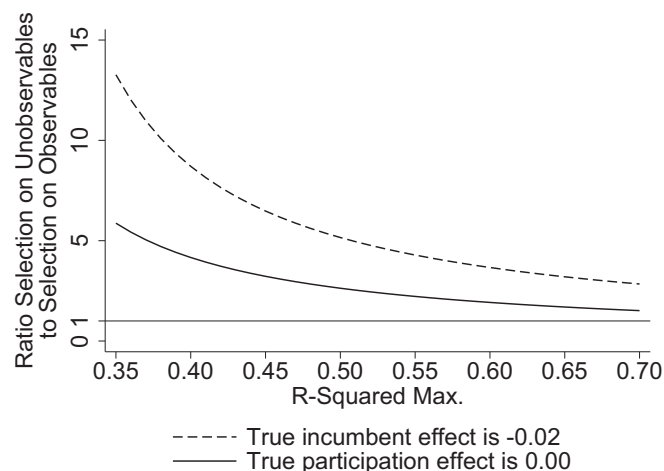


Fig. 5. Sensitivity to unobservable selection.

not on actual electoral behavior. However, the results are still relevant, and they imply that terrorists may have less leverage on electoral results than previously thought.

Our analyses of a specific survey on attitudes toward public safety and criminal justice issues show that citizens are more likely to be concerned about terrorism, to value public safety, and to be supportive of more punitive policies after terrorist attacks. We argue that psychological distress and changes in political attitudes are potential mechanisms leading to increased political participation after terrorist attacks. Interestingly, these attitudinal changes do not imply that individuals will stop voting for leftist parties; in Spain, after ETA attacks, PSOE voters were more likely to self-predict voting than PP voters. The presence of an activation effect among this subgroup of voters and the absence of a directional effect point to a rally around the flag effect that benefited the Spanish socialist party while it was in office. It must be noted, however, that during the years under study, PSOE adopted rather hawkish policies, such as introducing important reforms in criminal laws to restrict the rights of prisoners and make them more punitive. Also, the PSOE was involved in the Grupos Antiterroristas de Liberación scandal, which linked this political party with death squads attempting to eliminate ETA between 1983 and 1987. In a way, PSOE's approach to ETA limited the extent to which right-wing parties could take issue ownership of counterterrorist policies in Spain.

This study makes several contributions to the literature on the political consequences of terrorism. First, by linking the attacks to a set of surveys that ask individuals about electoral participation and vote choices, we are able to examine activation and directional effects of the attacks for the same group of individuals. This is important because prior literature has produced inconclusive evidence on the sign and magnitude of these two effects. Second, by leveraging a natural experiment, we improve causal identification with respect to previous work that has relied on correlational methods (8, 11, 22, 23).[†] Our results are consistent with some of this literature. For example, Robbins et al. (23) show that electoral participation increases after terrorist attacks with data from a cross-section of countries. However, our results have greater internal validity.

Our analyses focus on the effect of a very particular type of terrorism, perpetrated by a domestic nationalist organization, which carried out frequent attacks, and with whose violence citizens were sadly familiar. In this context, the fact that these effects are detectable in our data should be interpreted as a conservative set of results. Also, as explained above, the main political parties in Spain agreed on a counterterrorist agenda to confront ETA, there was not much political competition around this issue, and the right did not have a clear valence advantage. The results could diverge in cases in which the attacks are rarer and therefore more shocking (as in the 9/11 attacks in the United States), political competition around the issue of terrorism is greater (as it is in the case of Israel), and state leadership reaction to terrorist attacks is less consistent (as in the 11M attacks in Madrid). These contextual issues could explain why our findings are different from other studies.

At the heart of terrorism is the idea of threatening the legitimacy of the state; however, this can backfire (30). Martha Crenshaw writes that the Red Brigades's decision to kidnap and murder Aldo Moro resulted in the reaffirmation of the legitimacy of the Italian state, which terrorism was meant to undermine (31). Our evidence points toward a similar direction: By increasing their willingness to vote, citizens are not only showing that they want to achieve some order and control in front of the

terrorist threat (25) but also that they support the democratic system, as elections are a core element of it.

It is important to keep in mind that our study identifies a short-term, partial equilibrium effect of terrorism on reported political behavior. It could be that terrorists are successful in turning governments toward more repressive policies (32), limitation of freedoms and rights (33), and that this leads to a long-term deterioration of democracy and, more broadly, of the legitimacy of the state. But our analyses cannot speak fully to the longer term or general equilibrium effects. The results of our study suggest that if the goal of terrorists is to undermine the legitimacy of a democratic state, in the short term, they might be achieving the exact opposite.

Materials and Methods

We exploit a natural experiment in which the timing of the attacks relative to that of the surveys conducted by the CIS is assumed to be random. The CIS is Spain's main survey institution, and it runs opinion polls throughout the year, including special surveys on topics of general interest and preelectoral and postelectoral surveys around elections. After obtaining the dates of most surveys the CIS conducted while ETA was active, we identify those that coincide with an ETA's terrorist attack.

We focus on eight terrorist attacks perpetrated by ETA between 1989 and 1997 that overlapped with CIS surveys. One of the surveys we use is representative of the region of Castilla-la Mancha and the other is of the Basque Country; the rest are all nationally representative. We provide information on each of the attacks in *SI Appendix, Tables S1 and S2*. We show the date when it occurred, the province where it took place, the name of the victim, how the attack was perpetrated (e.g., shooting, car bomb), whether the victim died or was injured, the victim's status (e.g., civilian or member of the military or the police), and the political party that was in office. We also show when the attack took place in relation to the timing of the interview. As we show in *SI Appendix, Tables S8–S11*, national media outlets (i.e., newspapers, television, radio) covered all attacks immediately after they occurred, so we assume that the individuals in our sample were aware of them the same day or, at the latest, the day after they took place.

All CIS surveys include a set of questions about the respondent's voting behavior in past elections and their intention to vote in a hypothetical future election. We infer individuals' likelihood to participate in a future election and support for the incumbent party from the answer to the following question, which is worded exactly in the same way as in all of the CIS surveys: "In the hypothetical case that there was a national election tomorrow, for which party would you vote?" Possible answers to this question include all political parties competing in the national elections and the option of not participating in the election. Additionally, all CIS surveys record demographic attributes of the interviewees, their province of residence, and the day when the interview was conducted.

Under the assumption that the time when terrorist attacks occurred is exogenous relative to the timing of the surveys, we can define individuals in the "control" group as those interviewed before the attack and individuals in the "treatment" group as those interviewed after the attack. In *SI Appendix*, we describe the fieldwork methodology of the CIS and explain how it enables our identification strategy and validates the natural experiment. For similar designs that exploit the timing of local events, see refs. 34–37. Given this setup, we estimate the causal effect of terrorist attacks on electoral participation and support for the incumbent party using the following Linear Probability Model:

$$Y_{ips} = \delta \text{Post}_{ips} + X'_{ips}\beta + Z'_{ps}\gamma + e_{ips} \quad [1]$$

For the analyses of electoral participation, Y_{ips} is an indicator that takes value 1 if the interviewee responded that he or she would vote in a hypothetical election taking place in the next day and 0 otherwise. For the analyses of incumbent support, Y_{ips} is an indicator that takes the value 1 if the interviewee answered that he or she would vote for the incumbent party and 0 otherwise. We measure Y_{ips} for individual i , living in province p , interviewed in survey s . Post_{ips} is a binary indicator that takes the value 1 if individual i living in province p was interviewed after the attack during survey s and 0 if he or she was interviewed before the attack. X'_{ips} is a vector of demographic controls that include the political party for which the interviewee voted in the past national election, gender, age, level of education, employment status, and size of the municipality. We measure these

[†] Notable exceptions that use design-based inference methods to study the effects of terrorism are Bozzoli and Muller (29), Berrebi and Klor (10), Montalvo (2), and Getmansky and Zeitzoff (6).

attributes for individual i , living in province p , interviewed in survey s . Z'_{ps} is a set of province-by-survey fixed effects. The parameter of interest is δ , and it provides an estimate for the casual effect of terrorism on electoral participation and support for the incumbent party. In *SI Appendix*, we provide a detailed discussion of potential threats to our identification strategy and show balance in pretreatment observed characteristics across treatment and control units (*SI Appendix*, Table S4).

We make the pre- and postattack comparisons using different bandwidths around the date of the attack: 5 d, 3 d, and 1 d. Because we cannot exactly identify the hour when the interviews occurred, we drop individuals who were interviewed on the same day of the attacks. The addition of province-by-survey fixed effects restricts the pre- and postattack comparisons to individuals interviewed in the same survey and living in the same province. This will remove any biases arising from systematic differences in how the different surveys were fielded. The vector of controls X'_{ips} includes dummies for each municipality size (the CIS categorizes localities in seven groups according to the number of residents—below 2,000; between 2,000 and 10,000; between 10,000 and 50,000; between 50,000 and 100,000; between 100,000 and 400,000; between 400,000 and 1,000,000; and larger

than 1,000,000)—which help remove any biases arising from the nonrandom selection of municipalities of a given size within provinces. In addition, we cluster standard errors by province and municipality size to account for CIS clustered sampling design, by which the primary sampling units are municipalities of a particular size within provinces. *SI Appendix*, Figs. S14–S17 show that the results remain the same when we cluster by province and by attack.

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