Political Activists as Free-Riders:
Evidence from a Natural Field Experiment[*]

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Abstract

How does a citizen's decision to participate in political activism depend on the participation of others? We conduct a nationwide natural field experiment in collaboration with a major European party during a recent national election. In a party survey, we randomly provide canvassers with true information about the canvassing intentions of their peers. When learning that more peers participate in canvassing than previously believed, canvassers significantly reduce both their canvassing intentions and behavior. An additional survey among party supporters underscores the importance of free-riding motives and reveals that there is strong heterogeneity in motives underlying supporters' behavioral responses.

Keywords: Political activism, natural field experiment, strategic behavior, beliefs, motives

JEL Classification: D8, P16

1 Introduction

Democracies rely on the efforts of political activists who participate in political campaigns. In the pursuit of improving collective outcomes, however, the individual action of an activist is unlikely to accomplish change. Instead, the impact of political activists hinges on the joint effort of the group, creating a situation of strategic interdependence where the effort of an activist might depend on the effort of her peers. Such strategic interdependence of individuals' actions is at the core of the collective action problem of political activism (Hardin, 2015; Olson, 1965). This paper presents a natural field experiment to investigate how the effort of a political activist depends on her belief about the participation of others.

In canonical models, political activism is viewed as a public goods game with incentives to free-ride (Olson, 1965): activists are motivated instrumentally, trading off private benefits against private costs of contributing. This class of models postulates that political activists reduce their effort when fellow activists contribute more to the public good. Or, put differently, the effort choices of activists are strategic substitutes.

In contrast, a large literature argues that participation in collective action is not mainly driven by instrumental concerns but instead by social motives leading to conditional cooperation (Falk and Fischbacher, 2006; Ostrom, 2000; Uhlaner, 1989). If such motives outweigh instrumental considerations, activists augment their effort in response to an increase in effort by their peers. Hence, activists' effort choices will exhibit strategic complementarity. Understanding the strategic nature of political activism is crucial to the refinement of the theoretical assumptions of models of collective action.

This paper presents the results of a natural field experiment to causally examine the strategic nature of political activism. In cooperation with a major political party in a Western European country, we implemented a pre-registered field experiment in the context of a large door-to-door canvassing campaign in the run-up to a nationwide general election. We examine whether and how party supporters' canvassing efforts depend on their beliefs about the canvassing efforts of their fellow party supporters.

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Identifying the causal link between beliefs and behavior from correlational data faces the common challenges of causal inference. First, canvassers' effort choices might directly affect their beliefs, thereby giving rise to reverse causality. Second, active canvassers might hold systematically different beliefs relative to non-canvassers, potentially inducing omitted variable bias. In correlational data, these confounds could spuriously suggest either strategic substitutability or complementarity.

Our experimental strategy circumvents these confounds by exogenously manipulating beliefs in a natural field setting. Our design proceeds as follows. We use an unobtrusive survey distributed by the party via email eight weeks before the election with the stated purpose of gathering information to organize the campaign. In this survey, we first measure party supporters' ex-ante beliefs about the door-to-door canvassing intentions of their fellow party supporters. We then exogenously shift these beliefs in a treatment group by providing true information collected through a different survey conducted one month prior to the experiment. Supporters in a control group receive no such information. Subsequently, we elicit respondents' post-treatment beliefs about the actual canvassing turnout of their fellow party supporters. Finally, we elicit respondents' intentions to go canvassing. After the survey, we collect unique, unobtrusive real-time data on canvassing behavior through a novel canvassing smartphone application in which door-to-door canvassers register the addresses they visit. To preserve the natural field setting we ensured that participants are at no point aware of their participation in an experiment.

We present five key results. First, on average, political activists' strongly underestimate their peers' intended engagement in the campaign.[1] Second, on average, political activists' intentions follow the predictions of a public goods game with free-riding incentives: party supporters who learn that their peers plan to exert more effort than they previously expected significantly lower their intentions to participate in the party's campaign. The response is concentrated along the intensive margin. Supporters plan to

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[1]Our subsequent results focus on underestimators that make up 82% of our sample as we have limited statistical power to draw firm conclusions for the relatively small sample of overestimators.

canvass 1.10 days ($s.e. = 0.36$) less relative to a control mean of 4.03 days.[2]

Third, we demonstrate that the reduction in canvassing intentions translates into a reduction in actual canvassing behavior. Using real-time canvassing data collected through the party's smartphone application, we estimate a reduction of 14.39 ($s.e. = 7.83$) canvassed doors, which is equivalent to a reduction of 38% relative to the control group mean of 38.34. Furthermore, we find a statistically significant reduction of 0.093 ($s.e. = 0.047$) standard deviations in a pre-specified index combining canvassing intentions and behavior. Our results thus imply that political activists' behavior exhibits strategic substitutability *on average*.

Fourth, the effects are driven by party supporters with weaker social ties to the party (as proxied by prior canvassing experience, whether the respondent is a party member, and party membership duration). On the contrary, party supporters with strong ties do not exhibit a systematic pattern of strategic substitutability. Similarly, we only find evidence for strategic substitutability effects in localities with relatively weak social cohesion within the local party chapter. These results highlight that social connections can counterbalance free-rider incentives and act as a force for strategic complementarity.

Fifth, we conduct an additional survey among party supporters to dissect the mechanisms underlying strategic interactions in political action. We ask party supporters how they would adjust their campaign efforts in response to learning about higher effort of their peers. We then ask them to describe the reasoning underlying their decision with both an open-ended response as well as structured response items. Our data corroborates the importance of free-riding motives as a very prevalent motive, and allows us to distinguish between different social motives: it reveals that concerns related to social identity and enjoyment value are the most prevalent motives shown by activists who exhibit complementarity in their effort choices.

Our study contributes to a growing body of literature examining whether and how

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[2]We find imprecisely measured decreases in canvassing effort in response to the information treatment for overestimators, consistent with strategic complementarity. This potential discrepancy in strategic behavior between over- and underestimators could be due to the following two explanations. First, pre-treatment beliefs could be correlated with respondents' underlying strategic types. Second, beliefs could be measured with error leading to misclassification of underestimators as overestimators (Haaland et al., 2021).

social interactions and beliefs affect political behavior such as protest participation (Bursztyn et al., 2021; Cantoni et al., 2017; Enikolopov et al., 2020; González, 2020; Manacorda and Tesei, 2020; McClendon, 2014; Passarelli and Tabellini, 2017), voting (Gerber et al., 2020, 2008, 2011; Green et al., 2013; Kendall et al., 2014), and campaign behavior more generally (Neuenschwander and Foos, 2021). The three studies most related to this work are Cantoni et al. (2019) who use a similar experimental design to examine university students' protest participation in Hong Kong. Hager et al. (2022) study how strategic interactions of protesters in Germany vary across the political spectrum. Finally, Perez-Truglia and Cruces (2017) study the impact of information about campaign donations of neighbors on donation behavior in the US. We make several contributions to this literature.

First, our experimental data is distinct in two main respects: we draw on a unique combination of survey and behavioral outcome data collected through a smartphone application. This feature of the data allows us to study treatment effects on both self-stated intentions and actual behavior. Moreover, we provide evidence from a natural field experiment on behalf of the party, in which participants are not aware of their participation in an experiment.

Second, we study an electoral campaign in a liberal democracy where it is ex-ante unclear whether social motives are sufficiently strong to outweigh free-riding incentives. On the one hand, a typical public good logic applies to our setting. What matters for electoral success is the total number of convinced voters. As a result, individual effort can be easily substituted by the effort of others. On the other hand, social motives could play an important role in our context as party supporters often form strong social ties. Indeed, campaign organizers within the party assumed strategic complementarity of effort choices. As a result, they tried to motivate their supporters by highlighting high levels of canvassing participation through e-mail notifications like "Everybody goes from door to door! Participate as well!". Our evidence indicates that this perception of complementarity might be wrong which has important implications for parties' mobilization strategies.

Third, in contrast to samples used in the previous literature, we leverage a heterogeneous sample of party supporters of all ages and with diverse backgrounds. The heterogeneity in our sample allows us to shed light on underlying drivers and mechanisms of our treatment effects. In particular, the heterogeneity in our data provides important evidence that strategic substitutability is most pronounced for party supporters with weak social ties to the party. These patterns are also supported by individual-level data on motives underlying the effort adjustments in response to increases in peer effort.

Our findings also inform the theoretical literature investigating political behavior in democratic systems (Coate and Conlin, 2004; Downs, 1957; Feddersen and Sandroni, 2006; Palfrey and Rosenthal, 1984; Shadmehr, 2021; Shadmehr and Bernhardt, 2011). The systematic heterogeneity in the responsiveness to our treatment highlights that theoretical models of political behavior should account for heterogeneity in agents' motivation.

2   Experimental Design

2.1   Design and Sample

Setting: Our field experiment took place in the run-up to a recent general election in a Western European country. The experiment was implemented in collaboration with a major political party to study party supporters' motivation and actual participation in the party's door-to-door canvassing campaign. The analysis was pre-registered at the AEA RCT registry before the start of the data collection. The experimental manipulation was administered in an online pre-campaign survey sent out on behalf of the party roughly eight weeks before the election. After the intervention, we tracked party supporters' real canvassing efforts throughout the campaign until the election.

The electoral system in our context is mostly proportional with no absolute majority realistically achievable for any party. Hence, each additional vote gained can be thought of as increasing the party's political power in a more or less continuous way.

The party with which we cooperated strongly promoted canvassing as a campaign-

ing tool through internal communication channels. All canvassing volunteers were instructed to record every canvassed door in a novel smartphone application as a way to help the party organize its current and future campaigns. The data from the application provides unique behavioral outcomes on actual, real-time canvassing efforts.

While the overall level of canvassing activity was higher than in previous elections, there was still substantial potential to increase activity levels. Nationally, volunteers of the party reached out to 1.65% of all households. At the constituency level, the fraction of households canvassed ranged between 0 and 25% with a median of 0.5% and a 90th percentile of 4.5%. These low absolute levels of canvassing in most places imply that there was scope for volunteers to increase their level of canvassing activity even though that could imply going to less promising areas and thus lower returns to canvassing activity.

Sampling and Procedures: Our original sample comprises all party supporters who had signed up to the party's campaign email list about eight weeks before the election. At the beginning of the electoral campaign, we contacted these supporters with an email invitation on behalf of the party. The email asked supporters to participate in the survey to help organize the campaign. The invitation email was designed by the party to preserve the natural environment and ensure that participants would not be aware of being part of an experiment. A reminder email was sent ten days later. In total 1,411 party supporters responded to the online survey for this experiment.[3] Random assignment and experimental manipulation took place within the online survey.

Measuring and Manipulating Beliefs: We designed the experiment to provide causal evidence on how party supporters' motivation and actual canvassing effort depend on their beliefs about the efforts of their peers.

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[3]We simultaneously conducted a second experiment with a separate subsample of activists which is pre-registered in the same pre-analysis plan used for this paper. Supporters responding to the invite were randomly allocated between the experiment described in this paper and the experiment described in Hager et al. (2021) which studies how beliefs about the effort choices of members of the main competing political party affect activists' effort choices. Each individual only took part in one experiment.

The experimental design is illustrated in Figure A1. In a first step, we elicit participants' pre-treatment beliefs about the share of party members who *plan* to go canvassing. Then, half of all respondents are randomly assigned to receive information about the canvassing plans of fellow party members (treatment group), whereas the remaining half receives no information (control group). More specifically, participants in the treatment group are truthfully informed that 37% of party members in a previous survey had stated an intention to go canvassing.[4] After the experimental manipulation, all respondents are asked to estimate the share of members who will *actually* go canvassing. We elicit post-treatment beliefs about *actual* participation rather than *intended* participation to mitigate concerns about numerical anchoring and demand effects. The elicitation of participants' post-treatment beliefs allows us to check whether the information provision successfully shifts beliefs.

Outcome Measures: We study the canvassing effort of party supporters in the campaign by combining both survey and behavioral outcome data. We use two pre-specified self-reported measures of canvassing intentions that are collected after the treatment administration: First, we measure whether a respondent intends to do any canvassing in the campaign. This allows us to shed light on movement along the extensive margin. Second, we elicit respondents' intended number of days of participation, enabling us to analyze responsiveness to the treatment along the intensive margin.[5]

We then assess whether changes in canvassing intentions translate into changes in canvassing behavior. We draw on unique behavioral outcome data from the smartphone application distributed by the party. The party continuously emphasized the importance of using the application to volunteers citing the need for data to plan current and future campaign activities. The application allows us to assess three pre-specified behavioral outcomes: first, an indicator for whether a supporter knocks on any doors; second, the

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[4]We collected this data in a separate survey with another sample of party members contacted through official channels three weeks before the experiment. In this survey, we first elicited respondents' party affiliation and then asked the following question: *Do you plan to engage in canvassing on behalf of your party during this electoral campaign?* Through this survey, we did not get sufficient respondents to provide reliable estimates of constituency-level canvassing intentions. Hence, we provided only information about the national level.

[5]The intended number of days for respondents who do not plan to canvass is coded as zero days.

number of doors a supporter knocks on; and third, the number of days a supporter goes canvassing.[6]

2.2 Descriptives and Balance

Table A1 describes the sample characteristics elicited in the survey. 24% of supporters are women, and the average age is 41 years. The gender composition of our sample is comparable to the population of party members but supporters are significantly younger than the average party member.83% of supporters are party members with an average membership duration of 12 years. Besides basic socio-demographic information, the survey also inquires about supporters' prior canvassing experience. 38% of participants had helped in a past campaign.

Regarding our outcome variables, 49% of supporters intend to participate in door-to-door canvassing with an average of 3.85 intended days. Turning to behavioral outcomes from the app, we observe much lower actual canvassing activity relative to stated canvassing intentions: 12% of party supporters in our sample actually participate in the campaign. The respondents canvass on average 0.59 days and knock on 29 doors. The unique link between the survey and the behavioral outcome data from the natural field setting also allows us to study how intentions and actual canvassing behavior are related. We find a sizable positive correlation between intended days and the actual number of days of canvassing (ρ =0.28 , visualized in Figure A2). Similarly, we find that people's intention to do any canvassing is significantly related to whether they actually canvass (ρ =0.33). This makes our sample disproportionately engaged. The sample can thus best be characterized as 'young and highly motivated supporters.' The young age in our sample also implies that supporters did not face technological barriers to using the smartphone application with which the party organized its canvassing and which we used to obtain unobtrusive behavioral outcomes. Our study includes 6.5% of all party supporters who canvassed for the party during the entire campaign. Furthermore, our survey respondents were responsible for 11% of all knocked doors during the campaign.

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[6]Individuals who do not appear in the application data are coded as not having canvassed.

Finally, we do not observe significant differences between the treatment and control group for any of the covariates (Table A3). We regress the treatment indicator on all covariates to test for joint significance. The p-value of this joint F-test is 0.55, indicating that the randomization produces two highly comparable groups.

3   Belief Updating

Before turning to the analysis of treatment effects on canvassing outcomes, we test for the successful manipulation of beliefs about peer canvassing effort.

Pre-treatment Beliefs: Panel A of Figure 1 plots the distribution of pre-treatment beliefs about the percentage of party members who intend to go canvassing. The vertical line corresponds to the treatment information which indicates that 37% of party members intend to go canvassing. We observe that the distribution is highly right-skewed with a median belief of 10% of party members planning to go canvassing. Relative to the treatment information, 82% of participants underestimate their peers' canvassing intentions.

Belief Updating: The key qualification of our experimental design is that participants update their post-treatment beliefs about actual participation after receiving the treatment information. In particular, we expect underestimators to increase their post-treatment belief about the fraction of fellow party members who actually go canvassing. Vice versa, we expect overestimators to decrease their post-treatment beliefs.

Panel B of Figure 1 shows the non-parametric relationship between pre-treatment beliefs about intentions and post-treatment beliefs about actual participation by treatment status. We see that underestimators in the treatment group have higher post-treatment beliefs than control group underestimators (by, on average, 55% of the control group mean or 5 percentage points; $p < 0.01$, see column 1 of Panel A1 of Table 1). The reverse is true for overestimators. Treated overestimators update more negatively compared to overestimators in the control group (they see a decrease of 38% of the control group mean

or 17 percentage points; $p < 0.01$, see column 1 of Panel B1 of Table 1). We conclude that the information provision successfully shifted participants' beliefs about the canvassing effort of their peers.

4 Results

4.1 Empirical Specification

Do these exogenous changes in beliefs affect party supporters' motivation and actual behavior in the campaign? In Appendix Section A, we outline a theoretical model of activists' strategic behavior. In particular, our model predicts that classical free-riding behavior should take place if instrumental motives, on average, dominate the effect of social motives. Whether this prediction holds is ultimately an empirical question that we tackle in this section.

In our analysis we separately analyze treatment effects for under- and overestimators. We conduct this separate analysis for several reasons: First, the information shock for underestimators and overestimators go in opposite directions. Second, prior beliefs might be correlated with types, which could yield different behavioral responses among overestimators and underestimators. Given, however, that the large majority of our sample are underestimators most of the result section will focus on underestimators.[7]

We estimate the following specification using ordinary least squares:

$$Y_i = \beta_0 + \beta_1 T_i + \zeta^T \mathbf{X_i} + \varepsilon_i \tag{1}$$

where Y_i is the outcome variable of interest. T_i is a dummy variable taking a value of one for people who receive the treatment information and zero otherwise.[8] $\mathbf{X_i}$ is a set of pre-

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[7]Our results are also robust to a specification pooling underestimators and overestimators (see Appendix Table A4).

[8]We also report the results of a pooled regression with the treatment variable taking the value 1 for treated underestimators, -1 for treated overestimators and 0 for respondents in the control group in Table A7. The results of this specification are qualitatively similar to the results for the pooled specification with the binary treatment indicator.

specified control variables: party membership, number of years of party membership, age, sex, whether a participant has already participated in a canvassing training, whether a participant has already downloaded the online application, whether a participant has participated in canvassing before this federal election, and whether a participant has participated in canvassing for this federal election.[9] To account for multiple comparisons, we also examine the effects on a pre-specified index as a joint measure of all five self-reported survey measures and behavioral outcomes.[10] The key coefficient is β_1 which captures the strategic interaction between one's own and peer effort.

4.2 Main Results

Panel A1 of Table 1 presents the main results for underestimators. Participants who are informed that fellow party members devote more effort than previously thought, on average, reduce their willingness to participate in the party's campaign. Participants intend to canvass 1.10 days (*s.e.* = 0.36) less after receiving the treatment information, which is equivalent to a reduction of 24% relative to the control group mean of 4 days. There is, however, no significant effect on the dummy for the intention to engage in any canvassing, with a point estimate close to zero (0.002, *s.e.* = 0.026).

Does lower *intended* canvassing translate into lower *actual* canvassing? Considering canvassing effort, we again find a significant reduction of 14.39 canvassed doors (*s.e.* = 7.84). This is equivalent to a 38% reduction relative to the control group mean of 38.35 doors. Similarly, the point estimate on the impact on actual days canvassed indicates a reduction of 0.16 canvassed days (*s.e.* = 0.16), corresponding to a sizable, yet not statistically significant 22% reduction relative to the control group mean.[11] In line with the results on intentions, we again do not find a significant effect on whether en-

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[9]Excluding control variables leads to similar results (Online Appendix Tables A16 to A21).

[10]The index takes into account (i) an indicator for whether a participant plans to go canvassing, (ii) the number of days that a participant plans to go canvassing, (iii) an indicator for whether a participant knocks on any door, (iv) the number of doors that a participant knocks on, and (v) the number of days a participant goes canvassing.

[11]To show that our treatment effects are not driven by outliers, Figure A5 presents the cumulative distribution for the treatment and control group.

gaged in any canvassing. Finally, we investigate the impact on the pre-specified index of all five outcomes capturing intentions and actual behavior jointly. We observe a decrease of 0.093 ($s.e. = 0.047$) standard deviations in this summary measure of canvassing intentions and behavior.

The treatment effects on canvassing behavior are strongest in week seven and eight just before the election when overall activity was highest. Figure A3 displays the development of treatment effects over time and confirms this pattern. To explore why this might be the case, we study whether the information provided by the treatment could be reinforced over time by an individual's observation on the ground. Panel A of Table A13 shows that the average effects are indeed stronger for activists in localities with high overall activity levels.[12] This result suggests that learning through observation might indeed reinforce the provided information and lead to the observed dynamics.

Panel B1 of Table 1 presents the main results for overestimators, which given the low sample size are muted and statistically insignificant and, if anything, qualitatively consistent with strategic complementarity. If taken at face value, this is consistent with two potential explanations: First, as a result of measurement error in beliefs some underestimators may be erroneously classified as overestimators. This could plausibly be the case for respondents with prior beliefs of 50%, which has been shown to be an expression of uncertainty (Enke and Graeber, 2019). Second, the heterogeneity could be a reflection of type heterogeneity: underestimators may be more likely to be free-riders compared to overestimators. This is plausible if the non-exogenous prior beliefs are correlated or driven by other characteristics, for instance motivated beliefs. Overall, however, as Appendix Table A4 demonstrates substitutability holds on average across the pooled sample of under- and overestimators.

Robustness: The treatment effects are unlikely to be driven by differential selection into downloading and using the smartphone application. We do not find a significant

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[12]The sample size for this specification is relatively small (N=426), as we only observe location for individuals who downloaded the app. Hence, we focus on interpreting pooled treatment effects. Results by pretreatment beliefs are in Panels B and C of Table A13 and display a qualitatively similar pattern for over and underestimators.

effect on application download (Online Appendix Table A5). Furthermore, the observable characteristics of supporters who downloaded the application are similar to those who indicated any canvassing intention (Online Appendix Table A6). Hence, it is unlikely that technological barriers in using the smartphone application led to a substantial mismeasurement of canvassed doors.

It is also unlikely that differential reporting among app users drives the results. First, if learning that more people participate induces social desirability bias we would expect an increase and not a decrease in reported doors. Second, it could be that activists with a low number of canvassed doors are now reluctant to record them in the app. This would imply that treatment effects are concentrated among the lower end of the doors distribution. However, in panel (f) of Figure A5 we observe that treatment effects for underestimators are concentrated among roughly the top 60% of canvassers.

4.3   Heterogeneity in Treatment Effects

Who drives these treatment effects? The theoretical model in Appendix Section A makes predictions for heterogeneity across individuals. Specifically, the model posits that individuals who put a relatively lower weight on social as compared to instrumental motives will exhibit a stronger pattern of strategic substitutability. Vice versa, for individuals with stronger social motives, the pattern of strategic substitutability should be weaker. We test this prediction empirically.

To test for heterogeneity by social motives, we use a variety of proxies for the strength of the social connection to the party. In the pre-analysis plan we had pre-specified analyzing heterogeneity by (i) any prior canvassing experience for the same party, (ii) party membership, and (iii) their years of party membership. To keep the analysis as parsimonious as possible, we first employ a simple principal component analysis (PCA) of these three variables to study heterogeneous treatment effects using the standardized first principle component of the three variables. Intuitively, we use the first principle component as an index capturing the strength of social ties to the party.

Before turning to the heterogeneity analysis, we validate this index as a well-suited

measure capturing party supporters' social connectedness and social motives. Table A8 shows the correlation between the number of party members a supporter knows personally and the index using data from a post-election survey administered to a different sample of the same population of supporters six weeks after the election. We find that an increase in the number of known party members by one standard deviation (31 members) is associated with 0.18 ($p < 0.001$) higher value on the index. This supports the first principle component as a measure of party supporters' social connectedness and social motives in the following analysis.

In line with our hypothesis, underestimators with weaker connections to the party exhibit a larger negative treatment effect relative to supporters with stronger connections (Panel A2 of Table 1).[13] The treatment effect heterogeneity is of statistical and economic significance for both intentions and behavior: treated supporters with one-standard deviation stronger connections to the party exhibit a reduction of the treatment effect on intended days of 0.8 ($s.e. = 0.36$). The attenuation of the treatment effect on canvassing intentions translates into an attenuated treatment effect on canvassing behavior. Treated supporters with one standard deviation weaker connections to the party knock on 16.3 ($s.e. = 6.9$) fewer doors. The complementing treatment effect heterogeneity for behavioral outcomes over time is illustrated by Figure A8. Finally, in terms of the summary index measuring canvassing intentions and behavior jointly, we find that treated supporters with one-standard deviation stronger connections to the party display a 0.089 ($s.e. = 0.044$) standard deviation smaller decrease in canvassing.[14]

To further illuminate the underlying mechanisms, we also study heterogeneous treatment effects by the perceived social cohesion of local party chapters. For this purpose, we use the question "How strong is the (social) cohesion in your local party chapter?" with answers on a Likert scale from 0 (very weak) to 6 (very strong) posed in the post-election

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[13]We observe a qualitatively similar pattern for overestimators, though the results are less precisely estimated (Panel B2 of Table 1).

[14]We also examine heterogeneous responses for each of the variables used in the PCA separately which further corroborates that supporters with weaker social ties to the party drive our treatment effects (Tables A9, A10, and A11). The results are also similar when we control for the interaction of pre-specified controls and the treatment dummy (Table A12).

survey mentioned above. We average responses at the local level, standardize the average, and match the resulting local levels of cohesion to individuals in our experimental sample who downloaded the application and thus have location data.

We find that individuals in locations with low levels of perceived cohesion exhibit stronger negative treatment effects. Specifically, Panel A of Table A14 shows that, on average, individuals in locations with one standard deviation higher local cohesion exhibit a 0.31 standard deviation weaker treatment effect on the pre-specified index ($p < 0.1$).[15]

Put together, these results suggest that social connectedness and cohesion can counterbalance strategic substitutability and act as a force for strategic complementarity in the effort choices of political activists.[16]

4.4 Motives Underlying Effort Adjustments

In an additional survey among 150 political activists, we elicit the motives underlying activists' hypothetical decisions to increase or decrease their participation in the campaign in response to learning about higher peer effort (see Bursztyn et al. (2022) for a similar approach). We recruited respondents through social media groups affiliated with various political parties, including supporters of the party we collaborated with in the field experiment presented earlier.[17]

We first ask supporters how they would adjust their campaigning effort in response to learning about higher effort of their peers. Next, we ask supporters to describe the reasoning underlying their decision with an unprompted open-ended question which avoids priming respondents on particular motivations. On the subsequent screen, we also elicit structured responses based on theoretical considerations and pilot data from

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[15]The sample size for this specification is relatively small (N=408), as we only observe location for individuals who downloaded the app and live in locations with respondents in the post-election survey. Hence, we focus on interpreting pooled treatment effects. Results by pre-treatment beliefs are in Panels B and C of Table A14 and display a qualitatively similar pattern for over and underestimators.

[16]An alternative mechanism might be that supporters with stronger social connections to the party learn more quickly about the true level of activism and thus are less affected by the provided information. However, this cannot explain heterogeneity in the effects on intentions, which are measured prior to any further learning about peer effort.

[17]The sample is gender-balanced, the average age is 30 and approximately 35% of respondents are members of any political party (see Table A24 for details).

the open-ended question (see Appendix G for the full instructions). This structured data allows us to validate our hand-coding scheme and to classify individuals whose open-ended responses we could not cleanly map into a specific motive.[18] The key advantage of the open-ended elicitation relative to the structured responses is that it is less prone to ex-post rationalization of motives.

We hand-code open-ended responses using the following main categories, which are closely related to influential theoretical mechanisms in the literature: For motives connected to strategic substitutability, we code "free-rider" motives (Olson, 1965) and "substitution to other effort domains" (Dewatripont et al., 2000). For motives underlying strategic complementarity, we code increased "identity" (Akerlof and Kranton, 2000), "enjoyment" (Uhlaner, 1989), "social image concerns" (Bursztyn and Jensen, 2017), "reciprocity" (Falk and Fischbacher, 2006), and perceived "increase in the returns to activism" (Barbera and Jackson, 2019). Respondents that mention a general increase in motivation that we cannot classify precisely into any of the previous motives are classified as 'other motivation'. Appendix Table A22 contains additional details on the hand-coding procedure and example responses.

Figure 2 illustrates the results. Panel A shows that 35% of participants state that they would decrease their effort, 18% would increase their effort and 47% would not change their effort in response to learning about higher peer effort, consistent with our main field experimental evidence on strategic substitutability.[19]

Next, we study activists' motives for strategic substitutability. Panel B of Figure 2 highlights that based on the open-ended data 79% of respondents who say they would decrease their effort mention free-riding incentives, while 23% mention substitution of effort to other activities.[20] Finally, Panel C presents the data on motives for respondents

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[18]Our hand-coded data based on the open-ended responses is very predictive for choices among the structured categories (see Table A23 for details).

[19]When considering heterogeneity by the same index of connectedness to respondents' favorite party, we observe a pattern that is very similar to the experimental evidence (Panel A of Appendix Figure A11). Respondents with below-median connectedness to their favorite party are 10 percentage points more likely to exhibit strategic substitutability and 10 percentage points less likely to exhibit strategic complementarity compared to respondents with above-median connectedness. Panel B of Appendix Figure A11 shows qualitatively similar patterns of heterogeneity for social and free-riding motives.

[20]In Section H we provide additional evidence on a muted role of effort substitution.

exhibiting strategic complementary. Concerns related to social identity and enjoyment value are mentioned by 22% of respondents, respectively. Perceived increased returns are mentioned by 26% of respondents, underscoring that instrumental motives are, to some extent, also a driver of strategic complementarity. On the other hand, reciprocity and social image concerns are less prevalent with 4% and 7%, respectively. 37% fall into a category we call "other motivation", which comprises statements about a general increase in motivation in response to learning that more members plan to canvass that we could not cleanly map to any of the other motives.

Our data also allows us to explore the extent to which behavioral responses and motives underlying these responses differ across political parties in our setting. We find that respondents' motives are not predictive of being a supporter or member of our collaborating party. We regress dummies for all coded motives on a dummy indicating support for our collaborating party. An F-test of joint significance of dummies yields $p = 0.90$.

5 Conclusion

We conducted a nationwide natural field experiment in collaboration with a major European party during a recent national election. We randomly provide canvassers with true information about the canvassing intentions of their peers. When learning that more peers participate in canvassing than previously believed, canvassers significantly reduce both their canvassing intentions and behavior. An additional survey reveals that there is strong heterogeneity in motives driving supporters' behavioral responses. It reveals that the free-rider logic underlies most of the substitutability of effort choices, while concerns related to social identity and enjoyment value are the most prevalent social motives driving complementarity of effort choices.

How do our findings inform the broader literature on strategic interactions among political activists? First, our results underscore that strategic interactions have a quantitatively important role in shaping political activism. We document that, when being informed about an increase in peer effort, activists reduce their effort by 38% compared

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to the control group mean. This is sizable but roughly in line with effect sizes of similar experiments. For example, in the same context we document a 30% reduction in canvassing activity relative to the control mean in response to increased competition by opposing activists (Hager et al., 2021). In the context of student protests in Hong Kong, Cantoni et al. (2019) find a reduction in the likelihood of protesting of 61% relative to the control mean (for underestimators) and, in the context of right- and left-wing protests in Germany, Hager et al. (2022) find effect sizes between 15% and 23% of the control group mean.

Second, this paper complements existing literature that documents that the size and sign of strategic interaction vary across contexts. Interactions between activists supporting the same cause have been shown to exhibit both strategic complementarity (González, 2020) and substitutability (Cantoni et al., 2019). Strategic interactions with opposing activists also vary across contexts (Hager et al., 2022, 2021). This paper reconciles these seemingly conflicting results by showing that strategic interactions are not uniform, but instead can differ at the level of individuals (even within the same context and within the same political party).

We see several fruitful avenues for future work. First, while this study identifies the presence of several distinct social motives, future research may scrutinize the quantitative importance of these different social motives. Second, it would be useful to go beyond a reduced form framework and to microfound a model with different social motives explicitly. Finally, future work should try to better understand how political organizations can design their campaigns and messaging to trigger certain social motives as a way to overcome free-rider incentives.

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6 Main Figures and Tables

Figure 1: Pre- and post-treatment beliefs about canvassing campaign participation

Panel A: Distribution of pre-treatment beliefs about planned participation
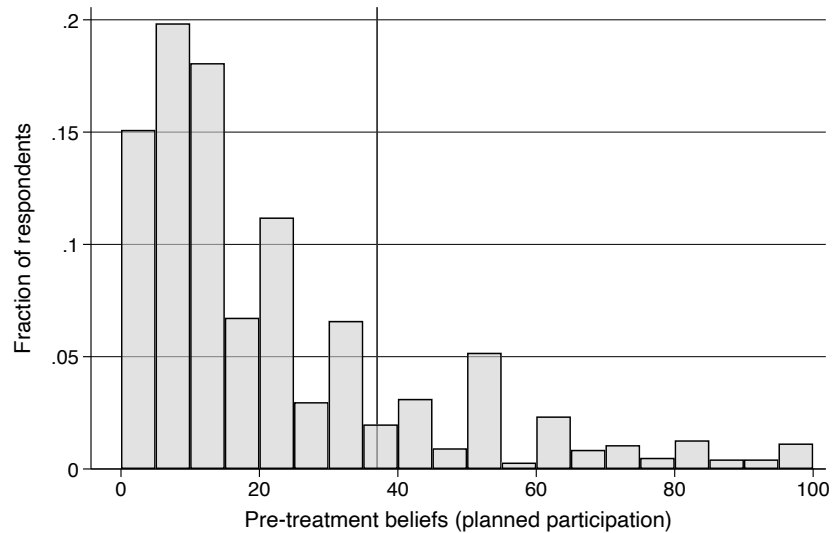
Panel B: Non-parametric relationship between pre-treatment beliefs about planned participation and post-treatment beliefs about actual participation
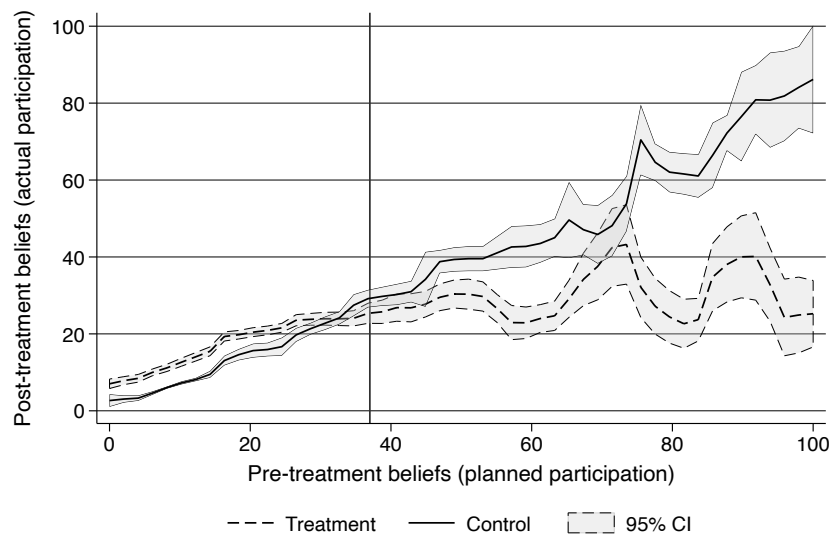
Notes: Panel A of Figure 1 shows the distribution of pre-treatment beliefs about the fraction of party members who plan to participate in the party's door-to-door canvassing campaign. The vertical line (37%) corresponds to the treatment information. Panel B of Figure 1 displays the non-parametric relationship between post-treatment beliefs about actual participation of party members and pre-treatment beliefs about the planned participation of party members. The estimates are obtained using local polynomial regressions of degree 1.

Figure 2: Strategic interactions and stated motives

Panel A: Effort adjustments
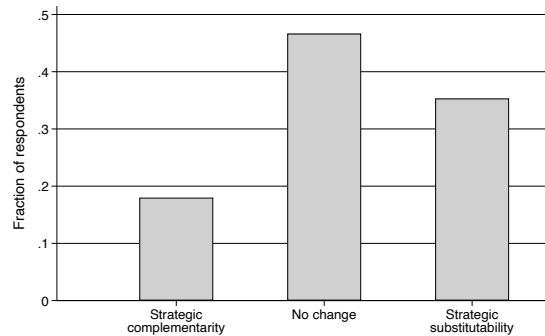
Panel B: Motives conditional on strategic substitutability
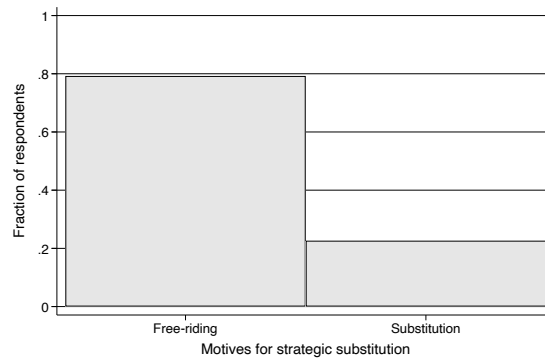
Panel C: Motives conditional on strategic complementarity
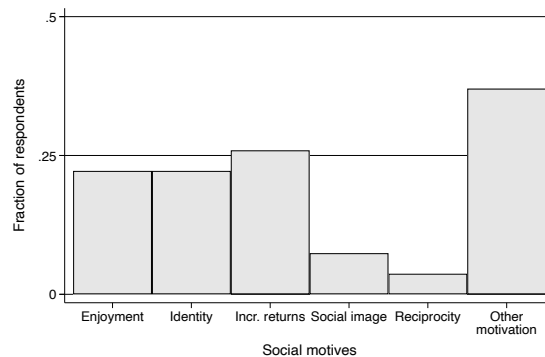
Notes: Panel A of Figure 2 shows the distribution of the nature of strategic interactions in a hypothetical vignette. Section G describes the vignette survey in detail. Panel B of Figure 2 displays the motives for respondents who exhibit strategic substitutability. Panel C of Figure 2 displays the motives for respondents who exhibit strategic complementarity. Motives are based on the following vignette (for the exact wording see Online Appendix section G): First, respondents are asked to imagine that, during a general election campaign, their favorite party sent a survey showing that more party members than they previously thought plan to participate in the canvassing campaign. They are then asked whether they would increase, decrease, or not change their canvassing behavior. Finally, respondents were presented an open text box beneath the question "Why would the results of this survey influence or not influence your decision to go canvass?". The data displayed is based on hand-coding of open text responses into pre-specified categories. The sample (N=150) was recruited through social media posts in groups of potential political activists.

Table 1: Main effects

	Belief	Intentions		App Data			App Data: Week 7/8			Index	
	% canvassing	Any	Days	Any	Days	Doors	Any	Days	Doors	Overall	Week 7/8

Panel A: Underestimators

Panel A1: Average treatment effect

Treatment	5.027***	0.002	-1.098***	-0.013	-0.159	-14.388*	-0.027*	-0.145**	-6.657**	-0.093**	-0.132***
	(0.543)	(0.026)	(0.361)	(0.016)	(0.159)	(7.839)	(0.014)	(0.064)	(2.814)	(0.047)	(0.049)

Panel A2: Interaction with strength of connection to the party

Treatment	4.959***	0.007	-1.113***	-0.013	-0.174	-15.822**	-0.028**	-0.152**	-7.118**	-0.096**	-0.137***
	(0.556)	(0.026)	(0.366)	(0.016)	(0.158)	(7.968)	(0.014)	(0.064)	(2.843)	(0.048)	(0.049)
Treatment × Strength of connection to party (PCA)	0.868	0.031	0.803**	0.001	0.134	16.294**	0.021*	0.057	5.239**	0.089**	0.104**
	(0.665)	(0.027)	(0.364)	(0.013)	(0.150)	(6.933)	(0.011)	(0.066)	(2.317)	(0.044)	(0.045)
Strength of connection to party (PCA)	-2.409***	0.073***	-0.115	0.014	-0.023	-8.100	-0.000	0.008	-2.023	0.030	0.028
	(0.586)	(0.021)	(0.351)	(0.011)	(0.153)	(7.076)	(0.011)	(0.070)	(2.362)	(0.042)	(0.044)
Control mean	9.083	0.473	4.028	0.123	0.701	38.348	0.084	0.297	13.318	-0.029	-0.010
Observations	1150	1148	1148	1163	1163	1163	1163	1163	1163	1148	1148

Panel B: Overestimators

Panel B1: Average treatment effect

Treatment	-16.686***	-0.081	-0.926	-0.029	-0.097	-9.009	-0.012	0.003	-2.561	-0.125	-0.100
	(1.973)	(0.053)	(1.227)	(0.038)	(0.186)	(12.265)	(0.034)	(0.055)	(4.030)	(0.086)	(0.084)

Panel B2: Interaction with strength of connection to the party

Treatment	-14.869***	-0.080	0.032	-0.017	0.002	-1.749	-0.002	0.026	-0.551	-0.058	-0.041
	(1.869)	(0.057)	(1.475)	(0.038)	(0.235)	(12.729)	(0.034)	(0.068)	(4.197)	(0.100)	(0.096)
Treatment × Strength of connection to party (PCA)	5.901***	-0.020	2.244	0.024	0.234	13.941	0.007	0.035	3.857	0.136	0.102
	(2.136)	(0.054)	(1.486)	(0.035)	(0.230)	(12.904)	(0.034)	(0.066)	(3.485)	(0.099)	(0.094)
Strength of connection to party (PCA)	-5.039***	0.118***	-0.238	-0.024	-0.056	-11.904	-0.018	-0.009	-2.878	0.010	0.023
	(1.927)	(0.041)	(0.935)	(0.024)	(0.098)	(8.440)	(0.023)	(0.033)	(2.305)	(0.058)	(0.058)
Control mean	45.313	0.545	5.754	0.149	0.440	22.515	0.090	0.119	7.157	0.034	0.021
Observations	247	247	247	248	248	248	248	248	248	247	247

Notes: Table 1 presents the main treatment effects. Panel A displays effects for respondents who underestimate the share of peers who intend to canvass. Panel B displays effects for respondents who overestimate the share of peers who intend to canvass. Panels A1 and B1 display the pooled treatment effects. Panels A2 and B2 present treatment effects interacted with a summary measure of connectedness to the party. The measure for strength of connection to the party is the first principal component of three pre-specified dimensions of heterogeneity (previous canvassing experience, party membership, and party membership duration) and is standardized to have mean zero and standard deviation one. Outcome variables are as follows. *"Beliefs"* captures the belief about the fraction of fellow party members who actually go canvassing. *"Intentions"* captures whether a participant intends to engage in any canvassing (*Any*) and the intended number of days (*Days*). *"App Data"* captures whether a participant actually engages in any canvassing (*Any*), as well as the number of days (*Days*) and the number of doors a participant knocks on (*Doors*, winsorized at the 99th percentile). *"App: Week 7/8"* captures actual engagement in weeks 7 and 8 after the treatment (one or two weeks before the election). *"Index"* indicates two summary measures. *"Overall"* describes a pre-specified index of all five outcome variables capturing canvassing intentions and behavior jointly. *"Week 7/8"* describes an index of the outcomes displayed under *"Intentions"* and *"App: Week 7/8"*. We construct the index by first standardizing each outcome using the control group mean and standard deviation, then calculating the total of the standardized variables, and finally re-standardizing the sum to have mean zero and standard deviation of one. Treatment effects are obtained conditional on pre-specified control variables: party membership, number of years of party membership, age, sex, whether a participant has participated in a canvassing training, whether a participant has already downloaded the online application, whether a participant has canvassed before this election, and whether a participant has already canvassed in this election. When we control for the strength of connection to the party we drop all components of the index from the control variables. We include all individuals who saw the treatment screen in our sample even when they did not complete the full survey as pre-specified in the pre-analysis plan. This leads to small variations in sample size across survey-based and behavioral outcomes.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

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Online Appendix Section A contains a mathematical framework. Online Appendix Section A.1 provides supplementary proofs and derivations for this model. Online Appendix Section B provides the invitation email, followed by Online Appendix Section C providing the survey instrument. Online Appendix Section D describes deviations from the pre-analysis plan.

Online Appendix Section E contains additional figures. Figure A2 displays the relationship between intentions and actual canvassing behavior. Figures A3 and A4 show treatment effects for time for underestimators and overestimators, respectively. Figure A5 shows the cumulative distribution of intended days as well as actual days and doors canvassed for underestimators. Figure A6 shows the cumulative distribution of intended days as well as actual days and doors canvassed for overestimators. Figure A7 displays treatment effects overtime on standardized canvassing variables. Figures A8 and A9 show treatment effects for time by connection to the party for underestimators and overestimators, respectively.

Online Appendix Section F contains additional tables. Table A1 and A2 contain summary statistics for full sample and under- and overestimators, respectively. Table A3 shows balance tests. Table A5 displays treatment effects on application download. Table A6 shows predictors of canvassing intentions and application download. Table A7 shows results using both under- and overestimators. Table A8 shows correlations between our proxies for social motives and social connections and career concerns in the post-election survey. Table A9 shows heterogeneity by previous canvassing experience. Table A10 shows heterogeneity by party membership. Table A11 displays heterogeneity by party membership duration. Table A12 displays results when the treatment dummy is interacted with all control variables. Table A13 displays treatment effects by total local activity. Table A14 displays treatment effects by perceived cohesion in the local party

chapter. Table A15 shows the effects by application download prior to the experiment. Tables A16 to A21 provide results without pre-specified controls. Section G contains details about the mechanism survey and additional results. Table A22 displays the coding scheme used for the analysis of activists' motives. Section H presents additional results on substitution effects to other effort domains.

A Conceptual framework

Assumptions: To motivate our empirical design and guide our analysis, we present a simple partial-equilibrium model of an individual's decision to participate in canvassing. A canvasser's utility depends on her own canvassing effort, d_i, and her beliefs about fellow supporters' canvassing efforts, d_{-i}, according to

$$u_i(d_i) = (1 - \alpha_i)g(d_i, d_{-i}) + \alpha_i h(d_i, d_{-i}) - c_i(d_i) - \tilde{c}_i \cdot \mathbb{1}(d_i > 0). \tag{2}$$

In this equation, $g(d_i, d_{-i})$ denotes an activist's instrumental utility from canvassing, while $h(d_i, d_{-i})$ represents the social utility gained from canvassing. Both $g(d_i, d_{-i})$ and $h(d_i, d_{-i})$ are assumed to be continuous and twice differentiable. Critically, both terms depend on own effort d_i but also on believed peer efforts d_{-i}. Instrumental and social utility have individual-specific relative weights $1 - \alpha_i$ and α_i, respectively.

Costs of canvassing are captured by $c_i(d_i)$ with $c', c'' > 0$ and $c'(0) = 0$, and individual-specific fixed costs $\tilde{c}_i \sim F$. We assume that all idiosyncratic properties are summarized by type $i \in I$, distributed according to $\Phi \perp F$. Canvasser i chooses canvassing effort, d_i, to maximize her utility u_i given the reservation utility from not participating in canvassing $(1 - \alpha_i)g(0, d_{-i})$.

We further clarify the properties of instrumental utility $g(d_i, d_{-i})$ and social utility $h(d_i, d_{-i})$. Instrumental utility $g(d_i, d_{-i})$ comprises two motives: first, the value of votes obtained through canvassed doors. In other words, activists may be motivated to participate in canvassing to signal their commitment to the party and thereby increase their chances of getting promoted. We thus assume that $\frac{\partial g(d_i, d_{-i})}{\partial d_i} > 0$. Critically, we also posit that the instrumental returns to canvassing are decreasing in peer effort (i.e. $\frac{\partial^2 g(d_i, d_{-i})}{\partial d_i \partial d_{-i}} <$ 0). In the context of our experiment, this assumption is likely to hold for two reasons. First, instrumental returns to canvassing are decreasing in peer effort if marginal benefits of additional votes or the returns to canvassing are (perceived to be) decreasing, an assumption which is plausible in our setting. The party encouraged local canvassers to target the most promising areas first, which implies that the expected returns to addi-

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tional canvassing are likely to decrease in the total canvassing activity.[21] Second, as the number of effort providing group members increases (included in d_i, the private incentives for canvassing will decrease as the direct benefits of winning have to be distributed among more individuals (Banerjee et al., 2007). In our context such rival benefits are political appointments, candidacies and, to a lesser extent, staff positions with elected politicians.

The term $h(d_i, d_{-i})$ represents the social utility gained from canvassing for which we assume $\frac{\partial h(d_i, d_{-i})}{\partial d_i} \geq 0$. Most generally, this term captures the quality of canvassing as a relational good (Uhlaner, 1989) that is enjoyed only through the consumption of others. In line with a large literature on conditional cooperation in collective action (Ostrom, 2000), we hence assume that social returns to canvassing are increasing in peer effort, i.e. $\frac{\partial^2 h(d_i, d_{-i})}{\partial d_i \partial d_{-i}} > 0$. A specific psychological foundation for this assumption is provided by theories of reciprocity (Falk and Fischbacher, 2006; Fehr and Gächter, 2000) in which individuals receive utility from rewarding kind actions of others.

Intensive margin responses: We first analyze intensive margin responses due to a change in beliefs about peer canvassing effort d_{-i}. The model yields that the strategic interaction between canvassers is determined by the relative importance of changes in the instrumental and social returns to canvassing.

- Effort choices will be **strategic complements ($\frac{\partial d_i^*}{\partial d_{-i}} > 0$)** iff
  $\alpha_i \frac{\partial^2 h(d_i, d_{-i})}{\partial d_i \partial d_{-i}} > -(1 - \alpha_i) \frac{\partial^2 g(d_i, d_{-i})}{\partial d_i \partial d_{-i}}$, namely iff changes in social returns dominate changes in instrumental returns.

- Effort choices will be **strategic substitutes ($\frac{\partial d_i^*}{\partial d_{-i}} < 0$)** iff
  $-(1 - \alpha_i) \frac{\partial^2 g(d_i, d_{-i})}{\partial d_i \partial d_{-i}} > \alpha_i \frac{\partial^2 h(d_i, d_{-i})}{\partial d_i \partial d_{-i}}$, namely iff changes in instrumental returns dominate changes in social returns.

Proofs of these results can be found in Appendix section A.1. The above inequalities combine two factors. On the one hand, the more important social returns are for a given

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[21] In addition, the party only gains little political power from winning votes beyond a threshold that ensures that it forms part of the government.

individual (i.e. the larger α_i) the more likely it is that effort choices are strategic complements. On the other hand, the nature of strategic interactions depends on the shape of the return functions (both instrumental and social). The relevant comparative static is the slope of the marginal return to own canvassing effort with respect to the effort of others. Put differently, what matters is how quickly an activist's return to canvasing changes as others change their canvassing effort.

Heterogeneity by strength of instrumental and social motives: How do the patterns of strategic interaction vary with the relative importance of social motives α_i? Intuitively, we show in Appendix section A.1 that individuals who put a sufficiently high weight on instrumental utility will exhibit strategic substitutability in their effort choices, whereas individuals who put a sufficiently high weight on social motives will exhibit strategic complementarity in their effort choices.

In the context of our experiment, we expect stronger social connectedness to the party to trigger a higher weight on social motives α_i, as stronger social connectedness plausibly increases the reciprocity to other party members and enhances identification with the party. We test this prediction empirically by estimating how the treatment effects vary with proxies such as having prior canvassing experience, being a member of the party, and the duration of membership.

Extensive margin responses: Finally, we consider how extensive margin responses depend on individuals' beliefs about their peers' canvassing effort. Note that an individual i will turn out canvassing if her cost of canvassing $\tilde{c}_i$ is lower than a cutoff value $\tilde{c}_i^*$. Hence, the fraction of individuals of type i deciding to participate in canvassing is equal to $F(\tilde{c}_i^*)$. We show in Appendix section A.1 that the marginal extensive margin response to an increase in d_{-i} is equal to

$$\left((1 - \alpha_i) \left(\frac{\partial g(d_i^*, d_{-i})}{\partial d_{-i}} - \frac{\partial g(0, d_{-i})}{\partial d_{-i}} \right) + \alpha_i \frac{\partial h(d_i^*, d_{-i})}{\partial d_{-i}} \right) \cdot f(\tilde{c}_i^*),$$

where d_i^* is the optimal canvassing effort conditional on exerting positive canvassing effort. Note that the sign of the effect depends on the relative strength of changes in instrumental utility ($\frac{\partial g(d_i^*, d_{-i})}{\partial d_{-i}} - \frac{\partial g(d_{-i})}{\partial d_{-i}}$) and social utility ($\frac{\partial h(d_i^*, d_{-i})}{\partial d_{-i}}$). Most importantly, however, the effect size critically depends on the mass of marginal individuals $f(\tilde{c}_i^*)$, who are close to being indifferent to participating or not. For those individuals the potential benefits of canvassing are roughly equal to the sum of fixed and variable costs. If $f(\tilde{c}_i^*)$ is low (high), the effect size on the extensive margin will be comparatively low (high) relative to the intensive margin. Differences in the effect sizes between the extensive and intensive margin may hence be interpreted as indicators of the mass of marginal individuals.

A.1 Supplementary results and proofs

We model agent i's utility of choosing her own canvassing effort d_i given fellow supporters' canvassing effort (d_{-i}) according to:

$$u_i(d_i) = (1 - \alpha_i)g(d_i, d_{-i}) + \alpha_i h(d_i, d_{-i}) - c_i(d_i) - \tilde{c}_i \cdot \mathbb{1}(d_i > 0) \tag{3}$$

where $g(d_i, d_{-i})$ represents the instrumental utility gained from either the overall level of canvassing activity (i.e. additional votes) or the utility gained from signaling one's commitment. We assume $\frac{\partial g(d_i, d_{-i})}{\partial d_i} > 0$ and $\frac{\partial^2 g(d_i, d_{-i})}{\partial d_i \partial d_{-i}} < 0$. The term $h(d_i, d_{-i})$ represents social motives. We assume $\frac{\partial h(d_i, d_{-i})}{\partial d_i} \geq 0$ and $\frac{\partial^2 h(d_i, d_{-i})}{\partial d_i \partial d_{-i}} > 0$. The term α_i denotes an individual-specific relative weight on social motives. $c_i(d_i)$ represents individual-specific costs of canvassing for which we assume $c'(0) = 0$, and $c', c'' > 0$. For $g(\cdot), h(\cdot)$, and $c(\cdot)$ we assume continuity and that they are twice differentiable. $\tilde{c}_i$ is an individual-specific fixed costs of doing any canvassing distributed according to F. Agent i chooses d_i to maximize her utility u_i, where the reservation utility from not engaging in canvassing is equal to $(1 - \alpha_i)g(0, d_{-i})$. We assume that all idiosyncratic properties are summarized by type $i \in I$, distributed according to $\Phi \perp F$.

Formally, agents choose $d_i \geq 0$ such that

$$d_i^* = \text{argmax}_{d_i}(1 - \alpha_i)g(d_i, d_{-i}) + \alpha_i h(d_i, d_{-i}) - c_i(d_i) - \tilde{c}_i \cdot \mathbb{1}(d_i > 0) \tag{4}$$

if $u_i(d_i^*) \geq (1 - \alpha_i)g(0, d_{-i})$ and $d_i^* = 0$ otherwise.

First, we investigate intensive margin responses and focus on interior solutions of this optimization problem. In this case, agent i sets her canvassing effort d_i according to the following first order condition:

$$\frac{\partial u(d_i)}{\partial d_i} = (1 - \alpha_i)\frac{\partial g(d_i, d_{-i})}{\partial d_i} + \alpha_i \frac{\partial h(d_i, d_{-i})}{\partial d_i} - \frac{\partial c_i(d_i)}{\partial d_i} = 0 \tag{5}$$

Without further functional form assumptions there is no closed form solution for the optimal effort choice d_i^*. However, it is possible to analyze i's optimal response to changes in d_{-i} using implicit differentiation:

$$\frac{\partial d_i^*}{\partial d_{-i}} = -\frac{(1 - \alpha_i)\frac{\partial^2 g(d_i, d_{-i})}{\partial d_i \partial d_{-i}} + \alpha_i \frac{\partial^2 h(d_i, d_{-i})}{\partial d_i \partial d_{-i}}}{(1 - \alpha_i)\frac{\partial^2 g(d_i, d_{-i})}{\partial d_i \partial d_i} + \alpha_i \frac{\partial^2 h(d_i, d_{-i})}{\partial d_i \partial d_i} - \frac{\partial^2 c(d_i)}{\partial d_i \partial d_i}} \tag{6}$$

Note that the denominator is negative, as we require d^* to be at a local maximum. This is guaranteed, for instance, if we assume $\frac{\partial^2 g(d_i, d_{-i})}{\partial d_i \partial d_i} < 0$ and $\frac{\partial^2 h(d_i, d_{-i})}{\partial d_i \partial d_i} \leq 0$. This immediately yields the intensive margin result presented in the main text.

Next, we investigate how $\frac{\partial d_i^*}{\partial d_{-i}}$ varies with the strength of social motives. Consider the case where $\alpha_i = 0$, that is the weight on social motives is zero. Then,

$$\frac{\partial d_i^*}{\partial d_{-i}}\bigg|_{\alpha_i=0} = -\frac{\frac{\partial^2 g(d_i, d_{-i})}{\partial d_i \partial d_{-i}}}{\frac{\partial^2 g(d_i, d_{-i})}{\partial d_i \partial d_i} - \frac{\partial^2 c(d_i)}{\partial d_i \partial d_i}} < 0. \tag{7}$$

In the case where $\alpha_i = 1$,

$$\frac{\partial d_i^*}{\partial d_{-i}}\bigg|_{\alpha_i=1} = -\frac{\frac{\partial^2 h(d_i, d_{-i})}{\partial d_i \partial d_{-i}}}{\frac{\partial^2 h(d_i, d_{-i})}{\partial d_i \partial d_i} - \frac{\partial^2 c(d_i)}{\partial d_i \partial d_i}} > 0. \tag{8}$$

As $\frac{\partial d_i^*}{\partial d_{-i}}$ is continuous in α_i, we can draw two conclusions. There exists a cutoff-level $\underline{\alpha_i}$ such that individuals with $\alpha_i < \underline{\alpha_i}$ exhibit strategic substitutability. Vice versa, there

exists a cutoff-level $\bar{\alpha}_i$ such that individuals with $\alpha_i > \bar{\alpha}_i$ exhibit strategic complementarity.

Next, we consider extensive margin responses. Note that for each individual of type i there exists a cutoff value $\tilde{c}_i^* = (1 - \alpha_i)g(d_i^*, d_{-i}) + \alpha_i h(d_i^*, d_{-i}) - c_i(d_i^*) - (1 - \alpha_i)g(0, d_{-i})$ such that the individual chooses to engage in canvassing iff $\tilde{c}_i \leq \tilde{c}_i^*$. Hence, the fraction of individuals of type i deciding to engage in canvassing is equal to

$$F\Big((1 - \alpha_i)g(d_i^*, d_{-i}) + \alpha_i h(d_i^*, d_{-i}) - c_i(d_i^*) - (1 - \alpha_i)g(0, d_{-i})\Big). \tag{9}$$

Taking the derivative with respect to d_{-i} yields

$$\left((1 - \alpha_i)\left(\frac{\partial g(d_i^*, d_{-i})}{\partial d_{-i}} - \frac{\partial g(0, d_{-i})}{\partial d_{-i}}\right) + \alpha_i \frac{\partial h(d_i^*, d_{-i})}{\partial d_{-i}}\right) \cdot f(\tilde{c}_i^*). \tag{10}$$

Given g is concave in d_i, $\frac{\partial g(d_i^*, d_{-i})}{\partial d_{-i}} - \frac{\partial g(0, d_{-i})}{\partial d_{-i}}$ will be unambiguously negative. Hence, for low α_i the above term will be negative. If we assume $\frac{h(d_i, d_{-i})}{\partial d_{-i}} \geq 0$, i.e. social utility increases in the participation of others, reflecting the quality of canvassing as a relational good, the sign of the effect is ambiguous and depends on the relative strength of social motives α_i. Most importantly, however, extensive margin responses depend critically on the mass of individuals $f(\tilde{c}_i^*)$ who are marginal. Hence, we expect the relative strength of intensive and extensive margin responses to depend on the degree of how many individuals are marginal in their decision to do any canvassing. Aggregating over all individuals yields

$$\int_{i \in I} \left((1 - \alpha_i)\left(\frac{\partial g(d_i^*, d_{-i})}{\partial d_{-i}} - \frac{\partial g(0, d_{-i})}{\partial d_{-i}}\right) + \alpha_i \frac{\partial h(d_i^*, d_{-i})}{\partial d_{-i}}\right) \cdot f(\tilde{c}_i^*) d\Phi. \tag{11}$$

B   Invitation email

Dear 'name',

the critical stage of the election campaign is imminent. We have conducted workshops in almost all constituencies and the feedback was resoundingly positive. Now it's up to us. We are all out to canvass to help [party name] win the election.

To help our campaign succeed, we ask you to respond to a short survey. We would like to know if you have any suggestions and to what extent you plan to participate in the campaign. Your answers will of course be treated confidentially.

Here is the link to the survey:

Survey

It would be great if you could support us with this survey. Just click on the link right now. The survey only takes five minutes.

C Survey instruments

C.1 Main survey

- **Introduction**

  Dear 'name',

  we are conducting a short survey among our supporters to plan our election campaign. Your participation helps us to use our campaign resources optimally. We will treat your answers confidentially. The survey only takes 5 minutes (10 questions).

  Thank you very much for your help!

- **Sex**

  What is your sex?

- **Age**

  How old are you?

- **Party member**

  Are you a member of [party name] party?

- **Years of party membership** (asked if respondent is party member)

  For how many years have you been a member of [party name] party?

- **Canvassing workshop**

  Have you ever participated in a canvassing training workshop?

- **Canvassing experience**

  Do you have experiences from canvassing in previous election campaigns?

- **Pre-treatment belief**

  Think of 100 typical [party name] party members.

  What do you think: How many of these 100 [party name] party members plan to engage in canvassing during this election campaign?

- **Treatment text**

  You said X of 100 [party name] party members.

  According to a survey of [party name] party members, 37 of 100 [party name] party members plan to engage in canvassing during this election campaign.

- **Post-treatment belief**

  What do you think: How many of these 100 [party name] party members will actually engage in canvassing during this election campaign?

- **Extensive margin**

  Do you plan to canvass during this election campaign?

- **Intensive margin** (asked if extensive margin is yes)

  On how many days do you plan to canvass during this election campaign?

- **Debrief**

  Now let's go! And don't forget to download the [party name]-application. Here for iOS and Android.

  With the [party name]-application you can actively participate in our election campaign and keep up to date with the campaign progress. Also, the application is fun!

D Deviations from pre-analysis plan

This section describes where the analysis presented in the paper deviates from the pre-analysis plan uploaded to the AEA RCT registry (AEARCTR-0002358). The pre-analysis plan contains pre-registered analyses for two separate experiments ("own party" and "other party" group). We present the results of these experiments in two different papers. This paper describes the results of the "own party" experiment. The results of the "other party" group are presented in Hager et al. (2021) which is available upon request from the authors.

For the analysis of the experiment presented in this paper, we deviated in the following points from the pre-analysis plan:

- We conduct additional analysis not covered in the pre-analysis plan. This includes the following analysis:

  - Any analysis of temporal patterns of treatment effects, including the impacts on any canvassing, doors, and days in week 7/8. We also construct an index using these variables.

  - Heterogeneity by strength of connection to the party (PCA of three pre-specified control variables).

  - The impact of the treatment on social media campaigning.

  - An IV-analysis instrumenting post-treatment beliefs with treatment assignment.

E Online Appendix Figures

Figure A1: Experimental design

	Experimental Assignment ($N = 1411$)	
Control ($N = 703$)		Treatment ($N = 708$)
Elicitation: Beliefs about *planned* participation of peers		Elicitation: Beliefs about *planned* participation of peers
		Treatment: Information about *planned* participation of peers
Elicitation: Beliefs about *actual* participation of peers		Elicitation: Beliefs about *actual* participation of peers
Elicitation: Intended Participation in Campaign	End of Survey	Elicitation: Intended Participation in Campaign
Measurement through App: Actual Participation in Campaign		Measurement through App: Actual Participation in Campaign

Notes: Figure A1 illustrates the experimental design.

Figure A2: Intentions vs. behavior (data from survey and online application)
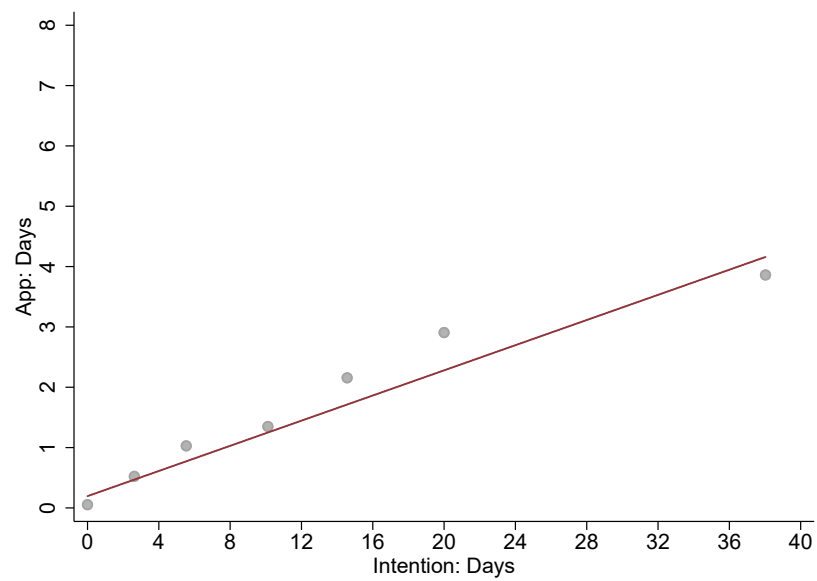
Notes: Figure A2 shows a binscatter plot between intended number of days and number of days canvassing as recorded through the online application. The regression line indicates the best linear fit.

Figure A3: Doors and days canvassed over time (underestimators)

(a) Doors: raw data

(b) Doors: treatment effects

(c) Days: raw data

(d) Days: treatment effects
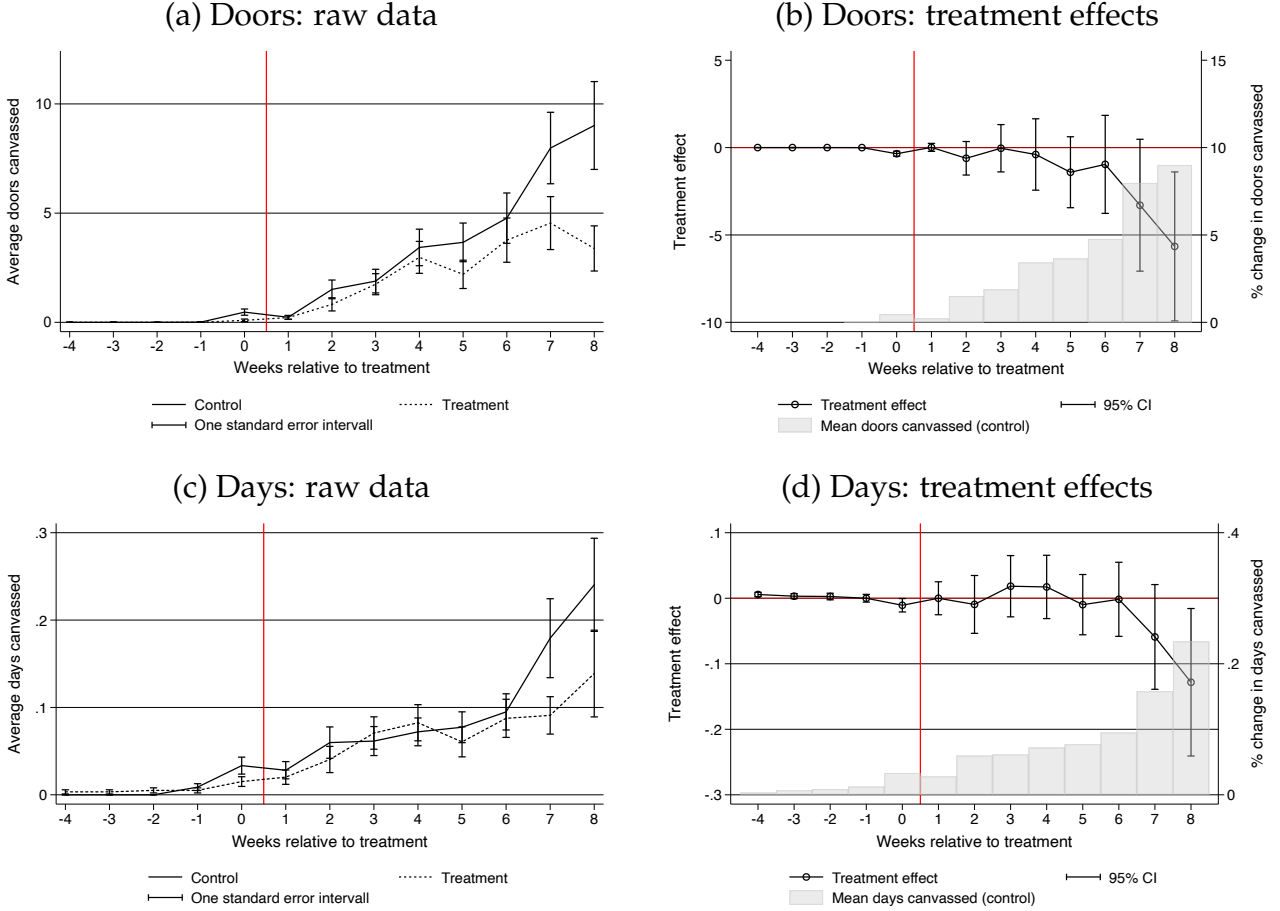
Notes: Figure A3 (a) shows the average number of doors canvassed (winsorized at the 99th percentile) for each week after the treatment. Figure A3 (b) plots the estimates of treatment effects on doors canvassed (winsorized at the 99th percentile) for each week after the treatment. Estimates are obtained by estimating equation (1) separately for each week after the treatment. All results are normalized with respect to the effect in week -1. Pre-specified control variables include: party membership, number of years of party membership, age, sex, whether a participant has participated in a canvassing training, whether a participant has already downloaded the online application, whether a participant has participated in canvassing before this federal election and whether a participant has participated in canvassing for this federal election. Shaded bars indicate the average number of doors knocked on in the control group in a given week after the survey. Vertical red lines indicate the timing of treatment. The sample in both figures is restricted to respondents who underestimate the share of fellow party members who plan to participate in the party's door-to-door canvassing campaign. Figures A3 (c) and (d) present analogous evidence for days canvassed.

Figure A4: Doors and days canvassed over time (overestimators)

(a) Doors: raw data

(b) Doors: treatment effects

(c) Days: raw data

(d) Days: treatment effects
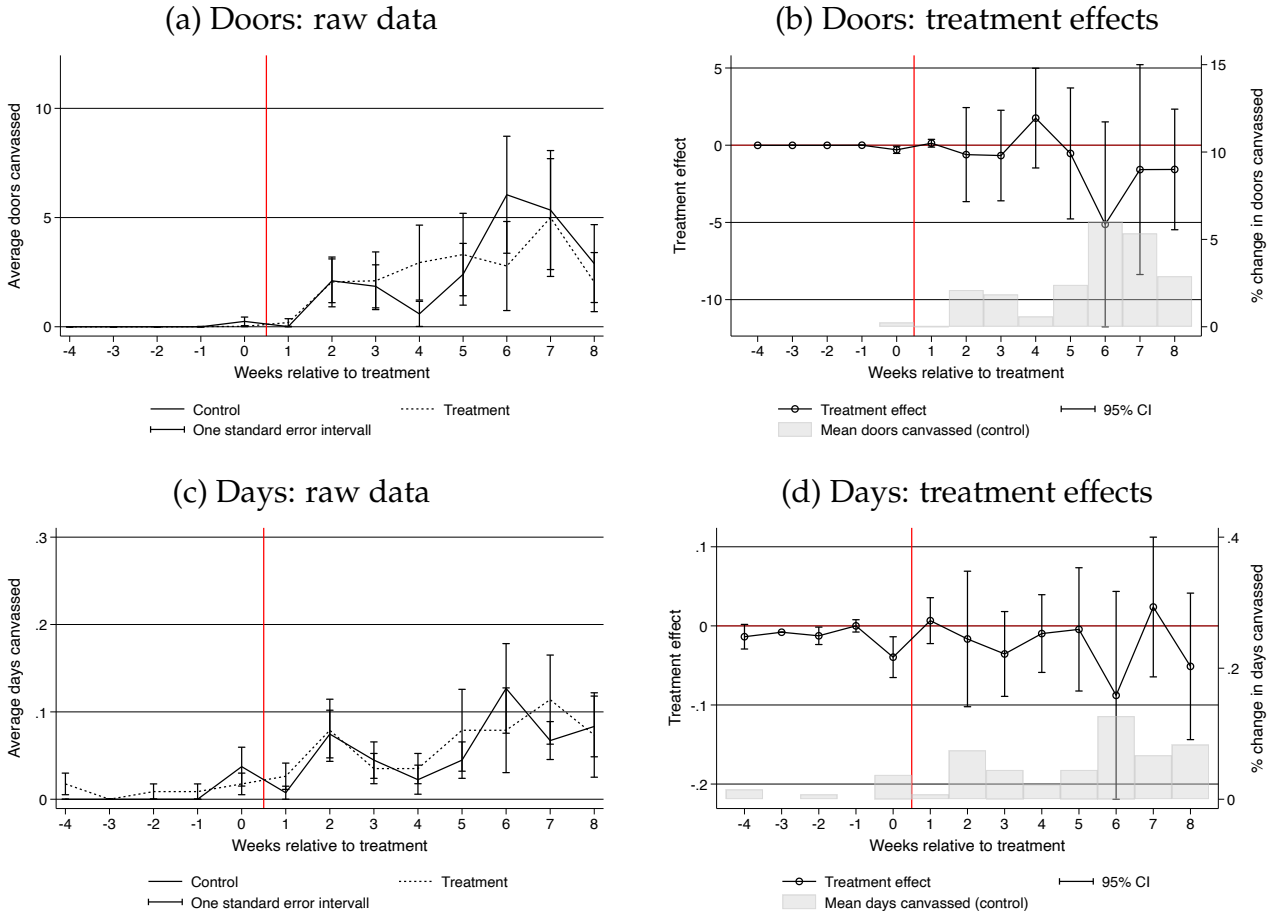
Notes: Figure A4 (a) shows the average number of doors canvassed (winsorized at the 99th percentile) for each week after the treatment. Figure A4 (b) plots the estimates of treatment effects on doors canvassed (winsorized at the 99th percentile) for each week after the treatment. Estimates are obtained by estimating equation (1) separately for each week after the treatment. All results are normalized with respect to the effect in week -1. Pre-specified control variables include: party membership, number of years of party membership, age, sex, whether a participant has participated in a canvassing training, whether a participant has already downloaded the online application, whether a participant has participated in canvassing before this federal election and whether a participant has participated in canvassing for this federal election. Shaded bars indicate the average number of doors knocked on in the control group in a given week after the survey. Vertical red lines indicate the timing of treatment. The sample in both figures is restricted to respondents who overestimate the share of fellow party members who plan to participate in the party's door-to-door canvassing campaign. Figures A4 (c) and (d) present analogous evidence for days canvassed.

Figure A5: Cumulative distribution function of key outcomes (underestimators)

(i) Intended days

(a)

(b)

(ii) Actual days

(c)

(d)

(iii) Actual doors

(e)

(f)
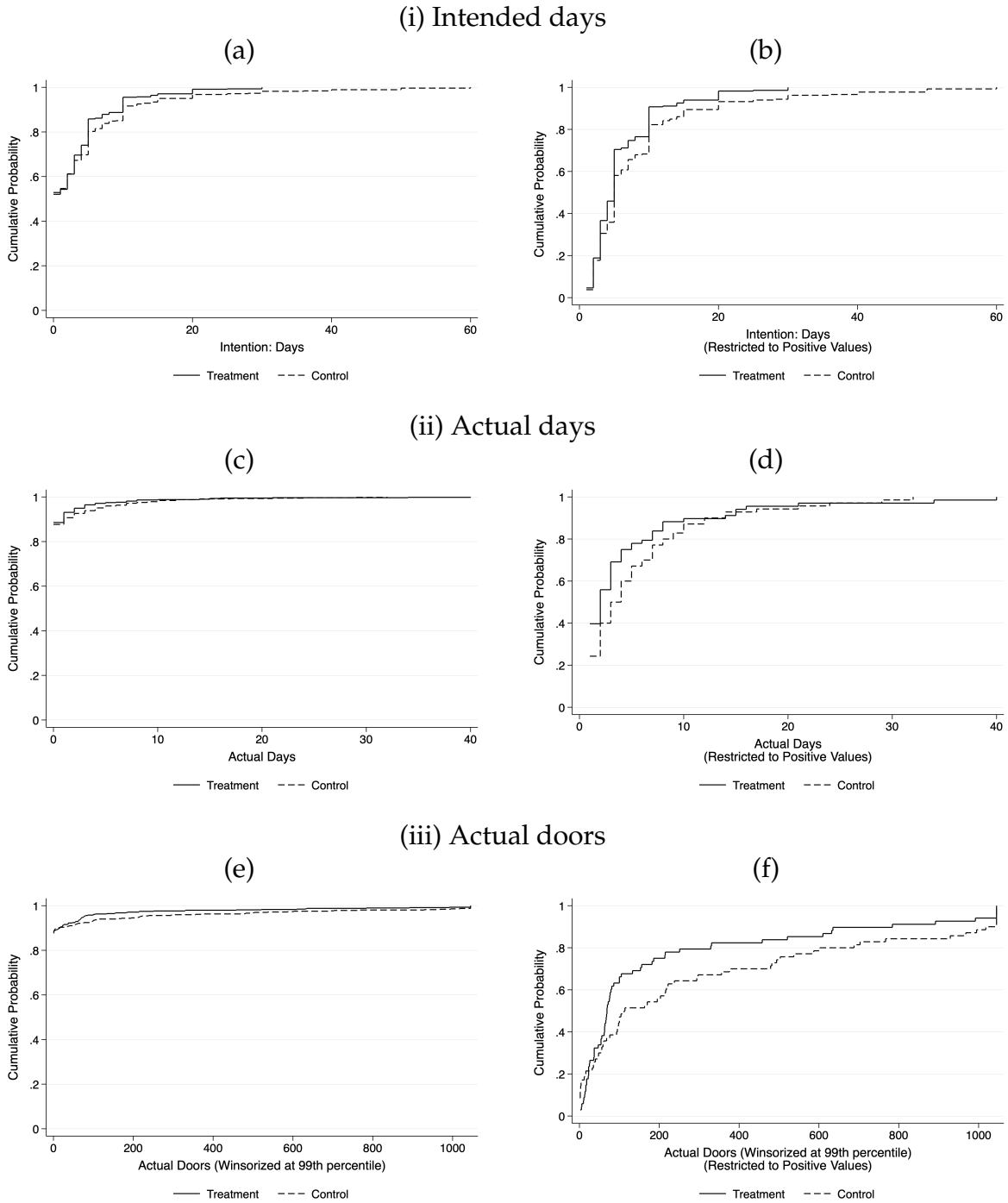
Notes: Figures A5 a-f show cumulative distribution functions (cdfs) of three key outcomes: (i) intended days canvassing, (ii) actual days canvassing, (iii) actual doors knocked on (winsorized at 99th percentile). Panels (a), (c), and (e) show the distribution for all observations, panels (b), (d), and (f) show the distribution for positive observations only. Sample is restricted to underestimators.

Figure A6: Cumulative distribution function of key outcomes (overestimators)

(i) Intended days

(a)

(b)

(ii) Actual days

(c)

(d)

(iii) Actual doors

(e)

(f)
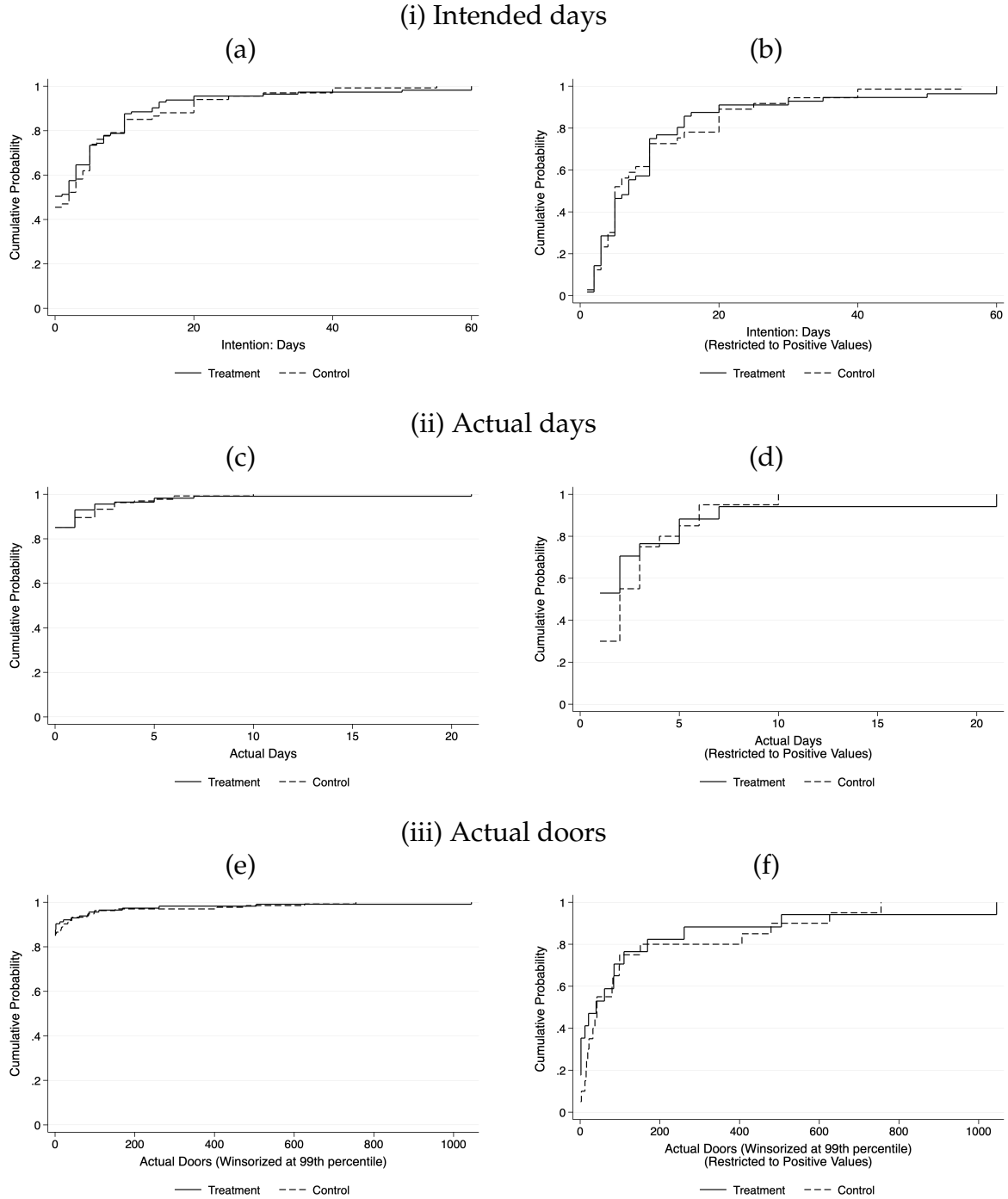
Notes: Figures A6 a-f show cumulative distribution functions (cdfs) of three key outcomes: (i) intended days canvassing, (ii) actual days canvassing, (iii) actual doors knocked on (winsorized at 99th percentile). Panels (a), (c), and (e) show the distribution for all observations, panels (b), (d), and (f) show the distribution for positive observations only. Sample is restricted to overestimators.

Figure A7: Doors and days canvassed over time (standardized outcomes)

Panel A: Underestimators

A.1 Doors canvassed

A.2 Days canvassed

Panel B: Overestimators

B.1 Doors canvassed

B.2 Days canvassed
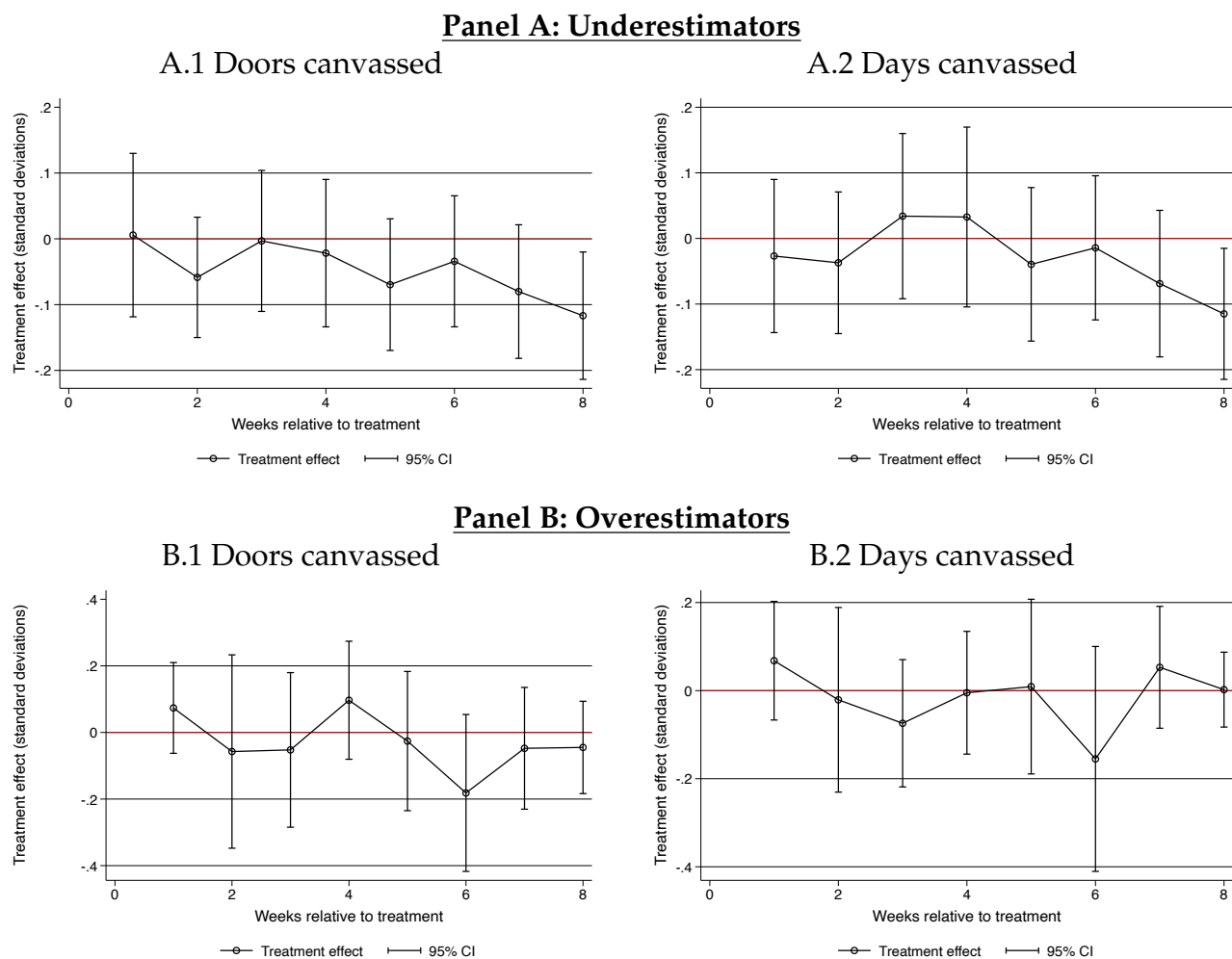
Notes: Panel A displays results for underestimators. Panel B displays results for overestimators. Figure A7 A.1 and B.1 plot the estimates of treatment effects on the standardized number of doors canvassed (winsorized at the 99th percentile) for each week after the treatment. Figures A7 A.2 and B.2 present analogous evidence for days canvassed. Estimates are obtained by estimating equation (1) separately for each week after the treatment. Pre-specified control variables are included.

Figure A8: Treatment effects over time by connection to the party (underestimators)

Weak connection to party

Strong connection to party

(a) Treatment effect: doors

(b) Treatment effect: doors

(c) Treatment effect: days

(d) Treatment effect: days
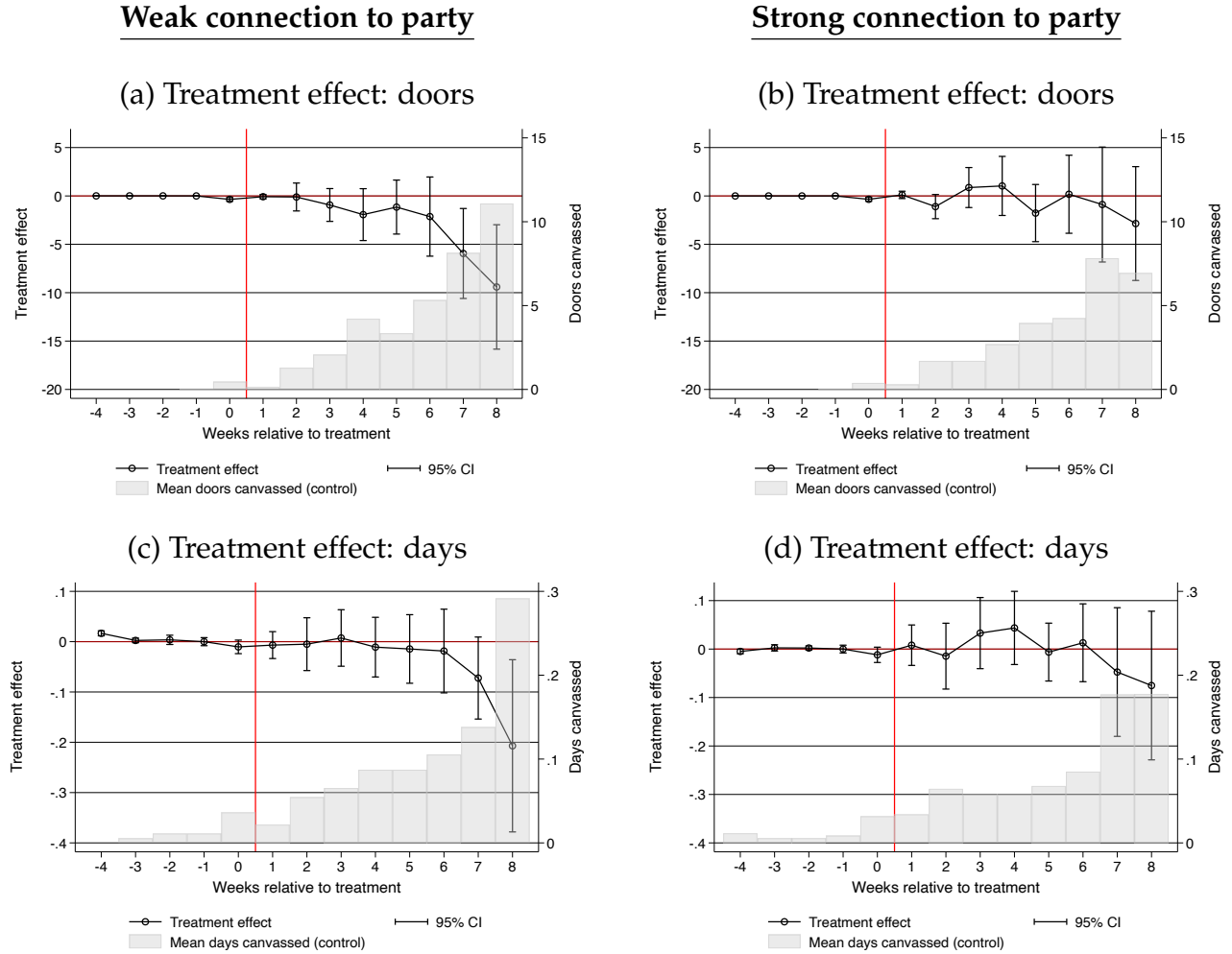
Notes: Figure A8 shows treatment effects over time separately for respondents with below median social connections to the party (panels (a) and (c)) and above median social connections to the party (panels (b) and (d)). The measure for strength of connection to the party is the first principal component of three pre-specified dimensions of heterogeneity (previous canvassing experience, party membership and party membership duration). Figures A8 (a) and (b) plot the estimates of treatment effects on doors canvassed (winsorized at the 99th percentile) for each week after the treatment. Figures A8 (c) and (d) present analogous evidence for days canvassed. The sample in all figures is restricted to respondents who underestimate the share of fellow party members who plan to participate in the party's door-to-door canvassing campaign. All estimates are obtained by estimating equation (1) separately for each week after the treatment. All results are normalized with respect to the effect in week -1. Pre-specified controls are as defined in Figure A3. Shaded bars indicate the average number of doors knocked on in the control group in a given week after the survey. Vertical red lines indicate the timing of treatment.

Figure A9: Treatment effects over time by connection to the party (overestimators)

Weak connection to party

Strong connection to party

(a) Treatment effect: doors

(b) Treatment effect: doors

(c) Treatment effect: days

(d) Treatment effect: days
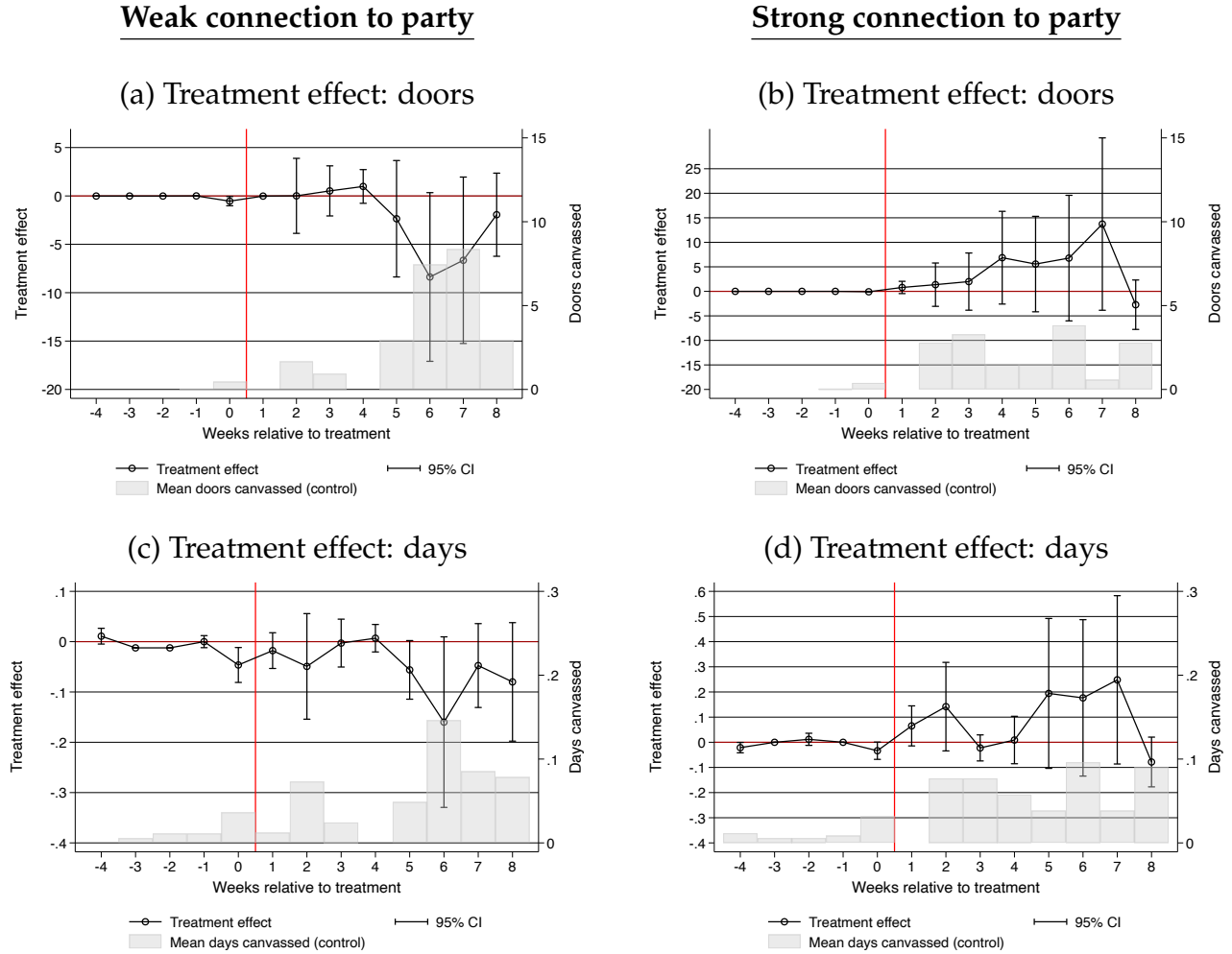
Notes: Figure A9 shows treatment effects over time separately for respondents with below median social connections to the party (panels (a) and (c)) and above median social connections to the party (panels (b) and (d)). The measure for strength of connection to the party is the first principal component of three pre-specified dimensions of heterogeneity (previous canvassing experience, party membership and party membership duration). Figures A9 (a) and (b) plot the estimates of treatment effects on doors canvassed (winsorized at the 99th percentile) for each week after the treatment. Figures A9 (c) and (d) present analogous evidence for days canvassed. The sample in all figures is restricted to respondents who overestimate the share of fellow party members who plan to participate in the party's door-to-door canvassing campaign. All estimates are obtained by estimating equation (1) separately for each week after the treatment. All results are normalized with respect to the effect in week -1. Pre-specified controls are as defined in Figure A3. Shaded bars indicate the average number of doors knocked on in the control group in a given week after the survey. Vertical red lines indicate the timing of treatment.

F   Online Appendix Tables

Table A1: Summary statistics (full sample)

	Mean	SD	Median	Min.	Max.	Obs.
Predetermined variables						
Female	0.24	0.43	0.00	0.00	1.00	1411
Age	41.04	19.30	36.00	16.00	100.00	1411
Social ties to party (z-scored)	-0.00	1.00	-0.06	-1.76	2.42	1411
Is party member	0.83	0.38	1.00	0.00	1.00	1411
Years of party membership	12.19	14.22	6.00	0.00	60.00	1411
Has experience canvassing	0.38	0.48	0.00	0.00	1.00	1411
Participated in door-to-door workshop	0.21	0.41	0.00	0.00	1.00	1411
Downloaded app before survey	0.27	0.44	0.00	0.00	1.00	1411
Has canvassed before survey	0.08	0.27	0.00	0.00	1.00	1411
Days canvassed before survey	0.19	0.96	0.00	0.00	16.00	1411
Doors visited before survey	4.38	41.80	0.00	0.00	1071.00	1411
Intention outcomes						
Canvassing: yes	0.49	0.50	0.00	0.00	1.00	1395
Canvassing: days	3.85	7.33	0.00	0.00	60.00	1395
Behavioral outcomes						
Has canvassed after survey	0.12	0.33	0.00	0.00	1.00	1411
Days canvassed after survey	0.59	2.70	0.00	0.00	40.00	1411
Doors canvassed after survey	29.22	137.57	0.00	0.00	1045.00	1411

Notes: Table A1 presents summary statistics for the full experimental sample.

Table A2: Summary statistics

	Mean	SD	Median	Min.	Max.	Obs.
Panel A: Underestimators						
Predetermined variables						
Female	0.21	0.41	0.00	0.00	1.00	1163
Age	41.31	19.04	36.00	16.00	100.00	1163
Social ties to party (z-scored)	0.07	0.98	0.01	-1.76	2.42	1163
Is party member	0.85	0.36	1.00	0.00	1.00	1163
Years of party membership	13.00	14.53	7.00	0.00	60.00	1163
Has experience canvassing	0.39	0.49	0.00	0.00	1.00	1163
Participated in door-to-door workshop	0.21	0.41	0.00	0.00	1.00	1163
Downloaded app before survey	0.26	0.44	0.00	0.00	1.00	1163
Has canvassed before survey	0.08	0.27	0.00	0.00	1.00	1163
Days canvassed before survey	0.20	1.02	0.00	0.00	16.00	1163
Doors visited before survey	5.06	45.87	0.00	0.00	1071.00	1163
Intention outcomes						
Canvassing: yes	0.48	0.50	0.00	0.00	1.00	1148
Canvassing: days	3.48	6.56	0.00	0.00	60.00	1148
Behavioral outcomes						
Has canvassed after survey	0.12	0.32	0.00	0.00	1.00	1163
Days canvassed after survey	0.62	2.86	0.00	0.00	40.00	1163
Doors canvassed after survey	30.80	143.39	0.00	0.00	1045.00	1163
Panel B: Overestimators						
Predetermined variables						
Female	0.37	0.48	0.00	0.00	1.00	248
Age	39.74	20.48	33.50	16.00	92.00	248
Social ties to party (z-scored)	-0.33	1.01	-0.42	-1.76	2.24	248
Is party member	0.71	0.46	1.00	0.00	1.00	248
Years of party membership	8.41	12.01	2.00	0.00	55.00	248
Has experience canvassing	0.32	0.47	0.00	0.00	1.00	248
Participated in door-to-door workshop	0.21	0.41	0.00	0.00	1.00	248
Downloaded app before survey	0.30	0.46	0.00	0.00	1.00	248
Has canvassed before survey	0.09	0.28	0.00	0.00	1.00	248
Days canvassed before survey	0.17	0.63	0.00	0.00	5.00	248
Doors visited before survey	1.21	8.07	0.00	0.00	99.00	248
Intention outcomes						
Canvassing: yes	0.52	0.50	1.00	0.00	1.00	247
Canvassing: days	5.57	10.01	2.00	0.00	60.00	247
Behavioral outcomes						
Has canvassed after survey	0.15	0.36	0.00	0.00	1.00	248
Days canvassed after survey	0.46	1.79	0.00	0.00	21.00	248
Doors canvassed after survey	21.85	106.02	0.00	0.00	1045.00	248

Notes: Table A2 presents summary statistics for the experimental sample. Panel A displays summary statistics for underestimators. Panel B displays summary statistics for overestimators.

Table A3: Balance tests

	Treatment	Control	Δ	se(Δ)	p(Δ=0)
Panel A: Underestimators	.	.			
Female	0.200	0.218	-0.018	(0.024)	0.462
Age	40.559	42.098	-1.539	(1.117)	0.168
Is party member	0.848	0.856	-0.007	(0.021)	0.722
Years of party membership	12.301	13.723	-1.422	(0.853)	0.096
Has experience canvassing	0.389	0.390	-0.001	(0.029)	0.965
Participated in door-to-door workshop	0.197	0.223	-0.026	(0.024)	0.273
Downloaded app before survey	0.281	0.248	0.033	(0.026)	0.198
Has canvassed before survey	0.074	0.081	-0.007	(0.016)	0.666
Days canvassed before survey	0.184	0.216	-0.033	(0.060)	0.585
Doors visited before survey	3.460	6.722	-3.263	(2.716)	0.230
Prior Belief: % of party members who canvass	12.172	11.798	0.374	(0.542)	0.490
Number of observations	594	569			
Panel B: Overestimators					
Female	0.200	0.218	-0.018	(0.024)	0.462
Age	40.559	42.098	-1.539	(1.117)	0.168
Is party member	0.848	0.856	-0.007	(0.021)	0.722
Years of party membership	12.301	13.723	-1.422	(0.853)	0.096
Has experience canvassing	0.389	0.390	-0.001	(0.029)	0.965
Participated in door-to-door workshop	0.197	0.223	-0.026	(0.024)	0.273
Downloaded app before survey	0.281	0.248	0.033	(0.026)	0.198
Has canvassed before survey	0.074	0.081	-0.007	(0.016)	0.666
Days canvassed before survey	0.184	0.216	-0.033	(0.060)	0.585
Doors visited before survey	3.460	6.722	-3.263	(2.716)	0.230
Prior Belief: % of party members who canvass	12.172	11.798	0.374	(0.542)	0.490
Number of observations	594	569			

Notes: Table A3 presents balance tests for the treatment and control group in our experiment. Columns 1 and 2 report variable means. Column 3 reports difference in means. Column 4 reports the associated heteroskedasticity robust standard error. Column 5 shows the p-value of a test of equality of means. We regress the treatment indicator on all covariates to test for joint significance. Panel A shows balance tests for underestimators. Panel B shows balance tests for overestimators. The p-value of this joint F-test of underestimators is 0.46. The p-value of this joint F-test of overestimators is 0.46.

Table A4: Treatment effects: Pooling Underestimators and Overestimators

	Belief	Intentions		App Data			App Data: Week 7/8			Index	
	% canvassing	Any	Days	Any	Days	Doors	Any	Days	Doors	Overall	Week 7/8
Panel A: Pooled treatment effects											
Treatment	1.238**	-0.012	-1.040***	-0.015	-0.146	-13.393*	-0.024*	-0.120**	-5.992**	-0.097**	-0.126***
	(0.607)	(0.023)	(0.368)	(0.015)	(0.136)	(6.899)	(0.013)	(0.055)	(2.448)	(0.042)	(0.043)
Panel B: Interaction with strength of connection to the party											
Treatment	1.238**	-0.007	-1.005***	-0.015	-0.148	-13.452*	-0.024*	-0.121**	-6.046**	-0.094**	-0.122***
	(0.599)	(0.024)	(0.368)	(0.015)	(0.136)	(6.908)	(0.013)	(0.055)	(2.458)	(0.042)	(0.043)
Treatment × Strength of connection to party (PCA)	3.064***	0.028	1.013***	0.006	0.140	15.264***	0.017	0.041	4.509**	0.098**	0.099**
	(0.713)	(0.023)	(0.376)	(0.012)	(0.127)	(5.905)	(0.011)	(0.055)	(1.926)	(0.039)	(0.040)
Strength of connection to party (PCA)	-3.635***	0.079***	-0.085	0.005	-0.027	-8.901	-0.004	0.009	-2.015	0.026	0.029
	(0.640)	(0.018)	(0.331)	(0.010)	(0.124)	(5.816)	(0.010)	(0.056)	(1.919)	(0.035)	(0.037)
Control mean	16.039	0.487	4.361	0.128	0.651	35.330	0.085	0.263	12.144	-0.017	-0.004
Observations	1397	1395	1395	1411	1411	1411	1411	1411	1411	1395	1395

Notes: Table A4 presents main treatment effects. Panel A displays the pooled treatment effects. Panel B presents treatment effects interacted with a summary measure of connectedness to the party. The measure for strength of connection to the party is the first principal component of three pre-specified dimensions of heterogeneity (previous canvassing experience, party membership and party membership duration). This summary measure is standardized to have mean zero and standard deviation one.

Outcome variables are as follows. *"Beliefs"* captures the belief about the fraction of fellow party members who actually go canvassing. *"Intentions"* captures whether a participant intends to engage in any canvassing (*Any*) and the intended number of days (*Days*). *"App Data"* captures whether a participant actually engages in any canvassing (*Any*), as well as the number of days (*Days*) and number of doors a participant knocks on (*Doors*, winsorized at the 99th percentile). *"App: Week 7/8"* captures actual engagement in weeks 7 and 8 after the treatment (one or two weeks before the election). *"Index"* indicates two summary measures. *"Overall"* describes a pre-specified index of all five outcome variables capturing canvassing intentions and behavior jointly. *"Week 7/8"* describes an index of the outcomes displayed under *"Intentions"* and *"App: Week 7/8"*. Treatment effects are obtained conditional on pre-specified control variables: party membership, number of years of party membership, age, sex, whether a participant has participated in a canvassing training, whether a participant has already downloaded the online application, whether a participant has participated in canvassing before this federal election and whether a participant has participated in canvassing for this federal election. We also include a dummy indicating overestimators as we use the pooled sample for our main specification. When we control for the strength of connection to the party we drop all components of the index from the control variables. We include all individuals who saw the treatment screen in our sample even when they did not complete the full survey as pre-specified in the pre-analysis plan. This leads to small variations in sample size across survey-based and behavioral outcomes. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A5: Treatment effects on application download

	Survey	App Data		
	click on app-link	within 24h	within one week	any time after survey
Panel A: Underestimators				
Treatment	-0.006	0.005	-0.005	0.010
	(0.012)	(0.008)	(0.009)	(0.014)
Observations	1163	1163	1163	1163
Control group mean	0.04	0.02	0.03	0.05
Panel B: Overestimators				
Treatment	-0.003	0.014	0.009	-0.021
	(0.029)	(0.025)	(0.026)	(0.033)
Observations	248	248	248	248
Control group mean	0.06	0.03	0.04	0.08

Notes: Table A5 presents treatment effects on application download. Panel A shows results for underestimators. Panel B shows results for overestimators. Pre-specified controls are as defined in Table 1.

Table A6: Selection into app download

	Intends canvassing	App download
Female	-0.066*	-0.107***
	(0.040)	(0.035)
Age	-0.005***	-0.005***
	(0.001)	(0.001)
Party member	0.131***	0.202***
	(0.047)	(0.043)
Membership duration	-0.003*	-0.003**
	(0.002)	(0.001)
Canv. experience	0.241***	0.061*
	(0.037)	(0.036)
Canv. workshop	0.361***	0.379***
	(0.039)	(0.042)
Overestimator	0.100**	0.096**
	(0.041)	(0.042)
Control mean	0.487	0.333
Observations	696	703

Notes: Table A6 presents a regression of intention to canvass and application download on covariates measured in the experimental survey. Sample is restricted to control group supporters.

Table A7: Estimation results with alternative treatment definition

	Belief	Intentions		App Data			App Data: Week 7/8			Index	
	% canvassing	Any	Days	Any	Days	Doors	Any	Days	Doors	Overall	Week 7/8
Panel A: Average treatment effects											
Treatment	7.136***	0.014	-0.798**	-0.008	-0.118	-10.548	-0.022*	-0.121**	-5.134**	-0.060	-0.097**
	(0.575)	(0.023)	(0.368)	(0.015)	(0.136)	(6.804)	(0.013)	(0.054)	(2.433)	(0.042)	(0.043)
Panel B: Interaction with strength of connection to the party											
Treatment	7.133***	0.019	-0.774**	-0.007	-0.120	-10.635	-0.022*	-0.123**	-5.143**	-0.057	-0.094**
	(0.574)	(0.024)	(0.366)	(0.015)	(0.137)	(6.816)	(0.013)	(0.055)	(2.433)	(0.042)	(0.043)
Treatment × Strength of connection to party (PCA)	-0.993*	0.016	-0.056	0.002	0.011	5.404	0.015*	0.022	2.014*	0.019	0.036
	(0.519)	(0.018)	(0.334)	(0.010)	(0.075)	(3.884)	(0.009)	(0.028)	(1.185)	(0.029)	(0.028)
Strength of connection to party (PCA)	-1.753***	0.088***	0.438	0.007	0.040	-2.976	-0.000	0.022	-0.409	0.069**	0.067**
	(0.506)	(0.015)	(0.277)	(0.009)	(0.089)	(4.569)	(0.008)	(0.039)	(1.419)	(0.028)	(0.028)
Control mean	16.039	0.487	4.361	0.128	0.651	35.330	0.085	0.263	12.144	-0.017	-0.004
Observations	1397	1395	1395	1411	1411	1411	1411	1411	1411	1395	1395

Notes: Table A7 presents treatment effects for respondents who underestimate the share of fellow party members who plan to participate in the party's door-to-door canvassing campaign for the pooled sample of treatment effects. The treatment variable is defined as 1 for treated underestimators, -1 for treated overestimators, and 0 for control respondents. Outcomes are as defined in Table 1. All regressions include pre-specified controls and a dummy indicating overestimators.

Table A8: Predictors of relationship components of the connection to the party measure

	Strength of connection to party (PCA)				Is party member				Party membership duration				Has experience canvassing			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Number of known members (z)	0.384***			0.308***	0.096***			0.083***	4.788***			3.248***	0.146***			0.128***
	(0.030)			(0.033)	(0.010)			(0.011)	(0.518)			(0.560)	(0.017)			(0.018)
Identification with party (z)		0.136***		0.084**		0.072***		0.059***		1.279**		0.604		0.040**		0.020
		(0.042)		(0.039)		(0.015)		(0.015)		(0.576)		(0.514)		(0.018)		(0.018)
Has career concerns			-0.647***	-0.427***			-0.081***	-0.027			-11.433***	-9.181***			-0.194***	-0.102***
			(0.068)	(0.070)			(0.023)	(0.024)			(1.000)	(1.080)			(0.034)	(0.036)
Control Observations	731	729	720	720	810	808	799	799	740	738	729	729	808	806	797	797

Notes: Table A8 presents the correlations between social connections, party identification, and a dummy indicating career concerns within the party with the party with the proxy for strength to the connection with the party and its components. All independent variables are standardized. Columns (1) to (4) study the correlation with the first principal component of the three pre-specified dimensions of heterogeneity (canvassing experience prior to the federal election, party membership dummy, and party membership duration). Columns (5) to 8) study the correlation with party membership status. Columns (9) to (12) study the correlation with party membership duration. Columns (13) to (16) study the correlation with canvassing experience prior to the federal election. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A9: Treatment effects by canvassing experience

	Posterior	Intentions		App Data			App Data: Week 7/8			Index	
	Belief	Any	Days	Any	Days	Doors	Any	Days	Doors	Overall	Week 7/8
Panel A: Underestimators											
Panel A1: Inexperienced supporters											
Treatment	4.566***	-0.014	-1.356***	-0.010	-0.295*	-25.112***	-0.040**	-0.205***	-11.075***	-0.142**	-0.199***
	(0.738)	(0.032)	(0.447)	(0.018)	(0.171)	(9.638)	(0.016)	(0.077)	(3.474)	(0.056)	(0.058)
Control mean	9.872	0.376	3.382	0.101	0.657	39.110	0.081	0.300	14.187	-0.126	-0.085
Observations	701	700	700	710	710	710	710	710	710	700	700
Panel A2: Experienced supporters											
Treatment	5.675***	0.025	-0.722	-0.015	0.088	3.527	-0.003	-0.045	0.780	-0.012	-0.024
	(0.785)	(0.042)	(0.608)	(0.028)	(0.323)	(13.850)	(0.025)	(0.114)	(4.884)	(0.086)	(0.085)
Control mean	7.850	0.626	5.041	0.158	0.770	37.158	0.090	0.293	11.959	0.122	0.107
Observations	449	448	448	453	453	453	453	453	453	448	448
Panel B: Overestimators											
Panel B1: Inexperienced supporters											
Treatment	-18.640***	-0.059	-1.435	-0.054	-0.182	-8.344	-0.044	-0.064	-5.094	-0.159*	-0.164*
	(2.439)	(0.064)	(1.170)	(0.045)	(0.129)	(9.971)	(0.039)	(0.048)	(4.500)	(0.091)	(0.096)
Control mean	46.211	0.442	5.084	0.137	0.326	15.895	0.084	0.105	6.737	-0.079	-0.069
Observations	168	168	168	168	168	168	168	168	168	168	168
Panel B2: Experienced supporters											
Treatment	-12.179***	-0.101	-0.384	0.034	0.310	-1.601	0.049	0.168	3.191	-0.010	0.036
	(3.111)	(0.099)	(2.696)	(0.062)	(0.584)	(38.897)	(0.065)	(0.158)	(10.280)	(0.196)	(0.174)
Control mean	43.128	0.795	7.385	0.179	0.718	38.641	0.103	0.154	8.179	0.309	0.240
Observations	79	79	79	80	80	80	80	80	80	79	79

Notes: Table A9 presents treatment effects by previous canvassing experience. Panel A shows results for underestimators. Panel B shows results for overestimators. Panel A1 and B1 contain the sample of supporters without previous canvassing experience, Panel A2 and B2 contain the sample of supporters with previous canvassing experience. Outcomes and pre-specified controls are as defined in Table 1. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A10: Treatment effects by party membership

	Posterior Belief	Intentions		App Data			App Data: Week 7/8			Index	
		Any	Days	Any	Days	Doors	Any	Days	Doors	Overall	Week 7/8
Panel A: Underestimators											
Panel A1: Party Member											
Treatment	2.590	0.002	-2.420**	-0.029	-0.506	-36.275*	-0.039*	-0.196	-10.681	-0.227*	-0.222*
	(2.096)	(0.064)	(1.037)	(0.026)	(0.343)	(20.542)	(0.021)	(0.156)	(7.353)	(0.116)	(0.118)
Control mean	13.012	0.367	4.266	0.061	0.573	41.854	0.049	0.183	9.976	-0.129	-0.134
Observations	168	167	167	172	172	172	172	172	172	167	167
Panel A2: No Party Member											
Treatment	5.461***	0.004	-0.857**	-0.009	-0.104	-10.520	-0.025	-0.142*	-6.193**	-0.069	-0.118**
	(0.535)	(0.028)	(0.386)	(0.018)	(0.180)	(8.608)	(0.016)	(0.073)	(3.135)	(0.053)	(0.054)
Control mean	8.434	0.491	3.990	0.133	0.723	37.758	0.090	0.316	13.881	-0.013	0.010
Observations	982	981	981	991	991	991	991	991	991	981	981
Panel B: Overestimators											
Panel B1: Party Member											
Treatment	-24.088***	-0.123	-4.222**	-0.022	-0.101	-11.433	0.024	0.031	-1.727	-0.266*	-0.196
	(4.891)	(0.121)	(1.998)	(0.076)	(0.211)	(21.474)	(0.077)	(0.084)	(5.324)	(0.148)	(0.152)
Control mean	49.556	0.528	7.722	0.194	0.500	45.111	0.111	0.111	11.250	0.177	0.120
Observations	73	73	73	73	73	73	73	73	73	73	73
Panel B2: No Party Member											
Treatment	-13.650***	-0.075	0.880	-0.000	0.101	6.505	-0.026	0.002	0.706	0.014	-0.030
	(2.034)	(0.065)	(1.872)	(0.048)	(0.313)	(15.453)	(0.041)	(0.088)	(5.200)	(0.122)	(0.117)
Control mean	43.755	0.551	5.031	0.133	0.418	14.214	0.082	0.122	5.653	-0.019	-0.016
Observations	174	174	174	175	175	175	175	175	175	174	174

Notes: Table A10 presents treatment effects by party membership. Panel A shows results for underestimators. Panel B shows results for overestimators. Panels A1 and B1 contain the sample of non-party members, Panels A2 and B2 contain the sample of party members. Outcomes and pre-specified controls are as defined in Table 1. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A11: Treatment effects by party membership duration

	Posterior	Intentions		App Data			App Data: Week 7/8			Index	
	Belief	Any	Days	Any	Days	Doors	Any	Days	Doors	Overall	Week 7/8
Panel A: Underestimators											
Panel A1: Below med. membership dur.											
Treatment	4.833***	-0.029	-1.726***	-0.011	-0.193	-23.635*	-0.049**	-0.211**	-10.394**	-0.150**	-0.226***
	(0.831)	(0.037)	(0.563)	(0.024)	(0.236)	(13.268)	(0.022)	(0.091)	(4.430)	(0.073)	(0.073)
Control mean	9.963	0.515	4.677	0.144	0.830	52.609	0.111	0.362	17.107	0.074	0.097
Observations	547	546	546	554	554	554	554	554	554	546	546
Panel A2: Above med. membership dur.											
Treatment	5.293***	0.035	-0.494	-0.015	-0.133	-7.027	-0.008	-0.091	-3.598	-0.039	-0.047
	(0.700)	(0.036)	(0.459)	(0.021)	(0.213)	(8.914)	(0.018)	(0.093)	(3.692)	(0.061)	(0.065)
Control mean	8.293	0.436	3.446	0.104	0.584	25.379	0.060	0.238	9.872	-0.122	-0.106
Observations	603	602	602	609	609	609	609	609	609	602	602
Panel B: Overestimators											
Panel B1: Below med. membership dur.											
Treatment	-19.903***	-0.097	-1.123	-0.017	-0.227	-17.929	-0.023	0.006	-2.429	-0.159	-0.123
	(2.573)	(0.068)	(1.354)	(0.051)	(0.223)	(15.923)	(0.046)	(0.056)	(3.853)	(0.103)	(0.096)
Control mean	46.333	0.580	6.099	0.173	0.531	28.358	0.111	0.111	5.852	0.103	0.065
Observations	158	158	158	159	159	159	159	159	159	158	158
Panel B2: Above med. membership dur.											
Treatment	-10.353***	-0.042	0.776	-0.033	0.000	2.460	0.010	-0.020	-1.192	-0.016	0.004
	(3.002)	(0.099)	(2.739)	(0.055)	(0.236)	(9.736)	(0.049)	(0.089)	(5.559)	(0.158)	(0.156)
Control mean	43.755	0.491	5.226	0.113	0.302	13.585	0.057	0.132	9.151	-0.072	-0.046
Observations	89	89	89	89	89	89	89	89	89	89	89

Notes: Table A11 presents treatment effects by party membership duration. Panel A shows results for under-estimators. Panel B shows results for overestimators. Panels A1 and B1 contain the sample of supporters who have a below median party membership duration (including non-members), Panels A2 and B2 contain the sample of supporters who have above median membership duration. Outcomes and pre-specified controls are as defined in Table 1. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A12: Treatment effects and strength of connection to the party - controlling for treatment interaction with covariates

	Posterior	Intentions		App Data			App Data: Week 7/8			Index	
	Belief	Any	Days	Any	Days	Doors	Any	Days	Doors	Overall	Week 7/8
Panel A: Underestimators											
Treatment	5.022***	0.008	-1.107***	-0.013	-0.159	-15.568*	-0.028**	-0.148**	-7.048**	-0.093*	-0.134***
	(0.560)	(0.026)	(0.371)	(0.016)	(0.163)	(8.160)	(0.014)	(0.064)	(2.856)	(0.048)	(0.049)
Treatment × Strength of	0.067	0.007	0.774*	0.017	0.205	18.469**	0.022	0.021	5.062	0.099*	0.082
connection to party (PCA)	(0.824)	(0.032)	(0.470)	(0.017)	(0.191)	(9.400)	(0.016)	(0.084)	(3.095)	(0.057)	(0.059)
Strength of	-1.993***	0.086***	-0.094	0.006	-0.058	-9.072	-0.001	0.026	-1.960	0.026	0.040
connection to party (PCA)	(0.654)	(0.023)	(0.424)	(0.012)	(0.170)	(8.117)	(0.013)	(0.079)	(2.759)	(0.048)	(0.051)
Control mean	9.083	0.473	4.028	0.123	0.701	38.348	0.084	0.297	13.318	-0.029	-0.010
Observations	1150	1148	1148	1163	1163	1163	1163	1163	1163	1148	1148
Panel B: Overestimators											
Treatment	-14.112***	-0.092	-0.141	-0.006	-0.073	-5.704	0.001	0.019	-0.568	-0.078	-0.052
	(1.861)	(0.059)	(1.304)	(0.037)	(0.184)	(10.632)	(0.035)	(0.056)	(2.962)	(0.088)	(0.083)
Treatment × Strength of	4.749*	-0.035	2.037	0.037	0.186	6.479	-0.012	0.024	3.052	0.113	0.063
connection to party (PCA)	(2.666)	(0.060)	(1.295)	(0.036)	(0.246)	(15.751)	(0.036)	(0.064)	(3.761)	(0.102)	(0.094)
Strength of	-4.831**	0.129***	-0.014	-0.037	-0.010	-5.970	-0.011	0.005	-1.874	0.029	0.051
connection to party (PCA)	(2.120)	(0.043)	(0.907)	(0.024)	(0.100)	(7.702)	(0.023)	(0.030)	(2.158)	(0.058)	(0.057)
Control mean	45.313	0.545	5.754	0.149	0.440	22.515	0.090	0.119	7.157	0.034	0.021
Observations	247	247	247	248	248	248	248	248	248	247	247

Notes: Table A12 presents treatment effects interacted with a summary measure of connectedness to the party for respondents who underestimate the share of fellow party members who plan to participate in the party's door-to-door canvassing campaign. Panel A shows results for underestimators. Panel B shows results for overestimators. The measure for strength of connection to the party is the first principal component of three pre-specified dimensions of heterogeneity (previous canvassing experience, party membership and party membership duration). This summary measure is standardized to have mean zero and standard deviation one. Outcomes and pre-specified controls are as defined in Table 1. The regressions also control for interaction terms between standardized covariates and the treatment dummy (excluding the components of connectedness measure). * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A13: Treatment effects by local canvassing activity

	Intentions		App Data			App Data: Week 7/8			Index	
	Any	Days	Any	Days	Doors	Any	Days	Doors	Overall	Week 7/8
Panel A: Pooled sample										
Treatment	-0.001	-0.695	-0.017	0.208	4.659	-0.024	-0.026	1.410	-0.016	-0.052
	(0.049)	(1.077)	(0.055)	(0.493)	(21.555)	(0.048)	(0.195)	(7.660)	(0.133)	(0.135)
Treatment × Local doors (1000s)	0.000	-0.217	0.000	-0.135	-10.682*	-0.009	-0.082*	-4.483*	-0.040	-0.057*
	(0.007)	(0.169)	(0.009)	(0.101)	(5.610)	(0.009)	(0.046)	(2.289)	(0.028)	(0.031)
Local doors (1000s)	0.004	0.140	0.016**	0.189**	15.571***	0.016**	0.095**	6.037***	0.066***	0.073***
	(0.005)	(0.151)	(0.007)	(0.090)	(5.003)	(0.007)	(0.044)	(2.105)	(0.023)	(0.028)
Control mean	0.782	7.627	0.405	2.063	111.878	0.270	0.833	38.455	0.759	0.713
Observations	426	426	427	427	427	427	427	427	426	426
Panel B: Underestimators										
Treatment	0.005	-1.367	-0.069	0.149	6.358	-0.067	-0.122	-1.379	-0.083	-0.151
	(0.055)	(0.997)	(0.060)	(0.602)	(25.715)	(0.053)	(0.238)	(9.171)	(0.154)	(0.157)
Treatment × Local doors (1000s)	-0.001	-0.163	0.011	-0.134	-11.726**	-0.003	-0.080	-4.211*	-0.032	-0.048
	(0.007)	(0.169)	(0.009)	(0.105)	(5.857)	(0.009)	(0.049)	(2.365)	(0.029)	(0.033)
Local doors (1000s)	0.006	0.138	0.008	0.164*	14.935***	0.009	0.087*	5.397**	0.057**	0.063**
	(0.004)	(0.158)	(0.007)	(0.097)	(5.355)	(0.007)	(0.047)	(2.148)	(0.025)	(0.029)
Control mean	0.782	7.288	0.407	2.320	126.860	0.279	0.983	44.058	0.803	0.774
Observations	340	340	341	341	341	341	341	341	340	340
Panel C: Overestimators										
Treatment	-0.014	2.062	0.212*	0.340	-11.110	0.133	0.233	9.256	0.244	0.292
	(0.102)	(3.618)	(0.122)	(0.447)	(27.806)	(0.108)	(0.150)	(10.350)	(0.236)	(0.227)
Treatment × Local doors (1000s)	0.007	-0.447	-0.079***	-0.174	-3.736	-0.052*	-0.076	-6.882	-0.098	-0.113
	(0.027)	(0.515)	(0.020)	(0.169)	(12.387)	(0.028)	(0.070)	(7.434)	(0.065)	(0.095)
Local doors (1000s)	-0.016	0.027	0.076***	0.342***	16.775*	0.060**	0.114*	10.045	0.116**	0.125
	(0.024)	(0.381)	(0.014)	(0.070)	(8.980)	(0.024)	(0.057)	(7.176)	(0.049)	(0.086)
Control mean	0.780	8.780	0.400	1.180	60.340	0.240	0.320	19.180	0.606	0.505
Observations	86	86	86	86	86	86	86	86	86	86

Notes: Table A13 presents treatment effects by doors canvassed locally. The measure of total doors canvassed locally includes all doors canvassed in the locality of a given respondent excluding that respondent's own doors. This measure is winsorized at the 99th percentile. Sample is restricted to respondents who downloaded the application for whom we observe their locality as recorded during the sign up for the application. Panel A displays treatment effects for the full sample. Panel B displays treatment effects for underestimators. Panel C displays treatment effects for overestimators. Outcomes and pre-specified controls are as defined in Table 1. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A14: Treatment effects by local cohesion

	Belief	Intentions		App Data			App Data: Week 7/8			Index	
	% canvassing	Any	Days	Any	Days	Doors	Any	Days	Doors	Overall	Week 7/8
Panel A: Pooled sample											
Treatment	1.192	-0.003	-1.926**	-0.016	-0.442	-41.128*	-0.064	-0.412**	-20.767**	-0.209*	-0.336***
	(1.023)	(0.039)	(0.875)	(0.046)	(0.463)	(23.283)	(0.041)	(0.189)	(8.187)	(0.126)	(0.130)
Treatment × Local cohesion	-1.661	0.053	0.610	0.146**	0.839	35.227	0.105*	0.288	18.625*	0.313*	0.310*
	(1.362)	(0.050)	(1.042)	(0.063)	(0.639)	(25.998)	(0.062)	(0.252)	(10.531)	(0.162)	(0.175)
Local cohesion	0.936	-0.012	-0.036	-0.066	-0.278	-18.802	-0.025	-0.059	-8.325	-0.123	-0.087
	(0.878)	(0.037)	(0.903)	(0.043)	(0.437)	(19.908)	(0.043)	(0.212)	(9.151)	(0.120)	(0.142)
Control mean	17.584	0.797	8.025	0.412	2.211	118.593	0.276	0.899	42.206	0.814	0.776
Observations	414	414	414	416	416	416	416	416	416	414	414
Panel B: Underestimators											
Treatment	6.038***	0.009	-2.473***	-0.029	-0.623	-51.769*	-0.089*	-0.560**	-25.774***	-0.272*	-0.433***
	(0.822)	(0.044)	(0.863)	(0.051)	(0.565)	(27.256)	(0.045)	(0.234)	(9.669)	(0.146)	(0.151)
Treatment × Local cohesion	-2.485**	-0.013	-0.385	0.117*	0.698	16.969	0.116*	0.272	12.989	0.172	0.219
	(1.018)	(0.053)	(1.138)	(0.070)	(0.787)	(31.239)	(0.070)	(0.318)	(12.160)	(0.191)	(0.205)
Local cohesion	1.562**	0.025	0.372	-0.080*	-0.261	-13.385	-0.058	-0.081	-4.325	-0.088	-0.070
	(0.687)	(0.038)	(1.023)	(0.046)	(0.542)	(22.862)	(0.046)	(0.262)	(9.995)	(0.135)	(0.158)
Control mean	8.432	0.804	7.736	0.413	2.540	137.220	0.287	1.087	49.600	0.879	0.862
Observations	328	328	328	330	330	330	330	330	330	328	328
Panel C: Overestimators											
Treatment	-17.367***	-0.024	0.825	-0.013	0.039	-8.701	-0.037	0.043	-4.161	-0.006	-0.029
	(3.579)	(0.085)	(2.879)	(0.111)	(0.643)	(37.141)	(0.106)	(0.179)	(12.098)	(0.231)	(0.226)
Treatment × Local cohesion	-0.852	0.280***	6.785**	0.176	0.571	53.089	-0.009	0.075	28.484	0.685**	0.541*
	(3.354)	(0.098)	(3.236)	(0.138)	(0.649)	(48.607)	(0.133)	(0.236)	(22.962)	(0.295)	(0.324)
Local cohesion	1.390	-0.141*	-2.683	-0.010	-0.221	-32.339	0.097	0.031	-22.440	-0.261	-0.181
	(2.554)	(0.080)	(2.000)	(0.103)	(0.538)	(41.137)	(0.100)	(0.198)	(20.691)	(0.234)	(0.278)
Control mean	45.224	0.776	8.898	0.408	1.204	61.571	0.245	0.327	19.571	0.619	0.515
Observations	86	86	86	86	86	86	86	86	86	86	86

Notes: Table A14 presents treatment effects by local cohesion within the party. Local cohesion is measured in the post-election survey using the question: "How strong the cohesion in your local party chapter". Answers were scaled from 0 (very weak) to 6 (very strong). Individual responses were then collapsed at the level of the first three digits of the zip-code and standardized. The data was then merged to the experimental survey. Sample is restricted to respondents who downloaded the application for whom we observe their location as recorded during the sign up for the application. Cohesion data is missing for 19 localities with no observations in the post-election survey. Panel A displays treatment effects for the full sample. Panel B displays treatment effects for underestimators. Panel C displays treatment effects for overestimators. Outcomes and pre-specified controls are as defined in Table 1. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A15: Treatment effects by application download

	Posterior	Intentions		App Data			App Data: Week 7/8			Index	
	Belief	Any	Days	Any	Days	Doors	Any	Days	Doors	Overall	Week 7/8
Panel A: Underestimators											
Panel A1: No app download											
Treatment	4.341***	-0.001	-0.813**	-0.003	-0.144	-8.556*	-0.015	-0.091*	-3.218*	-0.062*	-0.081**
	(0.664)	(0.031)	(0.404)	(0.011)	(0.093)	(4.536)	(0.009)	(0.049)	(1.696)	(0.038)	(0.040)
Control mean	9.438	0.366	2.908	0.026	0.206	10.848	0.026	0.114	4.241	-0.304	-0.252
Observations	844	842	842	855	855	855	855	855	855	842	842
Panel A2: App download											
Treatment	6.816***	0.000	-1.985**	-0.037	-0.119	-26.455	-0.057	-0.259	-13.605	-0.168	-0.259*
	(0.839)	(0.045)	(0.786)	(0.051)	(0.531)	(26.353)	(0.045)	(0.193)	(9.169)	(0.142)	(0.142)
Control mean	8.000	0.799	7.439	0.418	2.206	121.823	0.262	0.851	40.872	0.808	0.727
Observations	306	306	306	308	308	308	308	308	308	306	306
Panel B: Overestimators											
Panel B1: No app download											
Treatment	-16.408***	-0.111	-1.019	-0.006	-0.022	-1.429	-0.005	-0.005	0.198	-0.106	-0.101
	(2.350)	(0.069)	(1.295)	(0.032)	(0.067)	(2.086)	(0.022)	(0.022)	(0.312)	(0.082)	(0.076)
Control mean	45.432	0.421	3.737	0.032	0.074	2.105	0.021	0.021	0.095	-0.270	-0.240
Observations	172	172	172	173	173	173	173	173	173	172	172
Panel B2: App download											
Treatment	-15.388***	0.011	0.438	-0.032	-0.250	-22.830	0.001	0.025	-10.017	-0.069	-0.020
	(3.552)	(0.088)	(3.329)	(0.112)	(0.604)	(39.036)	(0.104)	(0.184)	(16.135)	(0.247)	(0.256)
Control mean	45.026	0.846	10.667	0.436	1.333	72.231	0.256	0.359	24.359	0.775	0.658
Observations	75	75	75	75	75	75	75	75	75	75	75

Notes: Table A15 presents treatment effects by whether respondents had downloaded the application prior to the experiment. Panel A shows results for underestimators. Panel B shows results for overestimators. Panels A1 and B1 contain the sample of supporters who had not downloaded the application before the treatment, Panels A2 and B2 contain the sample of supporters who had downloaded the application before the treatment. Outcomes and pre-specified controls are as defined in Table 1. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Results without pre-specified controls

Table A16: Main effects (no control)

	Belief	Intentions		App Data			App Data: Week 7/8			Index	
	% canvassing	Any	Days	Any	Days	Doors	Any	Days	Doors	Overall	Week 7/8
Panel A: Underestimators											
Panel A1: Average treatment effect											
Treatment	4.982***	0.013	-1.081***	-0.009	-0.166	-14.784*	-0.024	-0.144**	-6.764**	-0.082	-0.121**
	(0.547)	(0.030)	(0.390)	(0.019)	(0.168)	(8.456)	(0.015)	(0.067)	(2.944)	(0.057)	(0.055)
Panel A2: Interaction with strength of connection to the party											
Treatment	4.857***	0.014	-1.131***	-0.008	-0.174	-16.116*	-0.025	-0.147**	-7.155**	-0.087	-0.127**
	(0.563)	(0.029)	(0.397)	(0.019)	(0.167)	(8.667)	(0.015)	(0.066)	(2.992)	(0.058)	(0.056)
Treatment × Strength of connection to party (PCA)	0.769	0.035	0.833**	0.002	0.141	16.600**	0.022*	0.059	5.336**	0.097*	0.111**
	(0.666)	(0.030)	(0.380)	(0.015)	(0.153)	(7.314)	(0.012)	(0.066)	(2.364)	(0.051)	(0.050)
Strength of connection to party (PCA)	-1.423***	0.034	-0.225	0.006	-0.041	-10.916*	-0.009	-0.017	-2.883	-0.011	-0.018
	(0.504)	(0.021)	(0.334)	(0.012)	(0.139)	(6.563)	(0.010)	(0.063)	(2.116)	(0.043)	(0.043)
Control mean	9.083	0.473	4.028	0.123	0.701	38.348	0.084	0.297	13.318	-0.029	-0.010
Observations	1150	1148	1148	1163	1163	1163	1163	1163	1163	1148	1148
Panel B: Overestimators											
Panel B1: Average treatment effect											
Treatment	-16.782***	-0.049	-0.391	-0.000	0.051	-1.445	0.007	0.038	-0.937	-0.037	-0.028
	(1.964)	(0.064)	(1.292)	(0.046)	(0.237)	(13.654)	(0.037)	(0.069)	(4.486)	(0.115)	(0.107)
Panel B2: Interaction with strength of connection to the party											
Treatment	-14.862***	-0.049	0.338	0.004	0.087	1.837	0.008	0.041	-0.104	0.002	0.003
	(1.931)	(0.067)	(1.532)	(0.046)	(0.279)	(14.271)	(0.037)	(0.078)	(4.784)	(0.126)	(0.115)
Treatment × Strength of connection to party (PCA)	5.800***	-0.000	2.209	0.012	0.110	9.920	0.002	0.008	2.527	0.118	0.095
	(2.190)	(0.063)	(1.480)	(0.043)	(0.197)	(12.583)	(0.035)	(0.056)	(3.419)	(0.116)	(0.106)
Strength of connection to party (PCA)	-3.149*	0.046	-0.510	-0.024	0.000	-7.787	-0.020	-0.000	-1.688	-0.026	-0.021
	(1.827)	(0.044)	(1.063)	(0.033)	(0.104)	(8.552)	(0.023)	(0.031)	(2.540)	(0.081)	(0.072)
Control mean	45.313	0.545	5.754	0.149	0.440	22.515	0.090	0.119	7.157	0.034	0.021
Observations	247	247	247	248	248	248	248	248	248	247	247

Notes: Table A16 presents main treatment effects. Panel A displays effects for underestimators. Panel B displays effects for overestimators. Panels A1 and B1 display average treatment effects. Panels A2 and B2 display treatment effects interacted with a summary measure of connectedness to the party. The measure for strength of connection to the party is the first principal component of three pre-specified dimensions of heterogeneity (previous canvassing experience, party membership and party membership duration). This summary measure is standardized to have mean zero and standard deviation one. Outcomes are as defined in Table 1. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A17: Treatment effects on application download (no controls)

	Survey	App Data		
	click on app-link	within 24h	within one week	any time after survey
Panel A: Underestimators				
Treatment	-0.009	0.004	-0.006	0.009
	(0.011)	(0.008)	(0.009)	(0.014)
Observations	1163	1163	1163	1163
Control group mean	0.04	0.02	0.03	0.05
Panel B: Overestimators				
Treatment	-0.007	0.014	0.007	-0.021
	(0.029)	(0.024)	(0.025)	(0.033)
Observations	248	248	248	248
Control group mean	0.06	0.03	0.04	0.08

Notes: Table A17 presents treatment effects on application download without pre-specified controls. Panel A displays effects for underestimators. Panel B displays effects for overestimators. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A18: Treatment effects by canvassing experience (no controls)

	Posterior Belief	Intentions		App Data			App Data: Week 7/8			Index	
		Any	Days	Any	Days	Doors	Any	Days	Doors	Overall	Week 7/8
Panel A: Underestimators											
Panel A1: Inexperienced supporters											
Treatment	4.641***	0.002	-1.259***	0.001	-0.258	-23.253**	-0.034*	-0.190**	-10.656***	-0.111	-0.173**
	(0.736)	(0.037)	(0.482)	(0.023)	(0.190)	(10.407)	(0.018)	(0.082)	(3.679)	(0.070)	(0.069)
Control mean	9.872	0.376	3.382	0.101	0.657	39.110	0.081	0.300	14.187	-0.126	-0.085
Observations	701	700	700	710	710	710	710	710	710	700	700
Panel A2: Experienced supporters											
Treatment	5.517***	0.029	-0.810	-0.023	-0.021	-1.482	-0.008	-0.072	-0.656	-0.037	-0.042
	(0.794)	(0.045)	(0.642)	(0.033)	(0.312)	(14.327)	(0.026)	(0.114)	(4.883)	(0.096)	(0.091)
Control mean	7.850	0.626	5.041	0.158	0.770	37.158	0.090	0.293	11.959	0.122	0.107
Observations	449	448	448	453	453	453	453	453	453	448	448
Panel B: Overestimators											
Panel B1: Inexperienced supporters											
Treatment	-18.772***	-0.031	-0.988	-0.027	-0.135	-7.100	-0.029	-0.050	-4.655	-0.100	-0.114
	(2.363)	(0.077)	(1.368)	(0.051)	(0.133)	(10.562)	(0.039)	(0.049)	(4.617)	(0.117)	(0.113)
Control mean	46.211	0.442	5.084	0.137	0.326	15.895	0.084	0.105	6.737	-0.079	-0.069
Observations	168	168	168	168	168	168	168	168	168	168	168
Panel B2: Experienced supporters											
Treatment	-12.603***	-0.145	0.290	0.040	0.306	4.286	0.068	0.188	5.406	0.009	0.074
	(3.459)	(0.101)	(2.736)	(0.090)	(0.631)	(34.890)	(0.077)	(0.170)	(9.186)	(0.240)	(0.208)
Control mean	43.128	0.795	7.385	0.179	0.718	38.641	0.103	0.154	8.179	0.309	0.240
Observations	79	79	79	80	80	80	80	80	80	79	79

Notes: Table A18 presents treatment effects without pre-specified controls. Panel A displays effects for underestimators. Panel B displays effects for overestimators. Panels A1 and B1 contain the sample of supporters without previous canvassing experience, Panels A2 and B2 contain the sample of supporters with previous canvassing experience. Outcomes are as defined in Table 1. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A19: Treatment effects by party membership (no controls)

	Posterior	Intentions		App Data			App Data: Week 7/8			Index	
	Belief	Any	Days	Any	Days	Doors	Any	Days	Doors	Overall	Week 7/8
Panel A: Underestimators											
Panel A1: Party Member											
Treatment	2.851	-0.026	-2.595**	-0.050*	-0.551*	-41.143*	-0.049**	-0.183	-9.976	-0.282**	-0.249**
	(2.018)	(0.075)	(1.067)	(0.029)	(0.304)	(21.282)	(0.024)	(0.128)	(6.123)	(0.128)	(0.118)
Control mean	13.012	0.367	4.266	0.061	0.573	41.854	0.049	0.183	9.976	-0.129	-0.134
Observations	168	167	167	172	172	172	172	172	172	167	167
Panel A2: No Party Member											
Treatment	5.313***	0.021	-0.817*	-0.001	-0.096	-10.113	-0.019	-0.136*	-6.157*	-0.045	-0.097
	(0.537)	(0.032)	(0.419)	(0.022)	(0.190)	(9.235)	(0.017)	(0.075)	(3.289)	(0.063)	(0.061)
Control mean	8.434	0.491	3.990	0.133	0.723	37.758	0.090	0.316	13.881	-0.013	0.010
Observations	982	981	981	991	991	991	991	991	991	981	981
Panel B: Overestimators											
Panel B1: Party Member											
Treatment	-23.204***	-0.122	-4.884**	-0.032	-0.068	-20.544	0.051	0.105	-3.899	-0.311	-0.186
	(4.422)	(0.118)	(1.883)	(0.091)	(0.302)	(30.511)	(0.081)	(0.110)	(8.191)	(0.213)	(0.201)
Control mean	49.556	0.528	7.722	0.194	0.500	45.111	0.111	0.111	11.250	0.177	0.120
Observations	73	73	73	73	73	73	73	73	73	73	73
Panel B2: No Party Member											
Treatment	-14.163***	-0.012	1.561	0.010	0.101	5.175	-0.017	0.007	0.022	0.080	0.037
	(2.122)	(0.077)	(1.690)	(0.053)	(0.320)	(15.464)	(0.040)	(0.086)	(5.486)	(0.140)	(0.127)
Control mean	43.755	0.551	5.031	0.133	0.418	14.214	0.082	0.122	5.653	-0.019	-0.016
Observations	174	174	174	175	175	175	175	175	175	174	174

Notes: Table A19 presents treatment effects without pre-specified controls. Panel A displays effects for underestimators. Panel B displays effects for overestimators. Panels A1 and B1 contain the sample of non-party members, Panels A2 and B2 contain the sample of party members. Outcomes are as defined in Table 1. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A20: Treatment effects by party membership duration (no controls)

	Posterior	Intentions		App Data			App Data: Week 7/8			Index	
	Belief	Any	Days	Any	Days	Doors	Any	Days	Doors	Overall	Week 7/8
Panel A: Underestimators											
Panel A1: Below med. membership dur.											
Treatment	4.895***	-0.015	-1.666***	-0.003	-0.194	-23.181	-0.044*	-0.203**	-10.199**	-0.134	-0.209**
	(0.847)	(0.043)	(0.604)	(0.030)	(0.258)	(14.615)	(0.024)	(0.096)	(4.630)	(0.091)	(0.086)
Control mean	9.963	0.515	4.677	0.144	0.830	52.609	0.111	0.362	17.107	0.074	0.097
Observations	547	546	546	554	554	554	554	554	554	546	546
Panel A2: Above med. membership dur.											
Treatment	5.047***	0.038	-0.557	-0.014	-0.140	-7.151	-0.006	-0.090	-3.641	-0.036	-0.043
	(0.703)	(0.041)	(0.502)	(0.024)	(0.219)	(9.116)	(0.019)	(0.093)	(3.722)	(0.071)	(0.071)
Control mean	8.293	0.436	3.446	0.104	0.584	25.379	0.060	0.238	9.872	-0.122	-0.106
Observations	603	602	602	609	609	609	609	609	609	602	602
Panel B: Overestimators											
Panel B1: Below med. membership dur.											
Treatment	-20.035***	-0.074	-1.216	0.019	0.085	-1.999	0.004	0.081	1.417	-0.061	-0.051
	(2.581)	(0.080)	(1.413)	(0.062)	(0.336)	(20.057)	(0.051)	(0.087)	(5.119)	(0.147)	(0.129)
Control mean	46.333	0.580	6.099	0.173	0.531	28.358	0.111	0.111	5.852	0.103	0.065
Observations	158	158	158	159	159	159	159	159	159	158	158
Panel B2: Above med. membership dur.											
Treatment	-10.449***	-0.018	1.162	-0.058	-0.080	-3.974	-0.001	-0.049	-5.206	-0.028	-0.006
	(3.038)	(0.109)	(2.696)	(0.059)	(0.232)	(11.224)	(0.050)	(0.098)	(7.830)	(0.183)	(0.188)
Control mean	43.755	0.491	5.226	0.113	0.302	13.585	0.057	0.132	9.151	-0.072	-0.046
Observations	89	89	89	89	89	89	89	89	89	89	89

Notes: Table A20 presents treatment effects without pre-specified controls. Panel A displays effects for underestimators. Panel B displays effects for overestimators. Panels A1 and B1 contain the sample of supporters who have a below median party membership duration (including non-members), Panels A2 and B2 contain the sample of supporters who have above median membership duration. Outcomes are as defined in Table 1.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A21: Treatment effects by application download (no controls)

	Posterior	Intentions		App Data			App Data: Week 7/8			Index	
	Belief	Any	Days	Any	Days	Doors	Any	Days	Doors	Overall	Week 7/8
Panel A: Underestimators											
Panel A1: No app download											
Treatment	4.238***	0.011	-0.719*	-0.002	-0.142	-8.305*	-0.014	-0.091*	-3.107*	-0.051	-0.070*
	(0.669)	(0.033)	(0.415)	(0.011)	(0.095)	(4.548)	(0.009)	(0.050)	(1.715)	(0.040)	(0.042)
Control mean	9.438	0.366	2.908	0.026	0.206	10.848	0.026	0.114	4.241	-0.304	-0.252
Observations	844	842	842	855	855	855	855	855	855	842	842
Panel A2: App download											
Treatment	7.042***	-0.038	-2.589***	-0.071	-0.463	-44.511	-0.077	-0.366*	-20.459**	-0.307*	-0.380**
	(0.882)	(0.048)	(0.854)	(0.056)	(0.546)	(28.324)	(0.048)	(0.205)	(9.929)	(0.158)	(0.156)
Control mean	8.000	0.799	7.439	0.418	2.206	121.823	0.262	0.851	40.872	0.808	0.727
Observations	306	306	306	308	308	308	308	308	308	306	306
Panel B: Overestimators											
Panel B1: No app download											
Treatment	-16.471***	-0.070	-0.438	-0.006	-0.022	-1.054	-0.008	-0.008	0.149	-0.062	-0.063
	(2.419)	(0.075)	(1.192)	(0.025)	(0.056)	(1.574)	(0.020)	(0.020)	(0.255)	(0.080)	(0.077)
Control mean	45.432	0.421	3.737	0.032	0.074	2.105	0.021	0.021	0.095	-0.270	-0.240
Observations	172	172	172	173	173	173	173	173	173	172	172
Panel B2: App download											
Treatment	-17.415***	-0.041	-0.889	-0.019	0.111	-7.786	0.021	0.113	-5.192	-0.072	-0.032
	(3.376)	(0.089)	(3.014)	(0.116)	(0.717)	(43.106)	(0.104)	(0.205)	(14.481)	(0.264)	(0.248)
Control mean	45.026	0.846	10.667	0.436	1.333	72.231	0.256	0.359	24.359	0.775	0.658
Observations	75	75	75	75	75	75	75	75	75	75	75

Notes: Table A21 presents treatment effects without pre-specified controls. Panel A displays effects for underestimators. Panel B displays effects for overestimators. Panels A1 and B1 contain the sample of supporters who had not downloaded the application before the treatment, Panels A2 and B2 contain the sample of supporters who had downloaded the application before the treatment. Outcomes are as defined in Table 1. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

G   Mechanism survey

G.1   Instructions

This section describes the vignette fielded in 2022 among potential political activists in our country of study.

- Think of the following hypothetical scenario: A federal election is coming up and political parties are organizing their canvassing activities.
  You think about canvassing to support your favorite party.
  Your favorite party sends you the results of a survey among party members. This survey shows that more members than you had previously thought plan to participate in the canvassing campaign.

- How would the results of this survey affect your decision to participate in the canvassing campaign?

  - I would rather participate more.

  - The results would not affect my decision.

  - I would rather participate less.

- Why would the results of the survey affect or not affect your decision? Please answer using whole sentences.

PAGEBREAK

- Why would the results of the survey affect or not affect your decision to participate in the canvassing campaign? Please select all relevant options.
  If other party members canvass more than I thought

  - then the task will be done by others and my own activity will be less useful for the party.

  - this strengthens my feelings of belonging and identity with the party and hence my motivation to canvass.

- then I would think that my engagement would be received more positively by society at large.

- then I would be more motivated because others also do their part.

- then the canvassing would be more fun.

- then the usefulness of my canvassing activity for the party would be larger.

- then I would feel obliged to do my part for the party.

- then it would be more useful if I did other activities for the party.

- this doesn't influence my decision because I act out of conviction.

- this doesn't influence my decision because the opinion of other party members does not matter to me.

G.2 Coding scheme for open text questions

Table A22: Coding scheme for open text data on social motives

Name	Explanation	Example from open text data
Free-riding	Reducing effort because your own effort is not as needed anymore or because the return to individual canvassing declines.	"I assume that the impact my canvassing effort would decrease - every additional volunteer and every additional conversation would, in my opinion, have a lower impact than the previous."
Substitution	Reducing canvassing effort and increasing effort on another campaign activity.	"I think it makes sense to try less popular campaign activities."
Enjoyment	Increasing canvassing because canvassing is more fun the more people participate.	"It would probably be the case that if more people participated, the mood would also be different; it would be a fun event."
Identity	Increasing canvassing because of an increased feeling of identity with or belonging to the party.	"This would probably strengthen my feeling of belonging to the group."
Increasing returns	Increasing canvassing because the (perceived) returns to canvassing increased.	"The survey results would motivate me, because I would now think that my effort counts now more than ever and we can really make a difference."
Social image	Increasing canvassing because i) canvassing is less stigmatized when more people canvass, or ii) not canvassing is more stigmatized by others.	"Because I would be under the impression that canvassing would be desired within the party and in all likelihood also in society more general."
Reciprocity	Increasing canvassing because others also do their part.	"Somewhat higher willingness [to canvass] to demonstrate solidarity."
Other motivation	Increase in canvassing due to a general increase in motivation.	"High levels of mobilization motivate me."

Notes: Table A22 displays the coding scheme employed to code the open text responses. All responses were hand-coded by two researchers and any differences were reconciled through discussion. We pre-specified an additional category of social pressure which we merged into social image because of very low prevalence.

G.3 Comparing hand-coded and structured responses

Table A23: Validation of hand-coded responses

	Enjoyment	Identity	Incr. returns	Social image	Reciprocity	Free-riding	Substitution
% hand-coded who also chose structured option	100.00	100.00	71.43	100.00	100.00	85.11	91.67
Hand-coded mean	0.040	0.060	0.047	0.013	0.007	0.313	0.080
Structured mean	0.293	0.320	0.087	0.160	0.213	0.360	0.360

Notes: Table A23 presents the relationship between hand-coded motives and structured responses for whole sample. The sample (N=150) was recruited through social media posts in groups of potential political activists.

G.4 Summary statistics

Table A24: Summary statistics mechanism survey

	Mean	SD	Median	Min.	Max.	Obs.
Male	0.49	0.50	0.00	0.00	1.00	150
Age	30.03	9.65	27.00	18.00	74.00	150
Party member: any	0.35	0.48	0.00	0.00	1.00	150
Years party member	2.06	4.60	0.00	0.00	30.00	150
Experience canvassing	0.18	0.39	0.00	0.00	1.00	150
Supporter: Collaborating party	0.24	0.43	0.00	0.00	1.00	150

Notes: Table A24 presents summary statistics for the mechanism survey sample which was collected in March 2022. The sample (N=150) was recruited through social media posts in groups of potential political activists.

G.5 Additional mechanism results

To analyze the motives of individuals coded as "other motivation" in more detail, Panel B of Figure A10 displays the structured responses for this subgroup.[22] Identity and enjoyment are also very prevalent while increasing returns to canvassing are less common. Reciprocity emerges as another prevalent motivation among respondents whose open-ended responses we could not classify. Considering the open text and structured responses together, our data suggests that social motives such as increased identity with the party and increased enjoyment of the activity are most common for respondents who exhibit strategic complementarity.[23]

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[22]Panels A and C display the distribution of motives according to the structured responses for respondents with strategic complementarity and substitutability, respectively.

[23]None of our respondents mentioned changes in career incentives arising from higher peer participation. Moreover, social motives were not mentioned as a reason for a decrease in effort levels.

Figure A10: Strategic interactions and stated motives (structured responses)
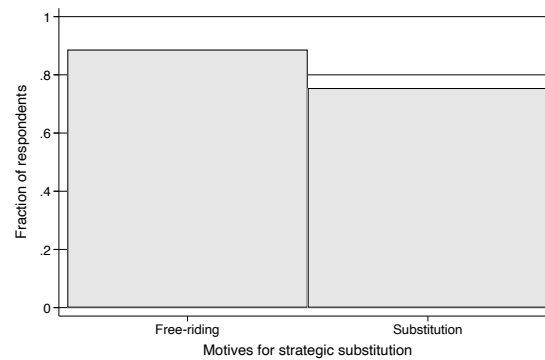
Panel A Motives among those with strategic complementarity
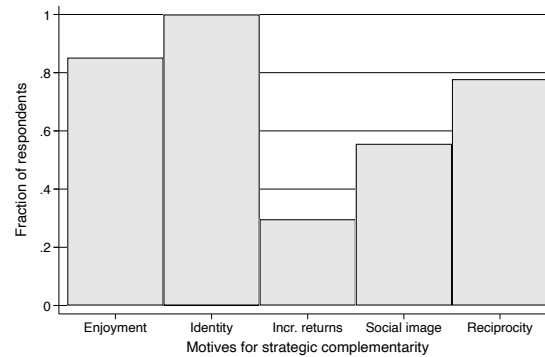
**Panel B:** Motives among those in "other motivation" category
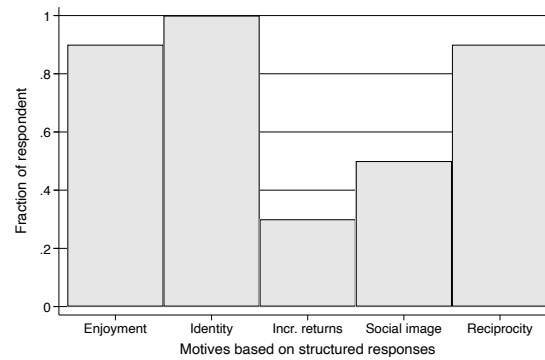
**Panel C:** Motives among those with strategic substitutability

Notes: Panel A of Figure A10 displays the motives for those respondents who exhibit strategic complementarity. Panel B of Figure A10 displays motives based on structured responses for those who were coded as "other motivation" in the open text response (see Figure 2 for details). Panel C of Figure A10 displays the motives for those respondents who exhibit strategic substitutability. Motives are measured using eight answer options (selecting multiple motives was possible). The sample (N=150) was recruited through social media posts in groups of potential political activists. Section G describes the vignette survey in detail.

Figure A11: Mechanism survey results by connectedness index

Panel A Strategic response patterns
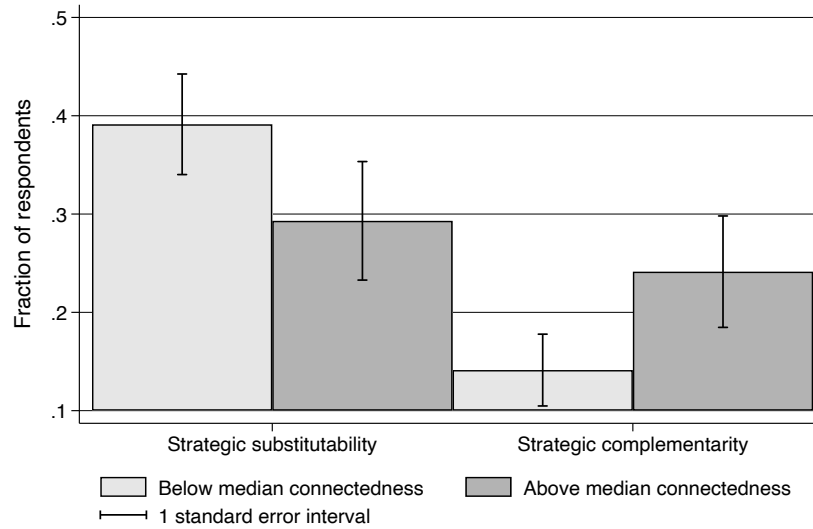
Panel B: Prevalence of social and free-riding motives
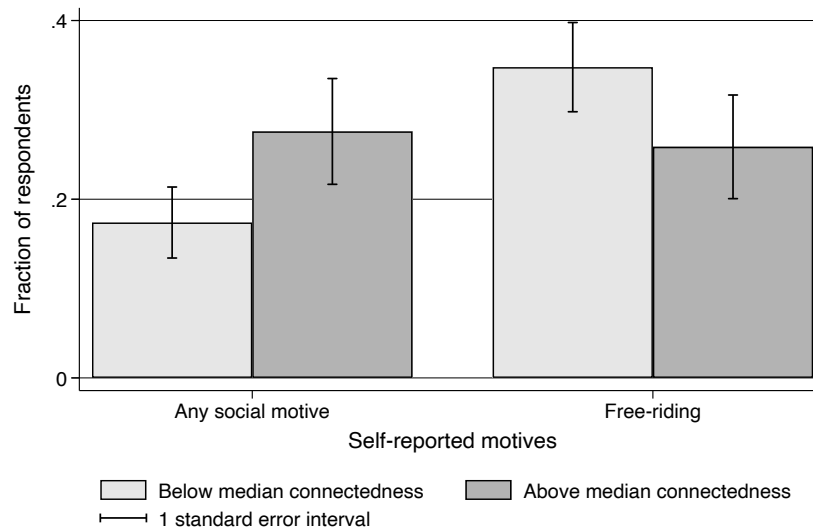
Notes: Panel A of Figure A11 displays the prevalence of strategic substitutability and strategic complementarity by the connectedness index among respondents to the mechanism survey. Panel B of Figure A11 displays the prevalence of social and free-riding motives by respondents' connectedness index. The connectedness index was constructed in parallel to the main experimental survey. The sample (N=150) was recruited through social media posts in groups of potential political activists. Section G describes the vignette survey in detail.

H   Spillovers into Alternative Effort Domains

Do party supporters substitute their reduced canvassing effort with increased effort in alternative contribution domains? This question pertains to the cross-substitutability between different forms of political activism. Activists might shift their effort between different contribution domains and activities to maximize their impact. In this case, different forms of political activism exhibit cross-substitutability. Alternatively, activists might be constrained or unwilling to respond with increased effort in alternative activities, indicating that different forms of political activism exhibit no cross-substitutability. To investigate this question, we leverage unique data from the party's application regarding activity on social media. Specifically, we investigate whether respondents who learn that fellow supporters engage in more canvassing become more likely to share news stories pertaining to their party on Facebook through the application.

We find that respondents who learn that fellow supporters engage in more canvassing than previously believed do not respond with an increase in sharing of party news stories (Table A25). The data indicate that treated supporters show a close-to-zero decrease of 1.1%-points ($s.e. = 1.4\%$) in their likelihood to share any news story as well as a decrease of 0.148 ($s.e. = 0.22$) in the average number of news stories shared. This evidence suggests that there is no cross-substitutability between supporters' canvassing behavior and their activity on social media pertaining to the party.

Table A25: Effects on effort in alternative domain: social media activity

	Shared social media message		
	Any	Days	Total

Panel A: Underestimators

Treatment	-0.011	-0.052	-0.148
	(0.014)	(0.120)	(0.220)
Observations	1163	1163	1163
Control group mean	0.07	0.39	0.78

Panel B: Overestimators

Treatment	-0.007	-0.178	-0.404
	(0.031)	(0.248)	(0.463)
Observations	248	248	248
Control group mean	0.08	0.47	0.92

Notes: Table A25 presents treatment effects on social media activity. Panel A shows results for underestimators. Panel B shows results for overestimators. *"Any"* takes value one if the respondent shares any party news story on Facebook through the application. *"Days"* denotes the total number of days a respondent shares a party news story on Facebook through the application. *"Total"* is the total number of party news stories shared by the respondent on Facebook through the application. Pre-specified controls are as defined in Table 1. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$