British voting intentions and the far reach of 11 September terrorist attacks in New York[*]

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December 2023

Abstract

Terrorist attacks have often been found to impact voting behaviours in the country of the attack. Here I study the impact of 9/11 terrorist attacks in New-York on voting preferences in the UK, concluding that 9/11 impacted the voting intentions of the British, significantly increasing prospective votes for the Conservative party and reducing future votes for the Labour, the incumbent party at the time. Using daily survey data on voting intentions of a representative sample of several thousands of British people in the days before and after the 9/11 attack, taking a Regression Discontinuity Design, reveals an immediate increase in intentions to vote for the Conservative party, which double in the days after the attack, while prospective Labour votes are halved, for marginal voters. These findings vary largely depending on party closeness and previous voting decisions, as well as by gender.

Keywords: Conflict economics, Voting Behaviour, Household economics.

JEL classification: D72 Voting Behaviour; F52 National security, economic nationalism; D12 Consumer economics: empirical analysis; D1 Household behavior.

Introduction

A vast literature studies the relation between terrorism and voters' behaviour in the country of the attacks, generally concluding for an increase in citizens' support for the right-wing parties (e.g., Berrebi and Klor, 2008; Gould and Klor, 2010; Hersh, 2013; Giavazzi et al. 2023) and a negative impact on preferences for the incumber party (e.g., Montalvo, 2011). Rare are the studies that allowed terror attacks in one country to affect voting intentions in another country. An exception, is Schüller (2015) that investigated the effect of 9/11 on political party support in Germany, using annual data from the German Socio-Economic panel and a before-after dummy approach, to conclude for no shift in support between political parties, but an increase in the strength of political support among right-wing voters and a weaking of political support for left-wing voters. This paper adds to this literature by examining the effects of the 11th September 2001 attacks in New-York (hereafter denominated as "9/11") on daily voting intentions of the British, allowing for a cross-the-Atlantic impact of terrorism on political preferences, and implementing a Regression Discontinuity Design with daily survey data on Brits voting intentions.

Most of the earlier literature used annual observations and a "before-after" dummy to pin down the effect of terrorism on voting behaviours, lacking a counterfactual, with the notable exception of for example, Montalvo (2011), who exploited the timing of the elections for Spanish resident abroad to identify the effect of a Madrid train bombing, which happened after residents abroad had already voted, but before the vote of the national residents, to conclude for a decline in support for the incumbent party. Data availability and methodological issues, as well as specific country differences, may contribute to explain the controversiality of some of the findings in the literature. For example, Peri, Rees, and Smith (2023) using bi-annual cross-country data from the European Social Survey matched with information on terror attacks with at least one casualty in the country of the attack, and taking a before-after empirical strategy, with a two-week bandwidth (exploiting information of the day of the EES interview), conclude that fatal terror (weakly) increased satisfaction with the incumbent government, corroborating the hypothesis of a "rally around the flag" effect of terrorism. Instead, Baccini et al. (2021), find no electoral effect of terrorism, pooling together several different failed and successful attacks, with county level electoral data in the United States, which may be perhaps at least partly explained by the fact that few attacks happened

in the days close to the local elections -as the effects of terror on individual behavioural outcomes are generally short-lived.

Earlier studies established that terrorism impacts behavioural outcomes of individuals far beyond the direct victims due to fear of future attacks (e.g., Becker and Rubinstein, 2004; Marshall at al., 2007; Clark, Doyle, and Stancanelli, 2020; Mirza, Stancanelli and Verdier, 2022) and the effects propagate via the media (e.g., Becker and Rubinstein, 2004; Giavazzi et al. 2023) and are short-lived (Clark, Doyle, and Stancanelli, 2020; Metcalfe, Powdthavee, and Dolan, 2011; Mirza, Stancanelli and Verdier, 2022). In particular, Metcalfe, Powdthavee, and Dolan (2011), find a significant and negative effect of the 11th September 2001 attacks in New-York on the mental well-being of the British, also in line with the large post-traumatic stress disorder impact of 9/11 in the United States (e.g., Cohen Silver, et al. 2002; Galea et al. 2002a and 2002b; Ford et al., 2003; Schlenger et al., 2002), and the fact that some of the 9/11 victims were British citizens.

This paper asks whether terrorist attacks in one country impact voting intentions in another country, focusing on the dramatic 9/11 attacks in New-York, which marked a huge rise in anti-terrorism measures and military spending on the two sides of the Atlantic (e.g.; Mueller and Stewart, 2014; European Union, 2021). Not only, 9/11 caused almost three thousand deaths, but also 67 British were counted among the fatal casualties, which likely magnified its behavioural impact in the UK, if any.[1]

Although the behavioural effects of terrorism on individuals only indirectly affected by the attacks are usually short-lived (e.g., Metcalfe, Powdthavee, and Dolan (2011); Clark, Doyle, and Stancanelli, 2020), they may still cause sizable and long-lasting consequences, if for example, political elections were taking places close to the days of the attack (e.g., Montalvo, 2011; Balcells and Torrats-Espinosa, 2018).

The literature documents considerable heterogeneity of behavioural responses to terrorism with those most vulnerable to stress, such as, for example, women and new-borns, being affected the most (e.g., Armijos Bravo and Vall Castello, 2021; Camacho, 2008; Mirza,

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[1] There were 16 German victims also among 9/11 death fatalities, which may contribute to explain the findings in Schüller (2015).

Stancanelli and Verdier, 2022; Quintana-Domeque and Rodenas Serrano. 2017; Rossin-Slater et al. 2020). Perhaps surprisingly gender heterogeneity of voting responses to terrorism has not played a major role in the earlier literature, perhaps possibly due to sample size and other data issues. Therefore, another contribution of this study is to highlight the heterogeneity of the voting responses to terrorism by gender, and other dimensions.[2]

To capture the immediate impact of 9/11 on the British voting intentions, the empirical approach relies on a Regression Discontinuity Design, using daily data on the voting intentions of a representative large sample of the British population, drawn from the British Household Panel Surveys (BHPS), thanks to the fact that several thousand respondents were interviewed in September, which enables me to estimate the immediate effect of 9/11, using a few days bandwidth. I detect a large and significantly positive impact of 9/11 on the British intentions to vote for the Conservatives, while intentions to vote for the incumbent Labour party fell significantly, though these effects are short-lived and hold true only for marginal voters, defined as those not close to any political party.

The effect of 9/11 on the British voting intentions was only short lived though, and there is no effect a year later, using the 2002 wave of the BHPS and a similar methodological approach. The Labour party with Tony Blair as Prime Minister was in force at the time of 9/11, having won the general elections a few months earlier; following on a first Tony Blair Labour government, from 1997 to 2001. Four years later in 2005, the Labour Party with Tony Blair won again the elections, setting a third Tony Blair Labour government.

The rest of this paper is organized as follows. The next section presents the data. The empirical method is described next, and a discussion of the results of estimation follows. The last section concludes.

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[2] Americans' Muslim religiosity was found to correlate with political party support of in the wake of 9/11 (Ayers, 2007). Here we do not explore heterogeneity of responses by religiosity, but we control for ethnicity, when applicable, and our main conclusions hold true in a set up with or without socio-demographic controls (see results Section).

Data

The data used for the empirical analysis are drawn from the British Household Panel (BHPS), a representative population survey of the United Kingdom, for the years 1993[3] to 2001, with most interviews carried out in September and October of each year. The BHPS provides information on the day, month and year when each respondent was interviewed, with the day of the interview being randomly set (e.g., Metcalfe, Powdthavee, and Dolan, 2011). Interviews were spread over several months, starting in September each year and ending in May the following year, with around 70% of the survey participants being interviewed in September and October, and none in June, July or August. In particular, the BHPS survey was addressed to over 18,000 respondents in 2001, with over 5,000 individuals being interviewed in September 2001, which enables precisely estimating the immediate impact of 9/11 on voting intentions, taking a Regression Discontinuity Design using the 2001 wave.

In terms of outcomes, the focus is on whether 9/11 impacted intentions to vote for the Conservative, the main UK right-wing party, or for the Labour, the incumbent party at the time of 9/11. In particular, survey respondents were first, asked whether they were close to any political party, and next, if they were not especially close to any political party, which party they intended to vote at future elections, if any. Moreover, questions on the party voted at the last general election were also asked.

The survey also asked about trust in the government, inquiring whether "the government reflected the will of people", or whether "the government put the nation before the party", or whether 'people can influence the government". Although the latter questions were not asked in all the waves, they are available for 2001 and many other waves.

The survey collected respondents' socio-demographics characteristics, such age, gender, ethnicity, education, family status, activity and employment, health status and disability, region of residence, which are included and excluded in the estimation models and the results of estimation are robust to this exercise.

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[3] Questions on "the Party which would vote for tomorrow"[3], if any, were asked in all the BHPS waves, except for the first one, wave 1992, and therefore, wave 1992 is not included in the analysis.

Given the local specificity of many Northern Ireland political parties, residents of Northern Ireland are dropped from the estimation sample. However, the results of estimation are robust to including them in the sample (see Table 2), as anyhow none were interviewed in the few days before and after 9/11.

Empirical method

The immediate effect of 9/11 on the voting intentions of the British is modelled here using a Regression Discontinuity Design (see, for instance, Lee and Lemieux, 2010, for an overview of this research method) in which the running variable is given by the calendar days elapsed before and after the terror episode, as in Clark, Doyle, and Stancanelli (2020) -to estimate the impact of the Boston marathon bombing on Americans' well-being- and in Mirza, Stancanelli and Verdier (2022) - to pin down the effect of the Bataclan Concert Hall attack on the French food expenditure using shopping scan data. This amounts to comparing individual voting intentions in the days before the attack to those in the days after the attack. The difference between the two is assumed to be caused by the terror attack. For this assumption to hold, a number of conditions need to be satisfied (Lee and Lemieux, 2010) and these are tested for.

First of all, it is a standard requirement for the validity of the RDD that the running variable is not affected by the exogenous shock under examination (McCrary, 2008). Here, this corresponds to checking that the British did not discontinue BHPS survey participation in the aftermath of the New-York attacks of 11 September 2001. The survey participation actually increased significantly in the days after 11 September 2001 (see Figure A.1 in the Appendix), but significant survey participation differences around the 11 September are found also for many other BHPS survey years (see Figure A.2 in the Appendix), which suggests that the 2001 discontinuity was not related to the New-York attack, but rather to variation in the sampling of survey respondents which was independent from 9/11 terror attack.

Next, the continuity of survey participants' characteristics around the RDD cut-off (i.e., before and after the 11 September 2001) was checked, considering gender, age and education (see the charts in Figure B, in the Appendix). Similar checks were run also for the other covariates as well as balancing tests, comparing the sample means for various subgroups before and after the terror attack (see Table A in the Appendix). Out of the twelve-variable considered, five differ significantly on average across individuals interviewed before and after 9/11, with those interviewed after 9/11 being slightly younger, more educated, more likely to be single, more likely to have children, and to be employed. These differences in interviewing rates are unlikely to be due to 9/11, but all the controls are included in the econometric model, and the results of estimation of the model are robust to including or excluding controls (see Table 1).

The RDD equation estimated is the following:

1) $\quad V_i = \xi\, T_i + \varphi\, f(d_i){*}T_i + \varrho\, f(d_i){*}(1\text{-}T_i) + u_i$

where V is the outcome variable (e.g., planning on voting Conservative at future elections), T is a dummy variable taking value one for respondents who answered the survey in the days after the 11 September and value zero for survey participants interviewed in the days before. The symbol f stands for a polynomial function of the running variable and we take it to be linear (following Gelman and Imbens, 2019), but also test for a quadratic specification (see Table 1); while i denotes the individual, and u is a random error assumed to be distributed normally, robust, and clustered at the level of running variable.[4] Under this set up, ξ is the parameter of interest that measures the impact of the 9/11 attack on outcome V. In particular, ξ measures the local average treatment effect (LATE), assuming that everyone is treated, which seems plausible, since everyone was exposed to the terror attack via the media. The day of the

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[4] The sensitivity of the results of estimation to not clustering the standard errors at the level of the running variable is tested for in Table 7.

attack is not included in the estimation sample, but respondents who answered the survey on 11 September are dropped from the sample, as individuals may not yet be aware of the New-York terror attack when interviewed, which would confound the estimates. The procedure in Calonico *et al.* (2014) is used to determine the optimal bandwidth, which gives a bandwidth of five days, and the robustness of the estimates to varying the bandwidth is tested for, as is customary (see Table 1). A matrix X of explanatory variables is also included in (and excluded from) from the model, controlling for individual characteristics: gender, age, ethnicity, education, family composition, any disability, employment status, and region of residence. Finally, I also take a before-after approach, as well as a combined RDD and Event Study panel data method, to compare the findings in this paper with models used in earlier literature.

Results of estimation

The results of estimation of a Regression Discontinuity Design (see Equation 1) of the effects of the 11 September terror attack in New-York on British voting intentions for the right-wing (Conservative Party) and the incumbent (Labour Party) are shown in Table 1. The literature predicts that terrorism generally increases votes for the right (e.g., Berrebi and Klor, 2008; Gould and Klor, 2010; Hersh, 2013; Giavazzi et al. 2023) and reduces votes for the incumbent party (e.g., Montalvo, 2011), though some also argue for a "rally around the flag" effect reinforcing support for the incumbent (e.g., Peri, Rees, and Smith, 2023). However, these studies focus on effects occurring in the country of the terror attack. Here, the massive terror attack of 11 September 2001 in New-York is found to significantly increase intentions to vote for the Conservative and to reduce intentions to vote for the Labour Party in the United Kingdom (see Table 1), for marginal voters.

In particular, these conclusions hold true either including and excluding covariates (respectively, specifications a and b of Table 1). The size of the effects corresponds to an immediate increase of over 100% in intentions to vote for the Conservative Party and a decline of 50% in intentions to vote for the Labour Party.[5] These findings are also plotted in Figures 1 and 2, respectively, which plot the RDD linear estimates without controls (as in specification a of Table 1), together with the 95% statistical al significance intervals, and the raw data points.

Robustness checks and placebos

Using a quadratic RDD specification, doubles the size of the increase in Conservative party voting intentions, while the estimated effect on prospective votes for the incumbent Labour Party loses precision, becoming statistically not significant when not including covariates (specification c of Table 1), and weakly significant (at the ten per cent level) including covariates (specification d of Table 1).

These findings are generally robust to varying the sample bandwidth to 4 days, including and excluding covariates (respectively, specifications e and f of Table 1), or using a bandwidth of 3 days (specification g of Table 1) or a bandwidth of 6 days (specification h of Table 1) or 10 days (specifications i and j, of Table 1, including and excluding covariates, respectively).

The results of estimation of the main model (specification a of Table 1) are also robust to dropping subsamples of observations located at different distances from the RDD cut-off (as

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[5] The estimation sample includes the full sample of respondents who answered the survey in the 5 days before and after the 11 September. Respondents were first asked about being close to any political party, and next, about future intentions to vote. The latter question was not asked to respondents who had answered to be close to a specific political party. However, the 2001 raw means in the 5 days before the terror attack, are equal, respectively, to 0.024 for the intentions to vote Conservative at future elections and to 0.057 for intentions to vote Labour at future elections, for the full sample of estimation, and to, 0.08 and 0.20, respectively, excluding individuals close to a specific political party from the sample.

suggested, for instance, by Barreca et al. 2011), namely, dropping respondents who answered the survey on the second day before or after the 11 September (i.e., dropping respondents who answered the survey on 7 or 13 September, see specification A in Table 2) or on the third day before and after the 11 September (see specification B in Table 2), or on the fourth day before and after the 11 September (see specification C in Table 2) or the 5th day (see specification D of Table 2). Also, including residents of Northern Ireland in the estimation sample (see specification E in Table 2) nothing changes, as actually it turns out that none was interviewed in the few days before and after 9/11. Dropping respondents residing in the region of London does not affect the conclusions either (see specification F in Table 2).

Furthermore, some placebo tests also corroborate the validity of the empirical approach, as, for instance, assuming a treatment on the 11 September 2000, and estimating the RDD model in the days before and after that day, when there was no terrorist attack, indeed does not display any significant effect on voting intentions for the Conservative or the Labour party (see specification 1 of Table 3). Similarly, there is no effect of a pretended fake treatment on the 7 September 2001 (see specification 2 of Table 3) or the 6 September 2001 (see specification 3 of Table 3). Nonetheless, as the results in this study are driven by the behaviour of "marginal" voters, those who were not close to any political party, to whom the questions on future voting intentions were aimed, other exogenous events may also shift their voting preferences, so one may not exclude significant effects on any possible different days than 9/11, as of course not only terrorism but also other major events may shift voting preferences and especially so for marginal voters.

Heterogeneity of results

Coming to heterogeneity of responses, these are allowed to vary depending on individual socio-demographics (see Table 4) and past voting behaviours (see Table 5).

Table 4 shows results of estimation of the main model (specification a in Table 1) for different subgroups of respondents, by gender, employment status, education, and age. Terrorism is likely to affect consumers' preferences for different political parties via fear feelings of future attacks magnified by media reports of a recent attack. There is evidence that individuals are especially scared by the threat of terrorism (e.g., Tsai and Venkataramani, 2015), of which they overestimate the occurrence (e.g., Viskusi, 2009). For example, Viskusi (2009) documents that Americans would be willing to spend larger amounts of money to prevent deaths from terrorism than natural disasters, relative to deaths from car accidents, while the likelihood of dying in a car accident is actually the largest. One may expect larger behavioural responses to terrorism from individuals who are more vulnerable to fear and stress from fear, such as women (e.g., Armijos Bravo and Vall Castello, 2021; Camacho, 2008; Currie and Rossin-Slater, 2013; Croson and Gneezy, 2009; Mirza, Stancanelli and Verdier, 2022; Quintana-Domeque and Rodenas Serrano. 2017; Rossin-Slater et al. 2020).

Indeed, gender appears to affect very differently the effect of 9/11 on voting preferences, with the decline in prospective Labour votes being driven by the responses of women (see specification 1 in Table 3) and the increase in prospective votes for the Conservative being much stronger for men than for women (see specification 2 in Table 4). This may be possibly explained by cultural gender norms, with men aiming at strengthening the country military spending (an objective traditionally more important for the Conservative party than for the Labour party) and women feeling more fearful and losing confidence in the incumbent Labour party. The gendered patterns of political preference responses to terrorism are also illustrated graphically in Figure 3, which plots the RDD linear estimates by gender, without controls (as

in specification a of Table 1 and all the specifications in Table 2 and 3), together with the 95%

statistical al significance intervals, and the raw data points.

Moreover, the decline in intentions to vote Labour is also very large for individuals out of work

– including the unemployed and the inactive (see specification 3 in Table 4), while this effect

is not significant for the employed (see specification 4 in Table 4), for whom there is, though,

a weak increase in intentions to vote Conservative. However, education also likely plays a role,

as it is especially the lesser educated (individuals with primary or middle education) whose

voting intentions for the Labour party decline (see specification 5 in Table 4), while this effect

is not statistically significant for the higher educated (see specification 6 in Table 4),), though

sample size issues may reduce the precision of the estimates when splitting the sample by

education level. Nonetheless, it is especially individuals aged less than 30 that see their

prospective Conservative votes increase sharply, against a decline in future Labour votes for

people aged above 50. Overall, these findings reveal a large heterogeneity of responses by

individual socio-demographic traits, which may possibly reflect a differential exposure to the

(social) media, which the literature showed to channel the effects of terrorism on behavioural

responses (e.g., Becker and Rubinstein, 2004) and political preferences (e.g., Giavazzi et al.

2023).

Finally, the outcomes for different subsamples, based on previous electoral choices at past

elections are examined in Table 5, revealing that the increase in prospective votes for the

Conservative party is statistically significant only for those who had abstained (see

specification 1 in Table 5) or voted Conservative (see specification 2 in Table 5) at the last

General Elections, but not for those who voted Labour (see specification 3 in Table 5).

Moreover, the decline in prospective votes for the Labour Party is significant only for those

who had voted for the Labour (see specification 3 in Table 5) while it is not statistically significant for individuals who voted Conservative (see specification 2 in Table 5) or did not vote (see specification 1 in Table 5). This is the more interesting as the last General Election were held in the UK only a few months before 9/11, in June 2001, when the Labour Party headed by Tony Blair won the elections.

Other political preference outcomes

Table 6 presents the results of estimation for a variety of other political preference outcomes, spanning trust in the government, as well as intentions to vote for other political parties than the Conservative or the Labour, and party to which the respondent felt close, if any.

The first block of results in Table 6 suggests that 9/11 diminished trust in the government, producing a significant decline in believing that the government reflected the will of people, though no significant effect was found for beliefs about whether people may be able to influence the government or whether the government puts the nation before the party, or for individuals support for a given political party.

As anticipated, no effect was found on the intentions to vote for any political party other than the Conservative or the incumbent Labour party, but there was a weak increase in prospected abstention from voting at future elections (see the second block of results in Table 6). Intentions to vote for the Liberal-Democrat, the Greens, the Scottish National Party were not impacted by 9/11.[6] There was no effect on uncertainty about which party to vote for either.

Finally, the last block of results in Table 6 pertains to whether 9/11 affected closeness to specific political parties. Here, it is found that 9/11 strongly reduced support for the

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[6] Intentions to vote for the Welsh National Party are not reported here as an outcome as there were not enough positive observations to produce any meaningful estimate.

Conservative and the Greens, but increased support for the Labour party, and did not affect other parties' support. These findings may suggest a rally around the flag effect.

Alternative modelling specifications

The results of estimation of different empirical strategies are presented in Table 7. First of all, not clustering the standard errors at the days elapsed since 9/11, the results of estimation lose all statistical significance (see Specification 1 of Table 7). This may not have to do with the RDD specification, but rather with the survey design, which is such that interviews are not equally distributed over time, so that the number of people interviewed from one day to the next is not a continuously smooth function of time. While this is not an issue for the validity of the RDD, as the breaks in interviews do not depend on the 9/11 event but on the survey design, which is randomly set, and fixed by the BHPS, it implies though that clustering at the level of the day may especially matter in this context.

Next, the day of 9/11 is included in the estimation sample, which is not the case for our main specification (see also Section 2), as respondents may not yet be aware of the terrorist attack on the very day it happened, which may confound the estimates of its behavioural effects, which is indeed the case here. Including respondents who answered the survey on the 11th September in the estimation sample, the estimates of interest lose precision and are not statistically significant. This is the more plausible as the first tower attack happened in NY after 8am, corresponding to about 13.00 in the UK, and it took sometime before it made head titles in the news and the media worldwide, so that by then, most BHPS interviews were already done for that day.

Whether any effect continued into the following year ,on the anniversary day of 9/11 in 2002 is tested in Specification 3 of Table 7, where the RDD model is estimated for 2002, taking a 5

days bandwidth, clustering the standard errors at the level of the running variable, and not including respondents who answered the survey on the 11 September 2002, to conclude for no significant effect of the anniversary of 9/11, a year later, on the Brits' voting intentions -and the same conclusion holds true including respondents who answered the survey on the 11 September 2002 in the estimation sample.

To compare the findings in this study to those taking an alternative and quite widespread approach in the literature to date, I present then the results of estimation of a comparable before-after specification, including covariates, taking a bandwidth of 5 days, clustering the standard error at the level of the day, and not including respondents who answered the survey on 9/11, which leads to finding no significant effect on any of the two outcomes of interest, and this holds true also including all available data point for 2001 in the estimation sample, or including day zero, or not clustering the standard errors.

Finally, I present the results of estimation of a panel data model with individual fixed effect and fully interacting the RDD with year fixed effects, to conclude for a significant negative impact on intentions to vote for the incumbent Labour party but no effect on future votes for the Conservative party (see specification 5 of Table 7). Under the same specification, focusing on mental health and anxiety as an outcome, gives a large and significant immediate increase in this outcome, in line with the conclusions of Metcalfe, Powdthavee, and Dolan (2011), who find a significant and negative effect of the 11th September 2001 attacks in New-York on the mental well-being of the British, using the BHPS and a panel data approach. However, in other specifications not controlling for individual fixed effects, I cannot reproduce their results.

Conclusions

This study investigates whether the dramatic terror events of the 11 September 2001 in New-York (9/11 in short) affected the political voting preferences of the British. The literature hypothesizes that terrorism affects voting behaviour by increasing votes for the right and reducing support for the incumbent party, though there is also evidence of a "rally around the flag" increasing support for the incumber party. Most of the earlier literature examines the electoral effects of terrorism in the country of the attack.

Using daily data drawn from the British Household Panel and a Regression Discontinuity Design, it is here concluded that 9/11 immediately increased intentions to vote Conservative at future elections, by about 100%, and reduced prospective votes for the Labour Party, by about 50%, for the marginal voters, who were not specifically close to any political party.

In contrast, for people close to some political party, I find evidence of a rally around the flag effect, with a significant increase in the probability of being close to the Labour party, and a decline in closeness to other parties, included the Conservative party.

Furthermore, respondents who voted Labour at the last general elections, which took place, only a few months before 9/11, do not show any increase in prospective votes for the Conservative in the aftermath of 9/11, but only a decline in prospective votes for the Labour. The opposite holds true for respondents who voted Conservative at the last general election, who report increased intentions to vote for the Conservative at future election, due to 9/11, but register no decline in the probability of voting Labour. Individuals who reported to have abstained from voting at the last election, also report increased intentions to vote for the Conservative in the aftermath of 9/11 but no decline in prospective Labour votes. Intentions to vote for other political parties, such as the Liberal Democrats, the Greens, or the Scottish National Party were not significantly affected by 9/11.

Therefore, the findings in this study confirm earlier work that terror increases political preferences for the right-wing parties and leads to a weaking of political support for the incumbent party, for marginal voters. In particular, these effects are driven by the preferences of men, as far as the increase in voting intentions for the right goes, and by those of women, for the decline in prospected future Labour votes. This gendered pattern is perhaps due to cultural gender norms, with men wanting to secure more military interventions and military spending in the aftermath of terrorist attacks and women feeling more doubtful about the adequacy of the incumbent to face future terror.

 Finally, the effects of 9/11 on the British voting intentions were short-lived, vanished a year after 9/11, and did not impact the later general election outcomes, as the Labour Party was re-elected in 2005. Nonetheless, as the size of the immediate effects is large, if terror was timed closer to the time of the elections, it might have affected substantially the outcomes. This certainly may deserve attention by policy makers and specific programs to reassure citizens in the aftermath of terror may be designed, which may involve for example awareness campaigns to reduce stress and fear from terrorism targeted at the most vulnerable groups in society.

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Figure 1. Intentions to vote conservative before and after 9/11
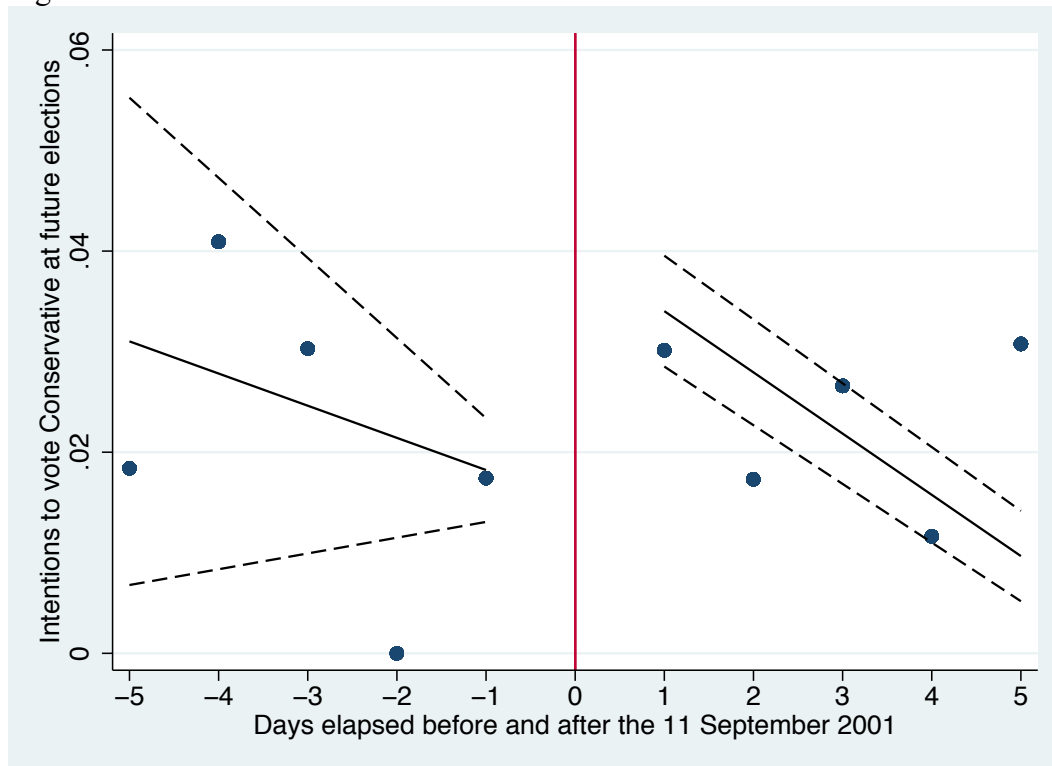
The vertical line corresponds to the 9/11 attack in New York (the 11th September 2001). The lines are linearly interpolated through linear RDD estimates (without any controls) and the dashed lines are the 95% confidence intervals around these estimates.

Figure 2. Intentions to vote Labour before and after 9/11
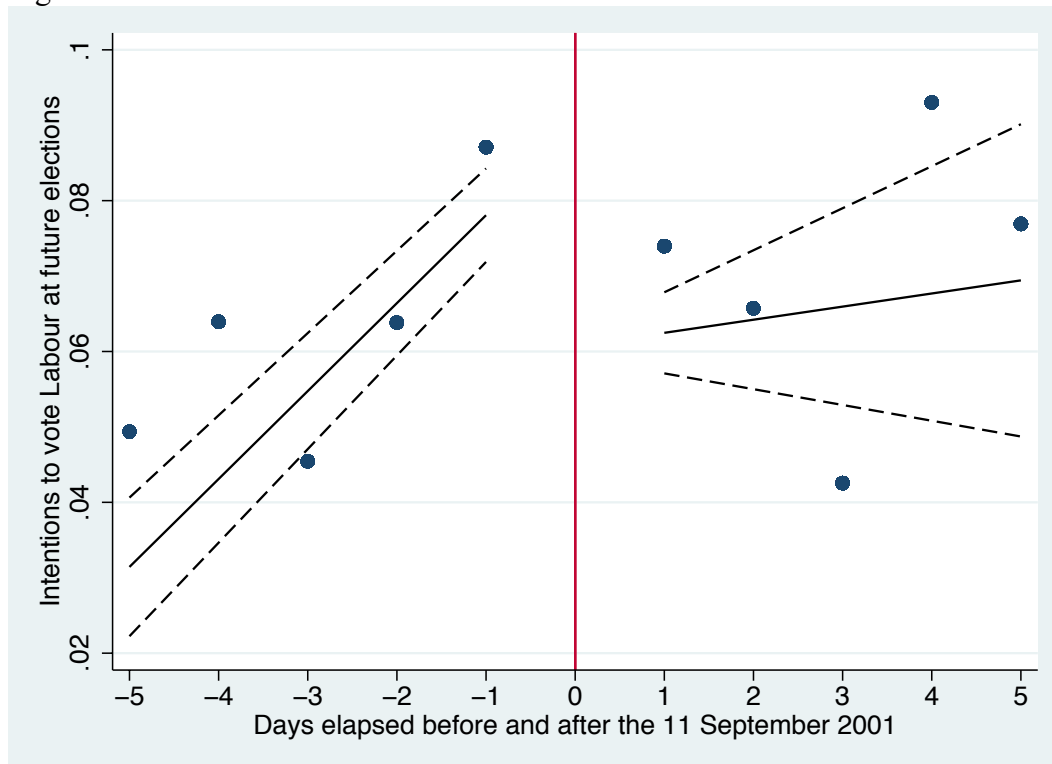
The vertical line corresponds to the 9/11 attack in New York (the 11th September 2001). The lines are linearly interpolated through linear RDD estimates (without any controls) and the dashed lines are the 95% confidence intervals around these estimates.

Table 1. Results of estimation of RDD models

		Intentions to vote for:	
		Conservative	Labour
Average (st. dev.) in the 5 days before 9/11		*0.024 (0.15)*	*0.057 (0.23)*
Specification a)	Treat 9/11	0.0251***	-0.0290***
RDD, wave 2001		(0.00634)	(0.00708)
no covariates	*Observations*	*1,476*	*1,476*
5 days bandwidth	*R-squared*	*0.002*	*0.003*
Specification b)	Treat 9/11	0.0252***	-0.0359***
RDD, wave 2001		(0.00765)	(0.00838)
with covariates	*Observations*	*1,471*	*1,471*
5 days bandwidth	*R-squared*	*0.023*	*0.037*
Specification c)	Treat 9/11	0.0536**	-0.00497
RDD, wave 2001 quadratic		(0.0173)	(0.0164)
no covariates	*Observations*	*1,476*	*1,476*
5 days bandwidth	*R-squared*	*0.003*	*0.003*
Specification d)	Treat 9/11	0.0640***	-0.0357*
RDD, wave 2001 quadratic		(0.0181)	(0.0181)
including covariates	*Observations*	*1,471*	*1,471*
5 days bandwidth	*R-squared*	*0.025*	*0.037*
Specification e)	Treat 9/11	0.0356***	-0.0262***
RDD wave 2001, linear		(0.00676)	(0.00975)
no covariates	*Observations*	*1,279*	*1,280*
4 days bandwidth	*R-squared*	*0.003*	*0.001*
Specification f)	Treat 9/11	0.0378***	-0.0383***
RDD wave 2001, linear		(0.00631)	(0.0131)
including covariates	*Observations*	*1,274*	*1,275*
4 days bandwidth	*R-squared*	*0.032*	*0.034*
Specification g)	Treat 9/11	0.0284***	-0.0302**
RDD wave 2001, linear		(0.00283)	(0.00771)
including covariates	*Observations*	*1,050*	*1,050*
3 days bandwidth	*R-squared*	*0.041*	*0.038*
Specification h)	Treat 9/11	0.00997	-0.0227***
RDD wave 2001, linear		(0.00901)	(0.00692)
including covariates	*Observations*	*1,846*	*1,846*
6 days bandwidth	*R-squared*	*0.020*	*0.031*
Specification i)	Treat 9/11	0.0195	-0.0185**
RDD wave 2001, linear		(0.0114)	(0.00757)
including covariates	*Observations*	*2,887*	*2,886*
10 days bandwidth	*R-squared*	*0.013*	*0.023*
Specification j)	Treat 9/11	0.0202	*-0.0138**
RDD wave 2001, linear		(0.0140)	*(0.00705)*
no covariates	*Observations*	*2,904*	*2903*
10 days bandwidth	*R-squared*	*0.01*	*0.03*

The outcomes are subjective intentions to vote. The models estimated are specified in Equation 1. See the text in Section 2 for the list of controls. Standard errors (in brackets) are robust and clustered at the level of the running variable. *** denotes statistical significance at the 1% level, ** at the 5% level, and * at the 10% level.

Table 2. Results of estimation of RDD models: more robustness checks

	Intentions to vote for:	
	Conservative	**Labour**
average before 9/11	*0.024*	*0.057*
A) Dropping day 2 & day -2		
Treat 9/11	0.0255***	-0.0244***
	(0.00550)	(0.00479)
Observations	*1,202*	*1,202*
R-squared	*0.002*	*0.004*
B) Dropping day 3 & day -3		
Treat 9/11	0.0255***	-0.0313***
	(0.00629)	(0.00740)
Observations	1,258	1,258
R-squared	0.002	0.004
C) Dropping day 4 & day -4		
Treat 9/11	0.0234***	-0.0246***
	(0.00466)	(0.00599)
Observations	1,251	1,250
R-squared	0.002	0.003
D) Dropping day 5 & day -5		
Treat 9/11	0.0356***	-0.0262**
	(0.00676)	(0.00975)
Observations	1,279	1,280
R-squared	0.003	0.001
E) Including Northern-Ireland		
Treat 9/11	0.0251***	-0.0290***
	(0.00634)	(0.00708)
Observations	1,476	1,476
R-squared	0.002	0.003
F) Dropping inner and outer London		
Treat 9/11	0.0264***	-0.0163**
	(0.00657)	(0.00295)
Observations	1,353	1,352
R-squared	0.002	0.002

The outcomes are subjective intentions to vote. The models estimated are specified in Equation 1. Controls are not included. Standard errors (in brackets) are robust and clustered at the level of the running variable. *** denotes statistical significance at the 1% level, ** at the 5% level, and * at the 10% level.

Table 3. Results of estimation of Placebo RDD models

	Intentions to vote for:	
	Conservative	**Labour**
1) Assuming treatment was on 11 September 2000, exactly a year earlier than 9/11		
Placebo Treat	-0.0393	0.0111
	(0.0402)	(0.0243)
Observations	*1,375*	*1,375*
R-squared	*0.003*	*0.003*
2) Assuming treatment was on 7 September 2001, a few days earlier than 9/11		
Placebo Treat	-0.00360	0.00288
	(0.0219)	(0.0230)
Observations	*1,344*	*1,343*
R-squared	*0.003*	*0.005*
3) Assuming treatment was on 6 September 2001, a few days earlier than 9/11		
Placebo Treat	0.00817	-0.00204
	(0.0496)	(0.0183)
Observations	*1,042*	*1,043*
R-squared	*0.015*	*0.004*

The outcomes are subjective intentions to vote. The models estimated are specified in Equation 1. Controls are not included. Standard errors (in brackets) are robust and clustered at the level of the running variable. *** denotes statistical significance at the 1% level, ** at the 5% level, and * at the 10% level.
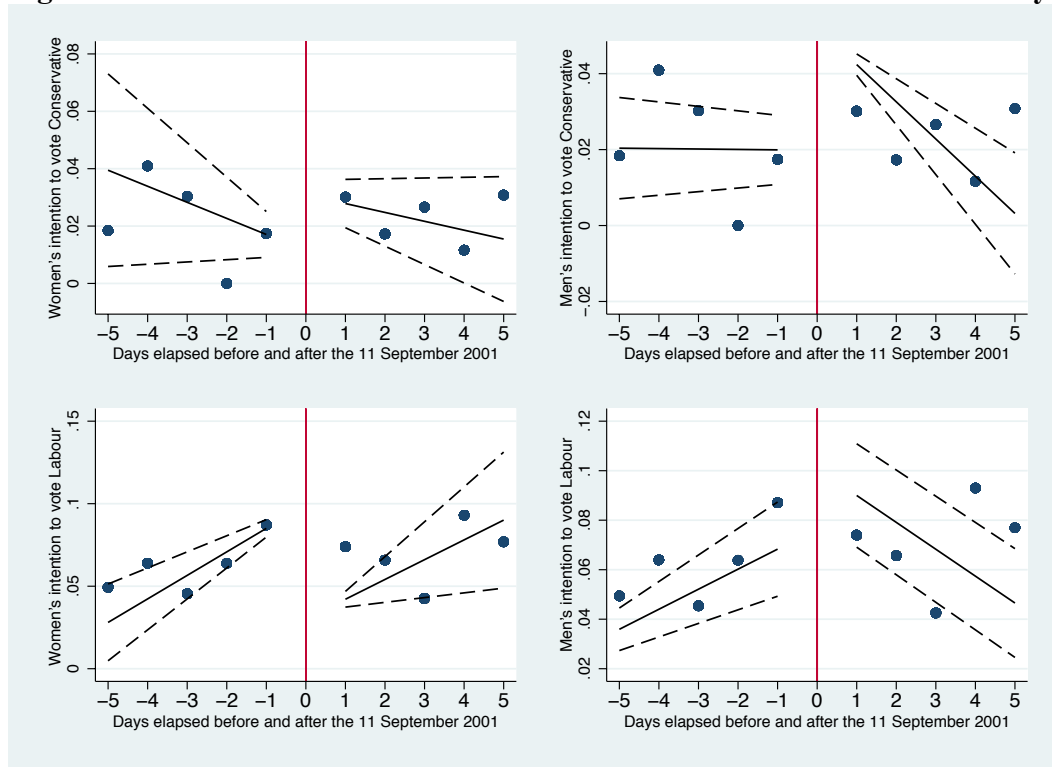
Figure 3. Intentions to vote Conservative or Labour before and after 9/11 by gender

The vertical line corresponds to the 9/11 attack in New York (the 11th September 2001). The lines are linearly interpolated through linear RDD estimates (without any controls) and the dashed lines are the 95% confidence intervals around these estimates.

Table 4. Results of Estimation: Heterogeneity of Results by Socio-Demographics

		Intentions to vote for:	
		Conservative	**Labour**
1) Women sample			
average before 9/11		*0.026*	*0.074*
	Treat 9/11	0.0195*	-0.0692***
		(0.0103)	(0.0103)
	Observations	*823*	*823*
	R-squared	*0.002*	*0.007*
2) Men sample			
average before 9/11		*0.018*	*0.060*
	Treat 9/11	0.0324***	0.0244
		(0.0710)	(0.0217)
	Observations	*653*	*653*
	R-squared	*0.004*	*0.005*
3) People out of work (unemployed or inactive)			
average before 9/11		*0.023*	*0.075*
	Treat 9/11	0.0165	-0.0425***
		(0.0100)	(0.0172)
	Observations	*781*	*781*
	R-squared	*0.001*	*0.005*
4) People in work			
average before 9/11		*0.024*	*0.058*
	Treat 9/11	0.0298*	-0.00529
		(0.0137)	(0.0144)
	Observations	*695*	*695*
	R-squared	*0.005*	*0.002*
5) Primary or Middle education			
average before 9/11		*0.029*	*0.080*
	Treat 9/11	0.0231*	-0.0455***
		(0.0118)	(0.00993)
	Observations	*934*	*934*
	R-squared	*0.002*	*0.004*
6) High-School or College/University			
average before 9/11		*0.012*	*0.049*
	Treat 9/11	0.0204*	-0.0102
		(0.00928)	(0.0336)
	Observations	*559*	*560*
	R-squared	*0.008*	*0.003*
7) Age less than 30			
average before 9/11		*0.029*	*0.11*
	Treat 9/11	0.0732***	-0.0490
		(0.0209)	(0.0368)
	Observations	*251*	*252*
	R-squared	*0.026*	*0.010*
8) Age 30-50			
average before 9/11		*0.019*	*0.10*
	Treat 9/11	0.0245*	-0.0597*
		(0.0126)	(0.0283)
	Observations	*483*	*483*
	R-squared	*0.005*	*0.003*
9) Age greater than 50			
average before 9/11		*0.023*	*0.040*
	Treat 9/11	0.0070	-0.0174**
		(0.00819)	(0.00602)
	Observations	*741*	*741*
	R-squared	*0.001*	*0.006*

The models estimated correspond to Equation 1 of Section 2, and do not include controls. The sample bandwidth is 5 days. Standard errors are robust and clustered at the level of the running variable.

Table 5. Results of Estimation: Heterogeneity of Results by Past Voting Decisions

	Intentions to vote for:	
	Conservative	**Labour**
1) Estimation sample is respondents who did not vote at the last general election		
average before 9/11	*0.013*	*0.08*
Treat 9/11	0.0357***	-0.0160
	(0.00515)	(0.0163)
Observations	*358*	*358*
R-squared	*0.005*	*0.015*
2) Estimation sample is respondents who voted Conservative at the last election		
average before 9/11	*0.065*	*0.0*
Treat 9/11	0.0513**	0.00730
	(0.0171)	(0.0194)
Observations	*306*	*305*
R-squared	*0.006*	*0.016*
3) Estimation sample is respondents who voted Labour at last general election		
average before 9/11	*0.09*	*0.11*
Treat 9/11	0.0188	-0.105***
	(0.0136)	(0.0292)
Observations	*493*	493
R-squared	*0.003*	*0.008*

The models estimated correspond to Equation 1 of Section 2, and do not include controls. The sample bandwidth is 5 days. Standard errors are robust and clustered at the level of the running variable.

Table 6. More outcomes, results of estimation of RDD models

	average before 9/11	Treat 9/11	Observations	R-squared
Government reflects the will of the people	0.48	-0.0741** (0.0192)	1,463	0.012
Ordinary people can't influence government	0.20	0.0341 (0.0199)	1,471	0.001
Government does not put nation before party	0.67	-0.0434 (0.0345)	1,455	0.012
Supports a particular political party	0.70	-0.0307 (0.0256)	1,475	0.007
Intentions to vote Liberal in the future	0.047	0.000381 (0.0110)	1,475	0.009
Intentions to vote Green in the future	0.0019	-0.000661 (0.00284)	1,475	0.002
Intentions to vote Scottish National Party in the future	0.0007	-0.00800 (0.00453)	1,475	0.009
Intentions: does not know what to vote in the future	0.073	0.0261 (0.0245)	1,475	0.002
Intentions not to vote in the future	0.078	0.0256* (0.0226)	1, 475	0.002
Close to Conservative Party	0.26	-0.0600** (0.0209)	1,476	0.009
Close to Labour Party	0.39	0.0495** (0.0190)	1,476	0.009
Close to Liberal Party	0.13	-0.00114 (0.0225)	1,476	0.000
Close to Green Party	0.09	-0.0169** (0.00593)	1,475	0.008
Close to Scottish National Party	0.02	-0.0182 (0.0147)	1,475	0.012
Close to Welsh National Party	0.002	0.00136 (0.00232)	1,475	0.003

The models estimated correspond to Equation 1 of Section 2, and do not include controls. The sample bandwidth is 5 days. Standard errors are robust and clustered at the running variable.

Table 7. Alternative specifications

	Intentions to vote for:	
	Conservative	**Labour**
1) RDD as main model without covariates, not clustering standard errors at level of the running variable		
Treat 9/11	0.0251	-0.0290
	(0.0166))	(0.0281)
Observations	*1,476*	*1,476*
R-squared	*0.002*	*0.003*
2) RDD as main model without covariates, including observations who answered the survey on 9/11 day		
Treat 9/11	0.0124	-0.0114
	(0.00772)	(0.0104)
Observations	*1,734*	*1,734*
R-squared	*0.001*	*0.002*
3) RDD as main model without covariates, estimated using data for September 2002, 9/11 anniversary		
9/11 2002	*-0.0297*	*0.0176*
	(0.0194)	*(0.0105)*
Observations	*1,344*	*1,344*
R-squared	*0.003*	*0.001*
4) Before-after approach with a dummy post 9/11, including covariates, bandwidth 5 days, clustering standard errors at level of the day, not including respondents who answered survey on 9/11		
Treat post 9/11	0.00358	0.00512
	(0.00789)	(0.0106)
Observations	*1,471*	*1,471*
R-squared	*0.022*	*0.034*
5) Taking a panel data approach with RDD terms fully interacted with year fixed effects, using survey years 1993 to 2001, bandwidth 5 days, clustering standard errors at level of the day, not including respondents who answered survey on 9/11, and including individual fixed effects		
9/11 2001	-0.0114	-0.0566**
	(0.0144)	(0.0179)
Observations	*7,825*	*7,824*
R-squared	*0.447*	*0.481*

The outcomes are subjective intentions to vote. *** denotes statistical significance at the 1% level, ** at the 5% level, and * at the 10% level. Different before-after specifications than 4) were also estimated, for example with a panel approach and individual fixed effects, or not setting any bandwidth for the sample, or not clustering standard errors, or including day zero, but none produced a significant effect for the outcomes. The outcome mental unwellness or anxiety, was estimated for model specification 5, which gave a statistically strongly significant and positive estimate, equal to 0.0546 with a standard error of 0.0218 (knowing that the mean in the 5 days before 9/11 2001 is equal to 0.10, with a standard deviation of 0.30), but this effect is not statistically significant in other models not accounting for individual fixed effects.

Online Appendix

Table A. Balancing tests of explanatory variables before and after 9/11, 2001 survey.

|	before	after	difference	st. dev.	t	obs
Woman	0.573	0.546	0.027	0.021	1.25	2,075
Age	54.005	49.165	4.839	0.871	5.556*	2,075
primary educ.	0.361	0.309	0.052	0.02	2.539*	2,075
middle school	0.285	0.297	-0.011	0.019	-0.569	2,075
high school	0.25	0.282	-0.032	0.019	-1.681	2,075
university	0.079	0.067	0.011	0.011	1.03	2,075
partnered	0.604	0.663	-0.059	0.021	-2.802*	2,075
any children	0.231	0.304	-0.073	0.0193	-3.777*	2,075
region	8.861	8.66	0.2	0.246	0.815	2,075
healthy	0.867	0.876	-0.008	0.0146	-0.59	2,075
disabled	0.099	0.107	-0.0085	0.013	-0.63	2,075
employed	0.401	0.488	-0.087	0.021	-4.009*	2,075

Sample descriptive statistics for individuals interviewed the five days before or after the 11 September 2001. A (*) denotes statistical significance at 5% level or higher. Out of the twelve-variable considered, five differ significantly on average across individuals interviewed before and after 9/11, with those interviewed after 9/11 being slightly younger, more educated, more likely to be single, more likely to have children, and to be employed. Obviously, it is difficult to imagine that these differences are due to 9/11, but they are likely to be driven by the sample pattern of interview design. The results of estimation of the model are robust to including and excluding controls.

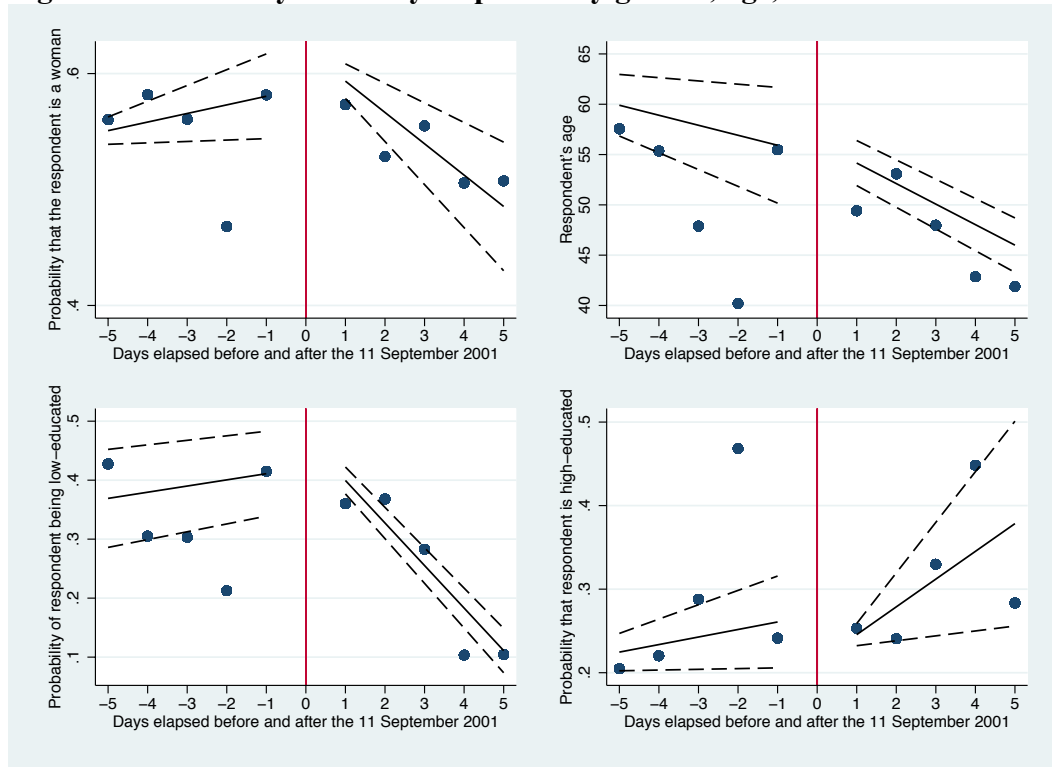**Figure A1. Survey response rate around the days of 9/11 attack**
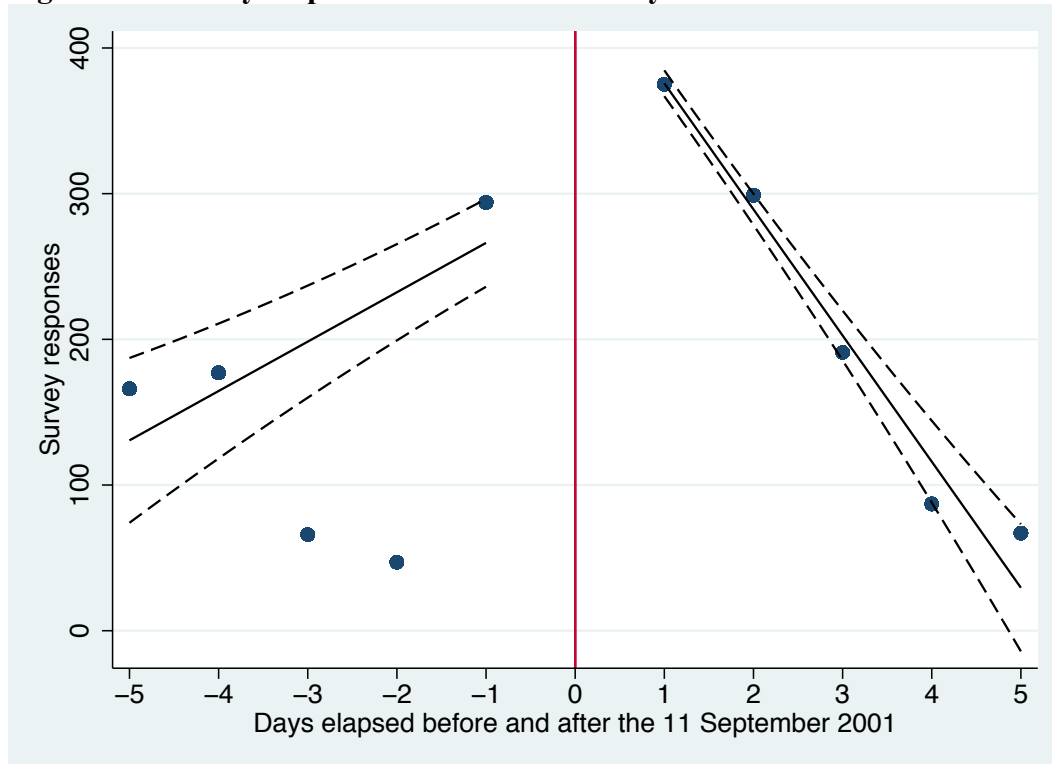
The vertical line corresponds to the 9/11 attack in New York (the 11th September 2001). The lines are interpolated through RDD linear regression estimates without any controls. There is a statistically significant discontinuity at the cut-off, though respondents were randomly allocated to interview days, perhaps due to the 11 September being a Tuesday in 2001.

Figure A2. Survey response rate around the days of 9/11 in different years
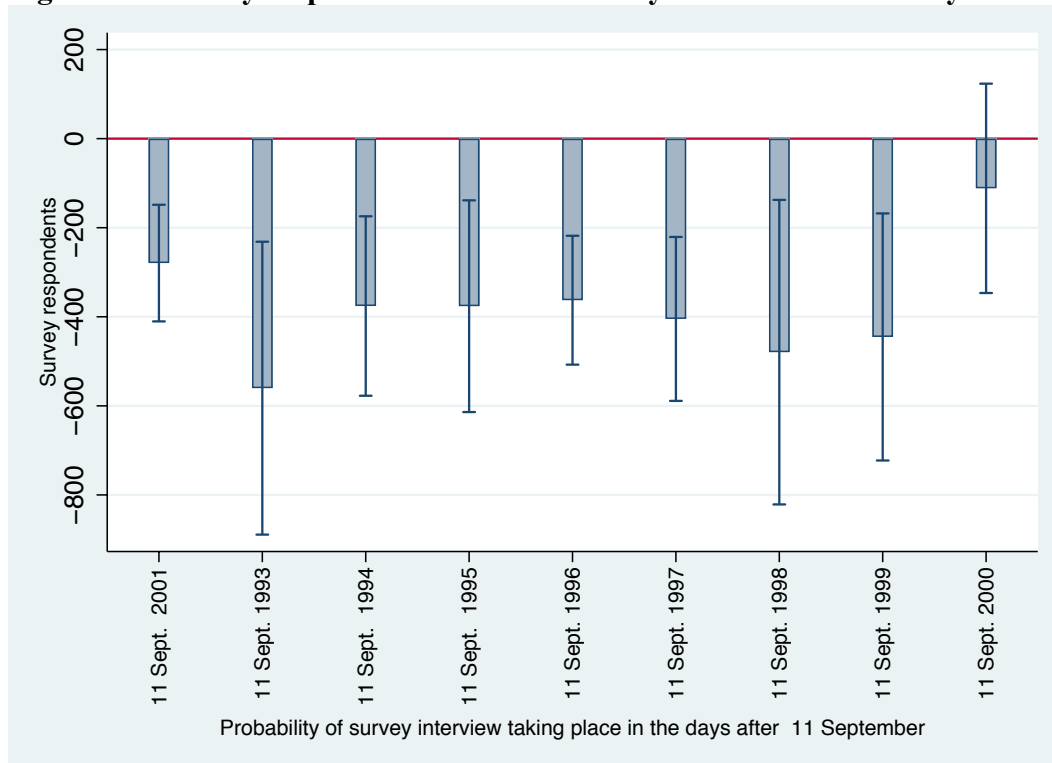
The graph plots the survey participation (i.e., respondents interviewed per day) from linear RDD model with individual fixed effects; any estimate that crosses zero is statistically non-significant at the 5% level. There is a statistically significant discontinuity at the cut-off, perhaps due to the 11 September being a Tuesday in 2001, a Saturday in 1993, a Friday in 1998, a Monday in 2000, etc., as respondents were randomly allocated to interview day.

Figure B. Continuity of survey responses by gender, age, and education

The vertical line is drawn on the day corresponding to the 9/11 attack in New York (the 11th September 2001).
The lines are linearly interpolated through linear RDD estimates (without any controls) and the dashed lines are
the 95% confidence intervals around these estimates.