Can More Information Lead to More Voter Polarization? Experimental Evidence from Turkey

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Abstract

This study shows how efforts in persuasive communication affect voter participation in the deterioration of democratic norms in Turkey. First, I estimate the average effect of two randomized door-to-door campaigns on voter behavior over a referendum to weaken constraints on the executive branch. I also test for a polarized electorate among the 260,000 voters reached by the campaigns. The opposition party delivered messages on either economy and terrorism related policy outcomes or implications of the institutional change. Each campaign had a zero average effect on vote share, but increased political polarization due to heterogeneous effects that persisted fourteen months later.

Keywords: voter behavior, belief, information
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1 Introduction

Democratic norms are in decline - civil liberties and political rights around the globe have deteriorated for eleven consecutive years (Freedom House, 2017). The erosion of these measures runs counter to a priori expectations that circumstances would improve: the number of democracies had doubled within the past five decades and information is increasingly available to voters due to a growing and diverse set of media sources. Numerous studies have shown that with more access to information, through channels such as higher newspaper circulation and radio penetration, citizens are more likely to hold politicians accountable (Dréze and Sen, 1989; Besley and Burgess, 2002; Ferraz and Finan, 2008; Snyder and Strömberg, 2010). Studies evaluating direct communication on policy outcomes, like information campaigns or debates, find that a mechanism leading to increased political accountability is that citizens have more accurate beliefs on the position of politicians (Banerjee et al., 2010; Kendall et al., 2015; Bidwell et al., 2016).

On the other hand, increasing information availability is also believed to polarize voters, offering a possible explanation for the backsliding of democratic norms (Gentzkow and Shapiro, 2011; Sunstein, 2001; Mullainathan and Shleifer, 2005; Downs, 1957). For example, studies have investigated whether the Internet has resulted in increased self-segregation into different ideological camps (Gentzkow and Shapiro, 2011). This research has approached the issue of information availability under the general premise that most information is sent from sources with an ideological slant and under varying levels of competition. There are also a number of theoretical studies and lab or online experiments arguing that polarization can occur even in response to the same sequence of signals. This can be explained by a variety of factors; such as, voters having different beliefs about the state of the world or making different inferences on bias in the source of information.[1] Under this assumption, polarization can increase and persist as information becomes more available.

In the context of a referendum on institutional change in Turkey, I exploit experimental variation in exposure to the same door-to-door information campaigns to empirically test for a polarized electorate and estimate the persistent effects of increased polarization. Administrative vote share and turnout data is used to measure polarization over actual policy choice rather than self-reported views. The circumstances under which the campaigns take place also provide an opportunity to understand the following question in an illiberal democracy: how do the political persuasion efforts of a party facing a longstanding incumbent affect support for weakening the system of checks and balances?[2]

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[1]In Piketty's (1995) model, people with different social origins can maintain different views on redistribution and the effectiveness of individual effort over the long-run, even if they experience the same income levels. Most of this literature is theoretical and provides both Bayesian, (Dixit and Weibull (2007); Andreoni and Mylovanov (2012); Acemoglu et al. (2016); Loh and Phelan (2017); Benoit and Dubra (2016)) and non-Bayesian mechanisms (Lord et al. (1979); Fryer et al. (2017)) to explain this behavior. There are also lab experiments in the psychology literature, such as the study by Lord et al. (1979), and the economics literature, Andreoni and Mylovanov (2012). Fryer et al. (2017) provide evidence using an online experiment.

[2]It should be noted that the main opposition party in Turkey was established by the founder of the Republic of Turkey, Mustafa Kemal Ataturk. Therefore, the opposition is not a fringe party that recently

Door-to-door campaigns are one mode of communication by which motivated agents try to shape voters' beliefs and preferences (DellaVigna and Gentzkow, 2010; Kendall et al., 2015; Pons, 2018). Most of the empirical literature on using communication directed to voters for political persuasion has been concentrated in liberal democracies. This is despite the fact that illiberal or weak democracies are one of the most common forms of governance today (Bidner et al., 2015; Mukand and Rodrik, 2017). Moreover, they are environments in which competition over the provision of information and neutral sources of information are limited. These characteristics of a weak democracy make the question of how voters respond to directed communication from oppositional sources particularly salient. Under these factors, it is not surprising that the efforts of the opposition party evaluated in this study included using a door-to-door campaign. It is a channel to bypass high media censorship and directly give information on policy outcomes and the institutional change to persuade voters.[3]

Research on this topic is generally difficult in illiberal democracies because administrative data is scarce and fieldwork requires precaution. For example, the experiments in this study took place during a period of low national security and mass arrests.[4] Despite the tumultuous period, the experiments in this paper were strategically timed to take place during an important institutional change. The campaigns were implemented by the party opposing a referendum, which was initiated by the incumbent party less than a year after the chaotic coup attempt in July 2016 and with just a few months notice.[5] The referendum was on weakening constraints on the executive branch.

In the two campaigns, volunteer canvassers from the opposition party went door-to-door to deliver messages to all registered voters in a group of neighborhoods that I randomly selected. The opposition party's strategy in one campaign was to give voters messages on poor economic performance and increased terrorist activity under the governance of President Recep Tayyip Erdoğan, the incumbent. The second campaign was focused on outlining the long-term negative consequences of an institutional change to weaken constraints on the executive branch. In each campaign, voters were also told to choose "No" in the referendum, against weakening constraints on the executive branch.

Before the randomization, I grouped neighborhoods by quartiles of the difference in vote share between Erdoğan's party and the main opposition party in previous elections. This method ensured that partisanship was balanced between the treatment and control groups at different points across the distribution. I pre-specified a test of the treatment effect in each quartile to detect whether the campaign had both a positive and negative effect on the

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emerged, but was established by someone who is still heralded as a hero across party lines. At the time of the study, the current incumbent had been in power for 15 years.

[3]Under the same motivation, the opposition party also conducted a countrywide Facebook campaign which I similarly designed as a randomized experiment. The results of the Facebook campaign are included in the Appendix.

[4]Across countries, Turkey ranks second in absolute decline in an index of civil liberties and political rights over the past decade (Freedom House, 2017). Figure 1 shows the decline in civil liberty and political rights rankings globally and in Turkey over the past decade.

[5]The possibility of a referendum had been discussed for a number of years, but its timing was unknown. The coup attempt was viewed as a catalyst to hold the referendum.

"No" vote share depending on past partisanship.

Both campaigns polarized the electorate. Together, the campaigns significantly increased the "No" vote share by 1.3 percentage points (1.9 percent) in moderate areas (third quartile) where the opposition was stronger. The vote share also increased by .8 percentage points (1%) in the fourth quartile. In moderate areas where the opposition was weaker (second quartile), the information *decreased* the "No" vote share by 3.5 percentage points (5.6 percent). Since the voting behavior was changed among individual pro-opposition (incumbent) voters living in pro-incumbent (opposition) areas, the campaign resulted in political polarization.

I also estimate the long run effects of both the April 2017 treatment arms on two elections that took place 14 months later in June 2018 (voting in both elections took place simultaneously). One was the 2018 Presidential election and if Erdoğan got the majority vote share, which he did, then the constitutional amendments that were voted on in 2017 would go into effect. The other was the 2018 General election to elect Members of Parliament (MPs). I find that the polarizing effect of the 2017 campaigns persisted over time and there was no dampening in the magnitude of the effect, except in the fourth quartile. In both the Presidential and General elections, the point estimate for an increase in the "No" vote share is 1.6 percentage points (2.4 percent) in the third quartile and the point estimate for the decrease in the "No" vote share is 3.6 percentage points (6 percent) and 3.8 percentage points (6.5 percent), respectively, in the second quartile.

In all three elections, the effect of the campaigns on turnout was close to zero in each quartile of past vote share. This is not surprising, and was not the opposition party's objective, given that turnout is historically high in Turkey. The national and sample turnout average was above 85% in the three elections. It could still be the case that in the third quartile where the "No" vote share increased in all three elections, oppositional voters were mobilized and incumbent voters were demobilized and the reverse occurred in the second quartile where the "No" vote share decreased. However, it's difficult to explain why the effects on vote share would not be more similar across all four quartiles since there is limited variation in the turnout rate across the distribution. Instead, we see that the combined significant effects of the two campaigns across all three elections are concentrated in the two quartiles where the vote share differential between the incumbent and the opposition is lowest.

A possible interpretation of the results is that voters were not affected by the information in the campaign, but were instead reacting to the source of the messages - e.g. the canvassers from the opposition party. In one case, voters may have disliked the presence of oppositional canvassers while others had a positive response. This interpretation is difficult to reconcile with the results. It would require that voters who were planning to vote for the incumbent were positively affected while those who were planning to vote for the opposition were negatively affected. In addition, it is unlikely that such visceral effects would persist for at least fourteen months.

Another alternative interpretation is that the effects were indirect; voters may have been

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updating their beliefs on the strength of the opposition and switching the policy choice of moderate voters. Under this interpretation, voters learn that the opposition is stronger than they thought and switch the vote of moderate voters. The net effect is a decrease in the "No" vote share where there are more incumbent voters who affect moderate voters and the reverse is true where there are more oppositional voters who affect moderate voters. This is consistent with why the combined effect of the campaigns had an effect in the quartiles where the vote share differential was lowest.[6] However, while the observed magnitude of the effect on turnout is small, I provide evidence that the two campaigns have different effects on turnout. This provides some suggestive evidence that the content of the information matters and that the results are not driven solely by the presence of canvassers.

To further negate the interpretation that voters are only updating on the strength of the opposition party, I benchmark the implied persuasion rates of the campaigns to the literature. During the campaign, canvassers left behind a pamphlet with information regardless of whether or not someone opened the door. The messages in the pamphlet were analogous to the scripts that canvassers were trained on to communicate verbally in a personable manner if a voter did open the door. This was done because the campaigns were conducted during a state of emergency and it was difficult to predict the rate at which doors would be opened around the election. The average rate was approximately 14% in all quartiles. This statistic, combined with the effect sizes, would imply persuasion rates that are orders of magnitude beyond what has been seen in the literature. This implies that the pamphlets must have explained part of the effect as well. Given how common pamphlets, banners, etc. are relative to the door-to-door visits, we would think that voters are responding to the information in the pamphlet rather than the presence of the pamphlets.

It is beyond the scope of this study to directly test channels to explain the results. More specifically, prior and posterior beliefs over the content of the messages were not collected among voters due to context specific constraints. In one study, Kendall et al. (2015) estimate the effect of two types of campaigns designed by the researchers in a municipal election in Italy on voter beliefs. While Kendall et al. (2015) cannot rule out that voters also updated their beliefs on the strength of the mayoral candidate because of the campaign itself, it is clear that the voters updated their beliefs on the content of the campaign messages. On the other hand, a benefit of this study is that it analyzes an actual campaign designed and implemented by political elites in a high stakes context. We see that the motivated agents of the campaign messages, the opposition party, lacked the right information on voters to successfully increase their vote share. Moreover, this is one of only a handful of studies on experimental partisan campaigns that use administrative vote share data and the only one outside of a liberal democracy.

In summary, I argue that the interpretation most consistent with the context and findings is that the information in the campaign persuaded voters to change their vote. Though voters were exposed to the same information campaign, they could interpret it in different ways. I

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[6]I use individual data from a survey to show that moderate voters are concentrated where the vote share differential between parties is low.

had access to a survey showing that Erdoğan supporters attributed poor conditions to factors they believed to be outside the leadership's control; such as, the attempted coup, the U.S. elections, and the global recession. Opposition supporters instead blamed the incumbent party. In this example, voters have different views on why conditions are poor, but they can have a similar noisy signal on policy outcomes, like the economy. When uncertainty is multidimensional, a negative signal about the economy can shift voters with identical preferences and priors on the level of economic conditions, but heterogeneous priors on why the economy is poor, to have either higher or lower support for the incumbent. I elaborate on this explanation in Section 4.

The most striking aspect of the study is that it shows a rigorous empirical test for a polarized electorate over policy choice and in response to persuasion efforts in a weak democracy. The magnitude of the effects are large and this study provides the first long-term estimates of persistent effects of increased polarization. Most of the literature on polarization focuses on disagreement in self-reported views; here, we see a clear test of polarization over an actual and important policy choice. Given the literature on institutions (Robinson et al., 2005), it is expected that the referendum will have a long run impact on the development in Turkey. A clear implication of the findings is that studies need to be designed to test for heterogeneous effects. For example, if tertiles, instead of the pre-specified quartiles, were used to estimate heterogeneous effects, as was done in a study analyzing the effect of the availability of Fox News on voter behavior (DellaVigna and Kaplan, 2007), polarization would not have been detected. According to a meta-analysis on 49 campaign experiments held before primary and ballot measure elections in the U.S., only four were found to be effective (Kalla and Broockman, 2017). These studies do not test for differences in the sign of the effect on different groups of voters.

Finally, it is worth noting how the polarization results found in this study draw attention to channels that are not discussed where polarization was unobserved, but could have taken place. For example, DellaVigna and Kaplan (2007) argue that the effect of the availability of Fox News will only affect voting behavior temporarily if voters do not account for the bias in the source of the information. Second, the authors argue that the persistent increase they find in the vote share for the Republican party can occur if voters do account for media bias, but are affected by non-rational persuasion. However, the study does not discuss whether Fox News at the time delivered new information or whether voters were responding to perceived changes in the strength of the conservative ideology in the U.S. The arguments outlined above instead explain that the persistent effects found in this study can be in response to new information being provided by a biased source. Especially in the context of a weak democracy, exposure to certain policy outcomes will inevitably be viewed as anti-incumbent, regardless of the source, and increase precision in noisy signals.

2 Institutional Background

2.1 Democratization in Turkey

The Republic of Turkey was founded in 1923. Mustafa Kemal Atatürk, an army officer, was the founder of both the Turkish Republic and the Republican People's Party (CHP). The CHP is currently the main opposition party. Atatürk established Turkey as a secular state, clamped down on the freedom of religious expression, and imposed a new language and culture on a majority pious population. The military played a significant role in politics and the country was under one-party rule for the first two decades. It is commonly believed that the political elite's transformation of Turkish society, by sharply reducing religious expression and imposing secularism, had modernizing effects on Turkey. However, it also instigated the ideological cleavage between liberal secular and religious conservatives, or rather, elites versus non-elites and the suppression of minority groups that continues today. Despite the recognized gains from Atatürk's modernizing of Turkey, the lack of inclusive founding institutions is regarded as creating a lasting impediment to Turkey's development.

2.2 Modern Turkey

Multi-party elections were introduced to Turkey in 1946 and since then Turkey has experienced periods of competitive elections. However, its strong military, weak state institutions, and the society's ideological cleavage led to long periods of economic and political instability. These periods of instability have resulted in a number of military interventions, including four outright coups. In 2001, there was a devastating economic recession and the country was under the unstable leadership of a multi-party coalition. The current ruling party, the Justice and Development Party (AK Party), was founded by Recep Tayyip Erdoğan in 2001 and first entered a general election in 2002. The AK Party came into power and the 2002 General Election marked the first time Turkey was ruled by a single party government since 1987. Only one other party, the CHP, also gained seats in parliament. The AK Party has had a majority in parliament since coming into power.

Under the AK Party, the ability of the military to intervene in politics weakened. The military had threatened the party because of its religious tendencies, but, with the help of an alliance with an Islamic cleric, Fethullah Gülen, and strong voter support, the party continued its rule uninterrupted. The party was also successful in expanding freedom of religious expression, such as allowing women to wear headscarves in public institutions, including universities and the parliament. During the peak of the party's alliance with the Gülenists, there were a series of controversial trials and arrests of military officials for the alleged coup plots named Operation Sledgehammer and Ergenekon. However, the alliance between the AK Party and Gülen soon dissolved.

In fact, while strong evidence on the details of the attempted coup is limited, there is consensus that some of the individuals involved in the 2016 coup attempt are Gülenists, who comprise a large and powerful international movement. Gülenists had infiltrated various institutions of Turkey for years, including the educational system, the military, judiciary, police force, etc. The coup attempt itself was poorly organized and failed rapidly, but was a catalyst in the calling for a referendum. Citizens were directly affected by the coup attempt; millions were within earshot of air strikes, thousands took to the streets to prevent the coup, and hundreds were killed. In addition, all leaders from the opposition parties publicly decried the coup attempt, which has largely been viewed as a positive step in Turkey's democracy.

Voters in Turkey have mixed views on whether the coup attempt can partly be blamed on Erdoğan's past relationship with Gülen. Others do not place any blame on Erdoğan and view the coup attempt as an incident that was completely outside of his control. Following the attempted coup, a state of emergency was enacted and more than 150,000 civil servants, academics, and journalists were detained. Despite the arrests being internationally condemned, in a survey that I conducted, the majority of sampled voters self-reported as supporting these mass arrests. The arrests are viewed as a measure of national security.

2.3   2017 Referendum

The referendum was held in 2017, less than a year after the attempted coup. The referendum was on switching from a parliamentary system to a presidential system and on eighteen amendments to the constitution. Until the referendum, the highest level of leadership was the prime minister and the role of the president was largely viewed as ceremonial. Erdoğan served as prime minister from 2002 to 2014, stepping down just before his term limit. In 2007, Erdoğan called for a referendum that would change a law, allowing the president to be nationally elected in 2014. Therefore, in 2014, Erdoğan became the first nationally elected president of Turkey and was able to retain a leadership position before his term as prime minister ended. A number of the proposed amendments to the constitution would consolidate power under the president. For example, a new power granted to the president is the ability to bypass the parliament completely and introduce legislation by issuing decrees with the force of law (Jenkins, 2016).

Turkey was already on an unstable path before the coup attempt. Terrorist activity had reached an unprecedented level, civil conflict had restarted, hundreds of thousands of civilians from Kurdish-majority areas had been displaced, and the economy was doing poorly.[7] The AK Party argued that switching to a presidential system and the proposed amendments would bring more stability and increased national security. The opposition argued that the current leadership, who had already taken steps over the past few years to consolidate power, was to blame for the deteriorating conditions and increasing their power would only exacerbate the problems.

[7]Figure 2 shows the number of terrorist attacks in Turkey over time. It shows that the number of attacks had risen significantly even before the coup attempt.

In Turkey, there are four parties with representation in parliament. Before the referendum, one of the small opposition parties, the Nationalist Movement Party (MHP), declared that it was in support of weakening constraints on the executive ("Yes" vote). The main opposition party and the minority pro-Kurdish party, the Peoples' Democratic Party (HDP), declared that they were against the constitutional changes that were being voted on ("No" vote). In the empirical section for the voter experiment, whether the analysis is conducted with all four parties or just between the main opposition party and the incumbent does not change any of the results. For the remainder of this paper, I will just refer the political parties as the incumbent party or the opposition party.

3   Timeline of the Experiment

A timeline and flowchart of the experiment is shown in Figure 3. I first conducted a voter survey in October 2016 with more than 1,770 voters. The survey identified policy issues most important to voters and their preferences regarding various policies. In the survey, voters reported that the economy and terrorism are policy issues most important to them. The purpose of the survey was twofold. First, I used the survey results to compile information on voters that would be used in a quasi-experiment with Members of Parliament (MPs). As part of the quasi-experiment, in mid-January, the MPs from all parties in parliament were sent a voter report based on the results from the survey. The results were sent right after they had voted in parliament to go to a referendum and three months before the referendum was held. At the time that the report was sent, the MPs faced uncertainty on the exact timing of the referendum, but knew that it would take place within six to twelve weeks.

The report discussed the sampling procedure, disclosed the funders of the survey, and included details on my background.[8] Then, it showed that terrorism and the economy are most important to voters and provided the survey results on voter policy preferences regarding those two issues.[9]

When the voter report was sent to the MPs, they were also asked whether they would be interested in conducting a voter experiment before the election to learn more about their voters. Approximately 25% of sampled MPs from the opposition party responded and one person from the incumbent party responded. Everyone who responded was followed up with and it is this interaction that created an opportunity to conduct a randomized door-to-door campaign. The asymmetry in response across parties is consistent with the intensive interviews conducted with the MPs over a three month period before the referendum. I learned that the incumbent party invests heavily in acquiring high quality voter data and

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[8]MPs were informed that UC Berkeley and MIT funded the survey that I conducted. Background information included that I am a PhD candidate at UC Berkeley and that the report was a part of a research project.

[9]The report was thirteen pages long and examples of two pages from the report are provided in Figure A2.

the opposition party does not. For this reason, it was not expected that the incumbent party would respond to the inquiry. I had permission from a non-partisan body in parliament for the entire process of the project with the MPs and they approved the script used in my interviews. The MPs also knew that the interactions were done consistently across parties and that any follow-up voter experiment would only be done with interested parties.

This procedure is outlined to emphasize how this project could be conducted in a sensitive environment, that it was initiated as a non-partisan project, and the interesting asymmetry in party investments to learn voter behavior. In the political science and economics literature on illiberal democracies, it is not generally recognized that the incumbent party may invest more in learning about voter policy preferences to outperform the opposition in elections, amongst other tactics.

Specific individuals from the opposition party implemented the randomized door-to-door campaign in one province. This leads to the second use of the voter report: the information provided on the economy and terrorist activity in the door-to-door campaign was motivated by the fact that voters had reported these two issues as most important to them in the survey that I had conducted. The decision to use this information from the voter survey was made by individuals from the opposition. They also chose the specific content provided in the door-to-door campaign. Interestingly, their public platform prior to receiving the information on voters was largely on issues concerning democratic norms and civil liberties. The party wanted to implement the second treatment arm, which included content on the implications of the referendum, to inform voters of the long term changes that would result from the referendum.

4 Voter Model: Different Interpretations of a Common Signal

4.1 Motivation for Voter Model

Since 2013, when Turkey started experiencing significant instability, the value of the local currency in Turkey, the lira, has been falling. The rate of depreciation rapidly escalated toward the end of 2016, after the attempted coup. In January 2017, after a record drop in the value of the lira, a nationally representative survey was conducted in Turkey covering issues such as the referendum and the economy.[10] In the survey, voters were asked the degree to which the drop in the value of the Turkish lira had an impact on their personal life. Figure 4 shows that voters who self-report as either incumbent or opposition supporters both agree that the depreciation of the lira had a negative impact on their lives. However, we see in Figure 5 that voters have different views of why the value of the lira dropped, based

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[10]The survey was done by an American polling company, which cannot be identified in this study. I was not involved with the survey, but had access to the results.

on their party affiliation. Opposition voters predominantly blame the current leadership (president and parliament). Incumbent voters blame external factors outside the control of the leadership (coup attempt, global crisis, and the U.S. election).[11]

In the referendum, voters were choosing to weaken constraints on the executive. The survey results on the lira suggest that increased information on policy outcomes under the incumbent, such as economic conditions or terrorist activity, could have an ambiguous effect on voter choice. Consider voters who underestimate how poor the economy is and blame poor conditions on external factors. They may choose "Yes" in the referendum because they believe that less constrained efforts to increase national security, such as the mass arrests, will reduce a source of instability and subsequently improve the economy. More generally, they may support removing constraints from incumbent policies so that they can be more effective when external threats are high. On the other hand, voters who also underestimate the economy, but blame current leadership for poor economic policy, or for being the cause of threats to national security in the first place, will vote against increasing authoritarianism. Using the language in the literature on disagreement or polarization in response to a common signal, the information on policy outcomes provided in the campaign is an "equivocal signal" (Benoit and Dubra, 2016). Voters are provided with a unidimensional signal to a multidimensional problem (Loh and Phelan, 2017).[12] The effect on voter choice of giving voters more information on incumbent policy outcomes, i.e. the economy and terrorist activity, depends on views, and levels of uncertainty, over this ancillary issue, which is whether the incumbent is to blame or not (Benoit and Dubra, 2016).

4.2 Voter Model

The purpose of the model outlined in this section is to provide a framework to interpret the results in the voter experiment. The framework explains (i) why the campaign could have positive or negative effects on the "No" vote share depending on voter type; (ii) why the effects on vote share are stronger in areas where there are more moderate voters.

Consider that rational Bayesian voters have a signal, e, about the state of the economy, the noise of which has variance σ_E^2. Providing them with more information on economic conditions reduces the variance in the signal. The common assumption in the literature is that rational Bayesian voters will converge to the signal if they have common beliefs (Dixit and Weibull, 2007). Similar to Dixit and Weibull (2007), Loh and Phelan (2017), Andreoni and Mylovanov (2012), Acemoglu et al. (2016), and Benoit and Dubra (2016), I also maintain rational Bayesian voters and relax the assumption of common beliefs. Here, the posterior beliefs of voters will converge to the signal on policy outcomes, but voters will diverge in

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[11]Voters in Turkey have mixed views on whether the coup attempt can be blamed partly on Erdoğan's past relationship with Gülen. Some do not place any blame on Erdoğan and view the coup attempt as an incident that was completely outside of his control.

[12]This issue of uncertainty over an additional dimension is discussed in Andreoni and Mylovanov (2012). Fryer et al. (2017) provide a similar framework, but over one-dimension and people are non-Bayesian.

their policy choice. They can make opposing policy choices because of differences in beliefs in the factors determining poor conditions.

Motivated by the survey evidence, let the state of the economy (e.g. value of the lira) be a function of incumbent quality, Q, and external factors affecting the economy, like national security, S. When S is high, external threats are low. I assume that the economy is increasing and linear in both factors, $E(S,Q) = S + Q$. Let a higher A denote further weakening constraints on the executive, or increased authoritarianism, for brevity. I assume that the optimal value of A is increasing in incumbent quality and decreasing in external threats to national security; for example, the lower the external threats to national security, the lower the optimal level of authoritarianism. The signal that voters have about the economy affects a voter's optimal choice for A. In summary, I assume that $A^*(S,Q) = Q - S + \epsilon$ is a voter's optimal level of authoritarianism, where $\epsilon \sim N[0,1]$.[13] The important assumptions here are that both S and Q are positively correlated with E, but S is inversely correlated with A^*, and Q is positively correlated with A^*. I will show that while voters receive information on the economy, their mean priors and relative certainty about S and Q determine their choice on optimal A, i.e. "Yes/No" in the referendum.[14]

I assume a voter has initial unbiased priors over S and Q distributed $N[\mu, V]$, where $\mu = \begin{pmatrix} \mu_S \\ \mu_Q \end{pmatrix}$ and $V = \begin{pmatrix} \sigma_S^2 & \sigma_{SQ} \\ \sigma_{SQ} & \sigma_Q^2 \end{pmatrix}$. Given the assumptions that E is increasing and a linear function of both S and Q, we have $E \sim N(\mu_S + \mu_Q, \sigma_S^2 + 2\sigma_{SQ} + \sigma_Q^2 + \sigma_E^2)$

The information in the campaign increases the precision of the signal and therefore lowers σ_E^2. A voter chooses "Yes", to increase authoritarianism, if $A^*(S,Q) \geq A$.

Under these assumptions, the standard result for the density $f(S,Q|E=e)$ holds. Let $(\mu_S)'$ and $(\mu_Q)'$ be the posterior means of this density. Despite receiving the same signal, people with the same priors and level of uncertainty on the economy can end up with different posterior means, $(\mu_S)'$ and $(\mu_Q)'$. Let $A'^*(S,Q) = (\mu_Q)' - (\mu_S)'$ be an individual's optimal level of authoritarianism based on the posterior means of $(\mu_S)'$ and $(\mu_Q)'$. The expressions for $(\mu_Q)'$ and $(\mu_Q)'$ are:

$$\begin{pmatrix} (\mu_S)' \\ (\mu_Q)' \end{pmatrix} = \begin{pmatrix} \mu_S \\ \mu_Q \end{pmatrix} + (e - \mu_S - \mu_Q) \begin{pmatrix} \frac{\sigma_S^2 + \sigma_{SQ}}{\sigma_S^2 + 2\sigma_{SQ} + \sigma_Q^2 + \sigma_E^2} \\ \frac{\sigma_{SQ} + \sigma_Q^2}{\sigma_S^2 + 2\sigma_{SQ} + \sigma_Q^2 + \sigma_E^2} \end{pmatrix}$$

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[13] I am agnostic about the full model determining A, but an assumption made here is that $A^*(S,Q)$ and E are not perfectly collinear. Benoit and Dubra (2016) make the assumption that $A^*(S,Q)$ and $E(S,Q)$ are independent.

[14] This framework will generalize to the case where A^* and E are linear in Q and S, as long as A^* and E are increasing in Q, A^* is decreasing in S, and E is increasing in S.

Which then gives:

$$A'^*(S,Q) = \mu_Q - \mu_S + (e - \mu_S - \mu_Q)\frac{\sigma_Q^2 - \sigma_S^2}{\sigma_S^2 + 2\sigma_{SQ} + \sigma_Q^2 + \sigma_E^2}$$

The effect of providing more information on the economy, and therefore reducing σ_E^2, affects the voter's optimal level of authoritarianism through updating on relative priors on the factors that are correlated with the economy, S and Q, in the following way:

1. Whether the voter is "moderate" or "extreme." A voter is extreme in its support for the opposition if the difference $\mu_Q - \mu_S$ is very negative and "extreme" in its support for the incumbent if the difference is very positive. For moderates, the differential, $|\mu_Q - \mu_S|$, is small. Moderates will be the most responsive to the information.

2. A voter who is more (less) uncertain about incumbent quality relative to national security will vote "Yes" ("No") in the referendum after receiving the signal e through the information campaign. Therefore, the direction of the effect of the information campaign on an individual depends on whether $\sigma_Q^2 > \sigma_S^2$ or $\sigma_Q^2 < \sigma_S^2$.

It is necessary that the expression is written in terms of vote share because that is observable at the neighborhood level to all political parties, rather than individual vote choice. Assume there's a continuum of individuals in each location, g, with initial unbiased priors over S and Q. In this case, the vote share in location g is

$$P[A^*(S,Q) \geq A|g] = 1 - \Phi\left(A - \left[(\mu_Q^g)' - (\mu_S^g)'\right]\right)$$

The derivative of this expression with respect to σ_E^2 gives us the effect of the treatment and the same predictions as above. It should be noted that this framework motivated the stratification design used in this experiment, and can rationalize the results, but it cannot be directly tested empirically. For example, in the first and fourth quartile there are more "extreme" voters who will be unresponsive to the treatment, but this affects the power of the study since there may still be some moderate voters.

Similar to Loh and Phelan (2017), Dixit and Weibull (2007), and Benoit and Dubra (2016), voters in this study are learning based on a multidimensional model after receiving unidimensional information, and have different beliefs. Under more traditional assumptions, voters would be given unidimensional information and updating on one dimension. Here, the vote choice depends on voters' relative certainty on each dimension in the learning model and the mean relative value of their priors for each dimension (i.e. how moderate they are). One can then wonder why the opposition would not just give information to voters that directly show whether or not the incumbent is to blame for the economy. The trouble here is that causal inference is inherently difficult; therefore, in trying to persuade a voter who is leaning toward the incumbent, the voter will now face uncertainty about the source of the signal.

Consistent with this framework, we would also expect that the campaign on the implications of the referendum to also have a polarizing effect on the electorate. In this case, voters receive a more precise signal on the level of constraints on the executive. As in the model above, the different types of voters have different views on the optimal policy. Upon learning more about the long run implications of the referendum and that actual policies will change, voters who prefer unconstrained power will be more likely to vote "Yes" and others who disagree with this policy will be more likely to vote "No."

5   Voter Campaign Experiment

5.1   Voter Campaign Experiment: Campaign Content

The intention of the opposition's door-to-door campaigns was to increase the share voting "No" in the referendum, against weakening constraints on the executive. In one campaign, voters were provided with information describing the economic loss and increase in terrorist activity under the current leadership over the past few years. The party highlighted worsening conditions since 2014 because that is when Erdoğan transitioned from prime minister to president to extend his political leadership. The party also chose to omit issues of a deteriorating democracy and increasingly limited civil liberties from the door-to-door campaign because of the results in the voter report. The results from the survey show that the majority of citizens across party lines support the arrests conducted after the state of emergency.

The second campaign was on the implications of the referendum and the actual policy chances that it would bring. The opposition party chose to not make any party specific statements in this campaign. Rather, the focus was on telling voters that regardless of who comes into power, now or in the future, that person would more easily make unconstrained decisions affecting all branches of government.

The campaigns were randomized at the neighborhood level, because this is the level at which administrative outcome data is available. Control neighborhoods did not receive any sort of campaign information. The messages in the treated neighborhoods were conveyed to voters in treatment neighborhoods both orally, if they opened their door, and in a pamphlet. The pamphlets were left with every household in a treatment neighborhood regardless of whether they opened the door. The original print of the pamphlets can be seen in Figures 6 and 7. The canvassers also received training on how to give the same information provided in the pamphlet orally and personably. For example, in addition to giving the same facts as in the pamphlet, they were trained to convey the information by discussing personal accounts of how they were affected by the deteriorating economy or recent terrorist attacks.

The implementation, funding, and details of the content were determined by a campaign manager and staff from the opposition party. The experiments reflect the strategy of indi-

viduals from the opposition party.

5.2 Voter Experiments: Party Strategy

In terms of the voter model, the opposition party assumed that voters would only update their views on the quality of the incumbent in response to increased information on the economy. As in, they misspecified the model as $f(Q|E = e)$ rather than $f(Q, S|E = e)$. They did not take into consideration that voters could have different interpretations of the same information campaign on policy outcomes. Going back to the voter model, the party assumed that voters would behave according to equation (1) rather than equation (2):[15]

$$A'^*(S, Q) = \mu_Q + (e - \mu_Q)\frac{\sigma_Q^2}{\sigma_Q^2 + \sigma_E^2} \tag{1}$$

$$A'^*(S, Q) = \mu_Q - \mu_S + (e - \mu_S - \mu_Q)\frac{\sigma_Q^2 - \sigma_S^2}{\sigma_S^2 + 2\sigma_{SQ} + \sigma_Q^2 + \sigma_E^2} \tag{2}$$

If voters have better information that the economy is poor and only attribute poorly performing economy to the incumbent, then they will vote against weakening constraints on the incumbent. This strategy is sensible. First, this is a common assumption in most campaign experiments designed by researchers. Second, particularly in Turkey, media censorship is high and voters may receive limited or selective information on performance indicators when conditions are poor.

Given these factors, the opposition party chose to use the campaign as an opportunity to disseminate information on negative changes in the economy and national security since President Erdoğan was voted into the presidency in 2014. Similar to the literature, the campaign strategy was consistent with the assumption that voters would respond to the information according to a retrospective voter model.[16]

5.3 Voter Campaign Experiment: Sampling

The door-to-door campaigns were implemented in the third largest province in Turkey, Izmir.[17] Figure 8 shows the distribution of the share that voted "No" across the country and in the sample for this experiment among the control group. We see that the experiment was

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[15]Please note that it is assumed, and empirically confirmed, that the effect is among both voter types who underestimate how bad conditions are.

[16]In the Appendix, I also describe a randomized online Facebook campaign that the opposition implemented and that I designed. This is an alternative campaign strategy that they also used.

[17]There are 81 provinces in Turkey. Each province is a constituency, except the larger provinces Izmir, Ankara, and Istanbul are split into two to three constituencies.

conducted in an oppositional stronghold, but that there is a large overlap with the distribution across the country. Izmir was selected because it is a region in which the party could immediately organize group of party volunteers that were willing to canvass during a state of emergency. Recruiting volunteers during this period is difficult because a person could be detained without trial for three months.

The sampling procedure and implementation of the campaign were affected by a number of factors. First, since it was a state of emergency, it was possible that voters would be hesitant to open their door. This would limit the power of the experiment because the unit of observation and the treatment was at the neighborhood level. Second, the party was constrained in terms of its budget available for transportation and the number of canvassers. To address the first issue, every household in a treated neighborhood was visited to increase the likelihood that a sufficient share of voters opened their doors and engaged with the canvassers. In-person conversation is considered one of the most effective methods to affect voter behavior (Pons, 2018). While a less salient method, the possibility of a low response rate to the door-to-door campaign explains the use of pamphlets. The pamphlets were left with every household that was visited regardless of whether the voter opened the door.

The second issue, the budget and capacity constraint, would also affect the power of the study. A sufficient number of neighborhoods needed to be reached and the compliance rate within each neighborhood needed to be sufficiently high. Therefore, before conducting the randomization I restricted the sample to neighborhoods based on whether they would be too difficult to reach or take too long to complete. There are 1294 neighborhoods and 30 districts in Izmir. I dropped districts and neighborhoods that were too rural. Rural areas were dropped because if neighborhoods were too far away, this would affect the sample size. Following the procedure of surveying companies in Turkey, I classified neighborhoods as "rural" if they had 500 or fewer registered voters in the most recent general election in 2015. Then, I classified a district as rural if more than 50% of the neighborhoods are rural. I also dropped neighborhoods where the number of registered voters was in the top 5% or bottom 5% of the distribution. Large neighborhoods were also because while they could be easy to reach, it would take too long to cover all households in a neighborhood. In the end, the experiment was conducted in 14 of the 30 districts and 550 out of 1294 neighborhoods. Over 260,000 registered voters were treated across 100 neighborhoods in Izmir and were compared to voters in 450 control neighborhoods.

In order to further increase the efficiency of the canvassers and monitor the rate at which doors were opened during such a risky period, I geocoded every street in each neighborhood and provided the canvassers with an optimal route. Every couple of days, they sent me the number of people they spoke to per street. All streets in every neighborhood were canvassed and it was reported that they visited the door of every household, or apartment. Using data on the number of registered voters per street, I could then construct the average neighborhood rate at which voters opened their doors and spoke to canvassers per street. While all streets in a visited neighborhood were covered, 20% of neighborhoods could not be canvassed at all because the party volunteers reported that they faced threats (aggressive behavior, threats to call the police, etc.). Table 3 provides the average number of registered

voters reached per neighborhood among the full sample. Importantly, it is shown that the average reach is similar across each quartile. The main results do not change depending on whether I include or drop the neighborhoods where the reach was zero.[18]

5.4 Voter Campaign Experiment: Design

Randomization was stratified by quartile of the past neighborhood level vote share differential between the incumbent and opposition parties. Past vote share is from two general elections that both took place in 2015. The vote share and turnout data were scraped from the government website.[19]. It was specified in a submitted pre-analysis plan that a two-tailed test would be conducted in each quartile. This was pre-specified in case of heterogeneous treatment effects.[20] Below, Y_{nq} is neighborhood level "No" vote shares or turnout. T_{nq} is an indicator for whether the neighborhood is in the treatment group and γ_q are quartile fixed effects. X_{nq} includes past voter data from the past two general elections, which were both held in 2015. The regressions, including the randomization inference exercises, follow the pre-specified specifications.[21] β captures the treatment effect across quartiles and I also estimate β_q by estimating the treatment effect within each quartile.

$$Y_{nq} = \alpha + \beta T_{nq} + \gamma X_{nq} + \gamma_q + \epsilon_{nq} \tag{3}$$

Table 4 shows balance between the treatment and control groups across the quartiles. Tables 5 and 6 show balance within each quartile.

5.5 Voter Campaign Experiment: Results

Based on the voter model, we expect the effect to be observable where $(|\mu_Q - \mu_S|$ is small). In addition, the direction of the vote depends on their relative certainty between each factor affecting the economy (i.e. the relative values of σ_Q and σ_S). We expect that we can reject the null of no effect on "No" vote share in quartiles of past vote share where the concentration of moderate voters is highest and where the number of neighborhoods with a high concentration of moderate voters is highest. We may expect that quartiles where the vote share differential is close to zero is where we will be able to reject no effect. To substantiate this claim, I use individual-level data.

The individual level data that I have on policy preferences is from the voter survey I con-

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[18]Table 12 shows the results for the sample where the "threatened" neighborhoods are dropped.

[19]https://sonuc.ysk.gov.tr/module/GirisEkrani.jsf

[20]Baysan, C. (2017, April) Canvassing in Turkey. osf.io/hhqej

[21]I show the results for both the unweighted and weighted regressions. Weighted regressions account for the number of registered voters per neighborhood. I did not pre-specify whether or not the estimation would be weighted by the number of voters; both results are provided, but the weighted version is my preferred specification. The results without weighting are provided in Tables 14 and 15

ducted before the referendum in mid-October. While the data on policy preferences were not collected in Izmir, they were collected in the other largest provinces of western Turkey. Importantly, individuals were randomly sampled within each neighborhood for the survey. Therefore, this allows me to use the policy preference data and predict the likelihood that an individual self-reported as being a supporter of the incumbent or opposition party and merge it with neighborhood level vote share data. I take the distribution of these predicted values and label the top and bottom 25th percentiles of the distribution as "extreme." Within each neighborhood, I calculate the proportion of extreme voters. I then match the data with the administrative neighborhood level vote share data.

First, I find that the proportion of extreme voters in a neighborhoods is higher where the differential vote share between the two parties is higher. Moderate voters are concentrated where the vote share differential is low and therefore where I have more power to reject no effect. It is not surprising that moderates mostly live together and more partisan voters mostly live together. Table 1 shows the average proportion of extreme voters across the vote share distribution for the sampled neighborhoods in the survey. We see that the lowest mean shares are .55 and .59. In Table 1, I show seven of the deciles of the differential vote share distribution for the voter survey sample because they overlap with the distribution of vote share differentials for the experiment. Within these seven deciles, I count the total number of neighborhoods that have a proportion of extreme voters that is less than .55. The fourth and fifth deciles, where the vote share differential between the incumbent and opposition is .07 and .17 respectively, are where I am most likely to reject an effect and observe polarization. Table 2 shows the difference in vote share between the opposition and the incumbent. Therefore, we see that the fourth and fifth deciles for the voter survey sample are closest to the vote share differentials in quartiles 2 and 3 of the experiment. Among quartiles two and three, for the experiment, which correspond to the deciles with a larger number of neighborhoods with a high concentration of moderate voters, we are mostly likely to be able to detect an effect of the campaign on the vote share.

Table 7 shows the aggregate result: I cannot reject no effect across all quartiles and we see that the treatment had no effect on turnout across quartiles. The main result are the significant effects in quartiles 2, 3, and 4 and the coefficients are highest in quartiles 2 and 3 (I cannot reject a difference in the coefficients between 3 and 4). We see that in columns 6, 7, 10, and 11 that the effects remain significant and even increase in magnitude in the two elections that take place fourteen months later. Recall that the campaign was meant to increase the "No" vote share. Instead, in quartile 2, we see that the "No" vote share decreased by 3.5 to 3.8 percentage points (5.6 to 6.4%), depending on the election. The campaign did have a positive effect of 1.3 to 1.6 percentage points (1.9% to 2.4%) in quartile 3, depending on the election. In the first election, we also see a .8 percentage point increase in quartile 4. Table 9 shows that the results for each campaign is similar, as expected.

In Figures 9 and 10, I also show the results of conducting randomization inference within quartiles 2 and 3 for the first election to calculate an exact p-value under the sharp null of no treatment effect, which also allows me to avoid making assumptions on the distribution of errors (Imbens and Rubin, 2015). To implement randomization inference, I run 10,000

permutations of the treatment to the neighborhoods in the sample and estimate the coefficient. This generates a distribution of coefficients. In quartile 3, I find that the p-value is .09 and in quartile 2, I find that the p-value is .03.

In summary, the average treatment effect among the marginal voter shows population polarization (Benoit and Dubra, 2016). The fact that partisanship (among moderates) is correlated with the relative certainty between the two factors is not a prediction of the model or something that I could have tested ex ante. However, this result is consistent with assumptions made in other studies on polarization where people have a lack of common beliefs and empirically that more ideological voters are more certain in their beliefs.[22]

Next, I provide evidence on whether the effect of the campaign can be explained by turnout. In Table 10, the mean of the outcome variable is provided and we see that turnout is high, ranging from 86-88% across quartiles. Across elections, the only significant effect is in the first election and in quartile 2. The effect is small: .5 percentage points or .5%, which is insufficient to explain the large effect we see on vote share. In the next section, I discuss alternative interpretations of the results.

5.6   Alternative Framework

It is possible that an alternative voter framework can explain the the results of the campaign experiment. For example, there may be voters in the incumbent stronghold who updated their beliefs on how strong the opposition is once they saw the party volunteers come to their neighborhood. Voters with strong ideological support for the incumbent may then put pressure on any moderate voters in their neighborhood to support the incumbent. Similarly, voters with strong ideological support for the opposition may have updated on the quality of the opposition. They also may have put pressure on moderate voters in their area to vote for the opposition. I am unable to rule out this type of a channel that operates through peer effects, but provide some arguments suggesting that it is the less likely interpretation.

First, in this case we would have expected to see effects on turnout. It is still possible that within each quartile there was both mobilization and demobilization, resulting in a change in vote share, but no observable change in turnout. While possible, it should be noted that the experiment has sufficient power to pick up small effects in turnout. So, the different changes in mobilization and demobilization would have to be very similar. Second, it is unclear why we would not see similar effects on vote share in quartiles 1 and 4 if the effect is through differential turnout (quartile 4, in particular, since quartile 1 is underpowered). Third, even though the overall aggregate effect on turnout is small in magnitude, I am able to reject differences in turnout across the two campaign messages. The results on turnout by campaign are shown in Table 11.

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[22]See Benoit and Dubra (2016) and Loh and Phelan (2017).

Aside from turnout, if the effects are driven by peer pressure, we would have expected aggression and the inability of canvassers to speak to voters to be correlated with partisanship. Table 3 suggests that this is not the case.[23] Under this alternative framework, it is still the case that the opposition would have to target voters in order to increase its vote share. The main distinction with this framework is that identity-based dynamics are driving the results rather than different beliefs about why conditions are poor.[24]

Finally, I benchmark the implied persuasion rates of the campaigns to the literature. Recall that the average rate at which doors opened and canvassers completed their scripts was approximately 14% in all quartiles. This statistic, combined with the effect sizes, would imply persuasion rates that are orders of magnitude beyond what has been seen in the literature if the effect is only driven through canvassers. For example, under this assumption, the persuasion rate in the second quartile is 59%. In the literature, the persuasion rate of campaigns on vote share ranges from 0 to 12.5% and the persuasion rate of media on vote share ranges from 2 to 19.5% (DellaVigna and Gentzkow, 2010; Pons, 2018). This implies that the pamphlets must have explained part of the effect as well. Given how common pamphlets, banners, etc. are relative to the door-to-door visits, we would think that voters are responding to the information in the pamphlet rather than the presence of the pamphlets.

6   Conclusion

This study analyzes the persuasion efforts of an opposition party to impact voter behavior via two randomized partisan information campaigns in a weak democracy. Moreover, I use experimental variation of the campaigns to test for a polarized electorate in a high stakes context where voters were choosing over a monumental institutional change. In the campaigns, messages were delivered to voters on poor economic conditions and increased terrorist activity under the incumbent and the implications of the institutional change. I find that the opposition party's efforts to reduce voter support for weakening a system of checks and balances instead polarized voters and they failed to change their aggregate vote share. This is a unique result where polarization in vote choice at the aggregate level is driven by differences in reaction to the same door-to-door campaign.

A lot of money is invested in partisan campaigns by political elites. Partisan campaign experiments in the U.S. have been effective in changing turnout, but they have generally been ineffective in changing vote share (Kalla and Broockman, 2017). However, most of these

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[23]Table 12 shows the results for the effect of the campaign on "No" vote share using the sample where the "threatened" neighborhoods are dropped.

[24]An example of identity-based dynamics can follow from the model in Padró i Miquel (2007). In Padró i Miquel (2007), followers of the ruling leader, with whom they share an identity, such as ethnicity or religiosity, tolerate rent extraction. They fear discrimination by the leader of the excluded group were the opposing leader to come into power. In the context of the referendum in Turkey, followers of the ruling leader face more rent extraction if they vote "Yes," but they also lower the probability that the leader of the excluded group can come into power in the future.

experiments do not pre-specify testing for variation in the direction in which the campaign affected different groups of voters and most of them rely on self-reported voting behavior. In addition, these experiments take place in a competitive information environment, unlike in Turkey where there is high media censorship. Any of these factors could contribute to the studies to not reject a null hypothesis of no effect. In this experiment, voters do respond to the campaign, but I am unable to find an effect on average because the electorate is polarized. In addition, it is clear that the political elites from the opposition party in the context of this experiment did not have sophisticated voter data required to target the right voters and increase their vote share.

This study also opens the question to understanding why some voters choose to weaken constraints on the executive after receiving a signal on poor conditions. This is an important issue considering the continued deterioration of democratic norms across the globe, which the Freedom House has described as "Democracy in Crisis" Freedom House (2018). In this study, I suggest that voters face an unidentified problem: they do not know why conditions are bad because of the salience of external threats. In this case, a common information campaign on poor policy outcomes can increase political polarization based on heterogeneous voter views on whether external factors are to blame or the incumbent. Those who blame external threats choose to weaken constraints on the executive so that the incumbent is more able to protect them and the economy.[25] Further research is needed to determine whether this framework can explain why longstanding incumbents can continue to stay in power and violate civil liberties and political rights in democratic countries under deteriorating conditions.

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[25]In the political science literature, this type of voter has been described as "authoritarian." (Stenner, 2005)

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Figure 1: **Density of Aggregate Scores for Civil Liberties and Political Rights Across Countries**
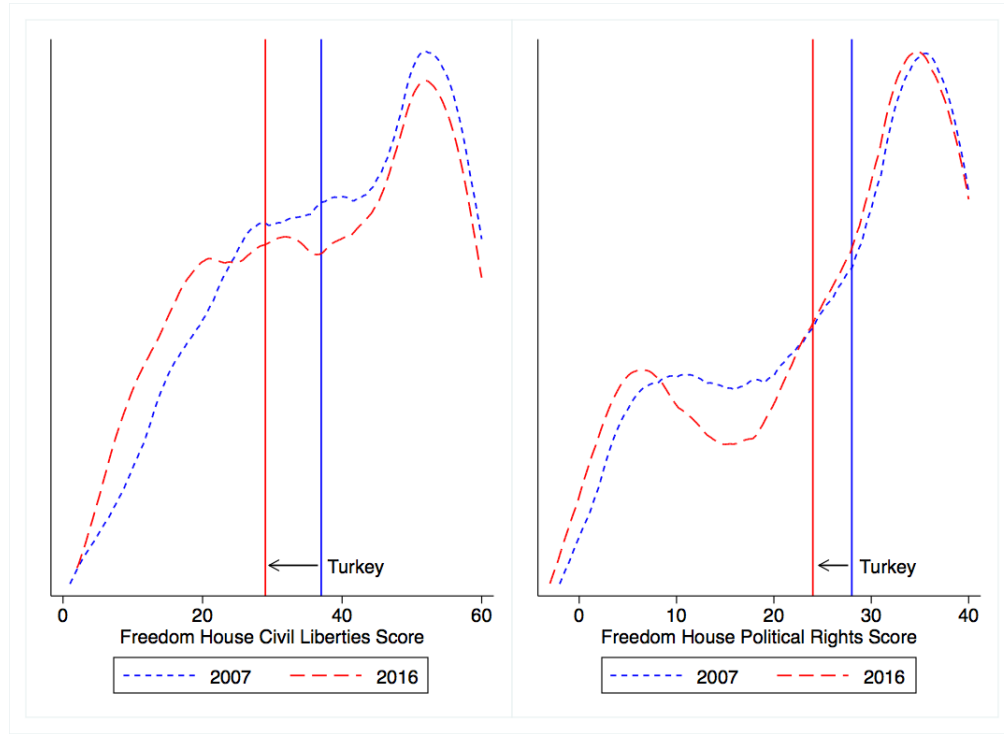
Freedom House aggregate scores across countries for civil liberties (0-60) and political rights (0-40) between 2007 and 2016. 193 countries are included in 2007 and 198 in 2016

Figure 2: **Terrorist Attacks in Turkey**
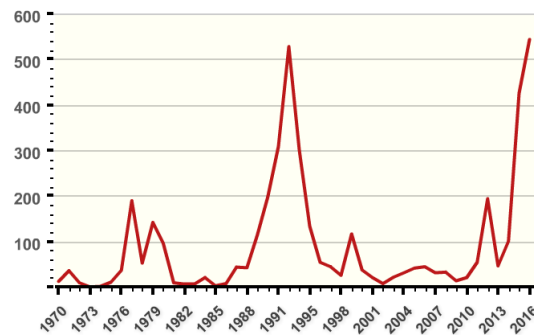
This figures shows the number of terrorist attacks in Turkey from 1970-2016. This figure was generated through via the Global Terrorism Database which, includes systematic data on domestic as well as international terrorist incidents.

Figure 3: Timeline and Flow Chart of Study
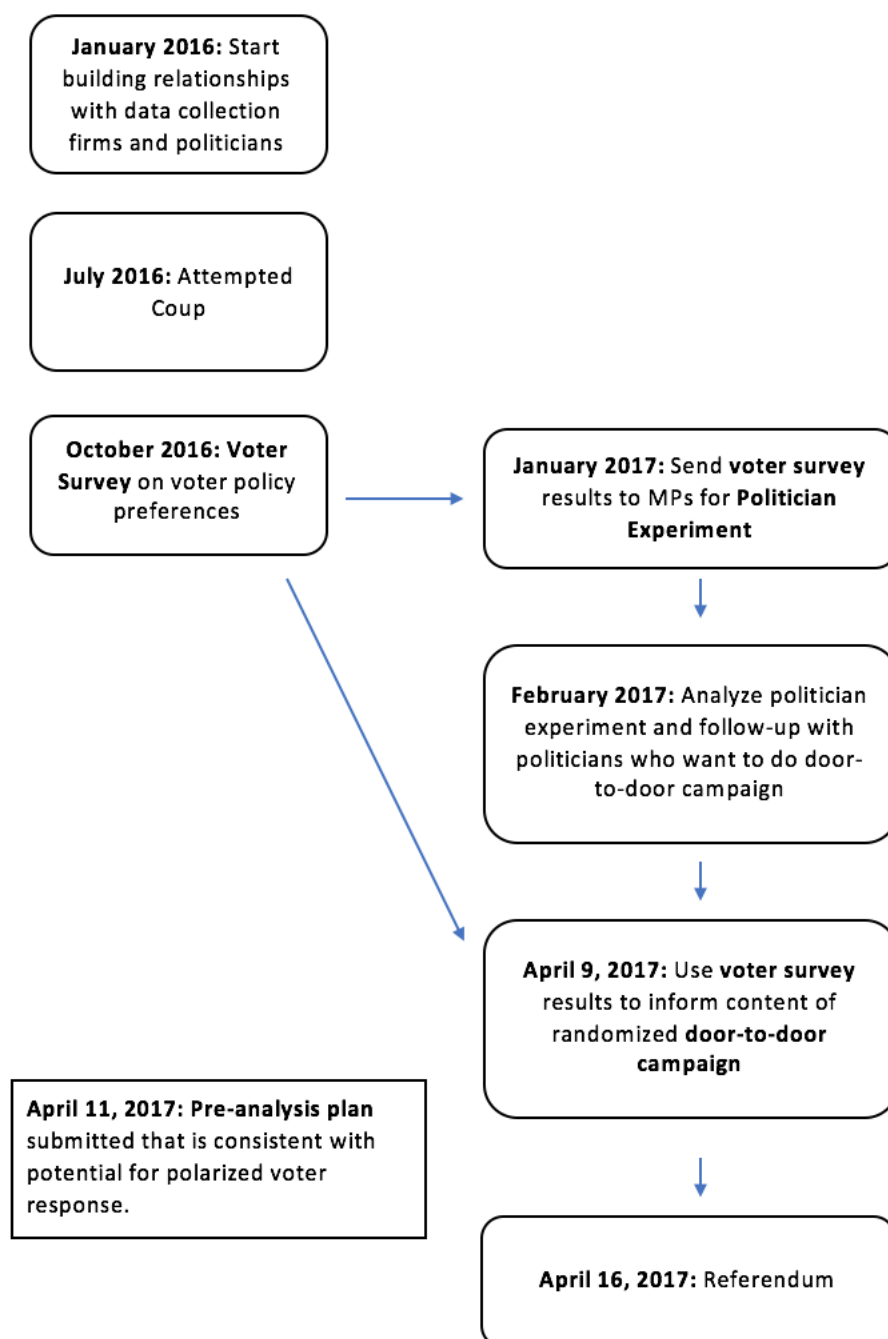
Figure 4: Does the drop in the value of Turkish Lira have any impact on your personal life?
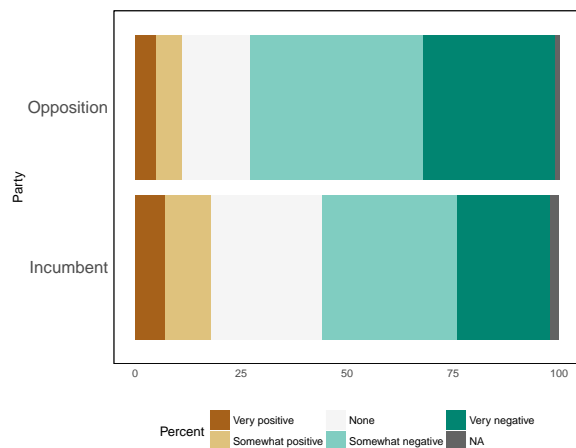
Figure 5: Who is most responsible for the latest devaluation of Turkish Lira?
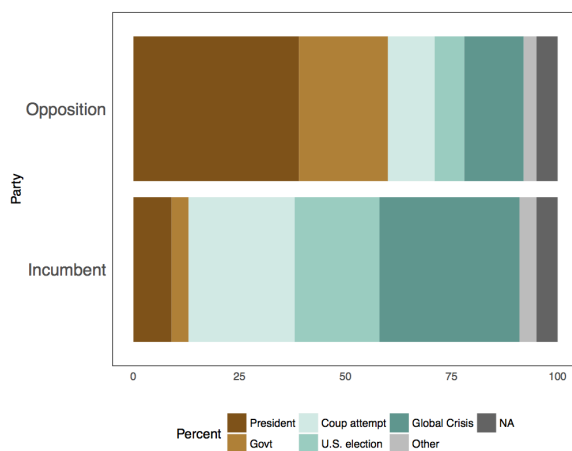
These figures are from a survey conducted by a U.S. based firm in Turkey with a sample of approximately 1,215 voters. [26] The survey is nationally representative. The survey was conducted in January of 2017 after the record low drop in the value of the local currency and before the referendum.

Figure 6: Pamphlet on Economy and Terrorism

#Hayır Türkiye Kazanacak!

Keyfi ekonomi yönetimine HAYIR

Türkiye Ağustos 2014'ten bugüne, yani 2,5 yıldır **zayıf liderliği** devrini yaşıyor.

Bu sürede 1 milyona yakın vatandaşımız işini kaybetti.

Kişi başına gelirimiz son 1 yılda 1000 dolar azaldı.

Ekonomimiz küçüldü. Enflasyon çift haneye yükseldi.

Şimdiye kadar bir kişinin keyfi kararlar vermesinin bedelini millet ödüyor. Türkiye kaybediyor.

Teröre HAYIR

Son 2.5 yılda Türkiye daha önce teröre daha önce olmadığı kadar çok can verdi.

Terör örgütlerinin kolaylıkla saldırı düzenleyebildiği bir ülke haline geldik.

Mevcut yönetim teröre karşı bizleri korumayı başaramadı.

Terörle mücadelede başarılı olmayan bir insana daha fazla güç vermemiz doğru değil.

- The pamphlet outlines the following:

  - Since 2014, there has been poor leadership
  - Under which 1 million citizens have lost their job
  - The per capita income has dropped by $1,000 in the past one year
  - The economy has contracted and inflation has increased
  - Turkey is losing under one leader
  - Since 2014, unprecedented level of terrorist activity
  - Terrorist organizations are more easily able to conduct attacks
  - Security is weak
  - More power should not be given if terrorism could not be reduced
  - The headlines state: "#NO Turkey will win," "NO to poor economic policy," "NO to terrorism."

Figure 7: Pamphlet on Checks and Balances

#Hayır Türkiye Kazanacak!

GELECEĞİM İÇİN
Hayır | Hayır Tercih

Tek adam rejimine HAYIR

- Anayasa değişirse başkan seçilecek kişi sınırsız güç sahibi olacak.
- Seçilen kişi 5 yıl boyunca istediğini yapacak.
- Çünkü bizim seçtiğimiz meclis tarafından denetlenemeyecek.
- Yargıya hesap vermeyecek.

Saray düzenine HAYIR

- Anayasa değişirse başkan seçilecek kişi devleti bütün gücünü elinde toplayacak.
- Sarayda oturacak kişi; hem yasama, hem yargı, hem yürütme yerine geçecek.
- Hiçbir insan bu kadar gücü layıkıyla taşıyamaz.
- Bu güçler hiç istemediğimiz birinin de eline geçebilir.
- O kişi elindeki gücü kötüye de kullanabilir.

- The pamphlet outlines the following:

  - If the constitution changes the elected president will have unlimited power
  - The elected person will do what they want for 5 years
  - Because they will not be held accountable by the elected parliament
  - They will not be held accountable by the judiciary
  - If the constitution changes the elected president will have complete power over the state
  - The person sitting in the palace will replace the legislative, judiciary, and executive branches
  - No one person deserves this much power
  - This power can also be passed to someone that is not wanted
  - That person can use the power for bad
  - The headlines state: "#NO Turkey will win," "NO to a one person regime," "NO to palace order"

Figure 8: Density of "No" Vote Share Across Country and Sample
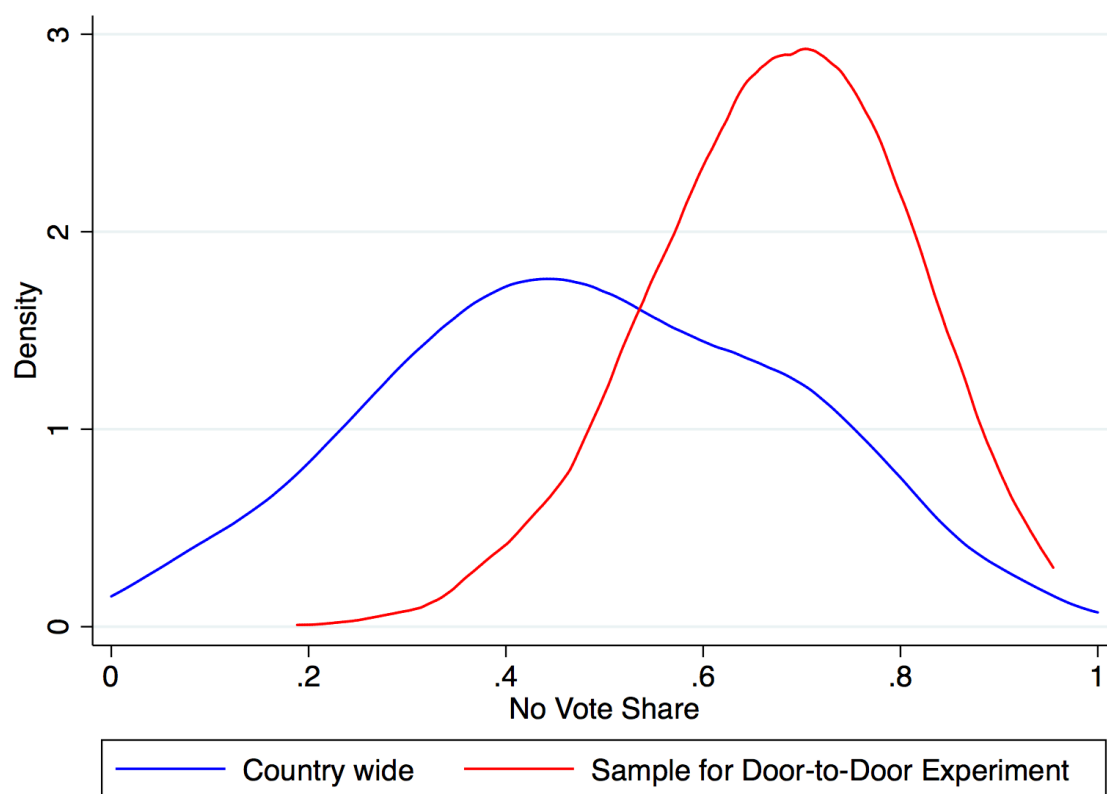
This table shows the density of "No" vote share across Turkey and across the sample among the control group in the voter experiment. The number of registered voters are included as weights.

Figure 9: Randomization Inference Quartile 2 for Voter Experiment

Distribution of the Estimated ATE
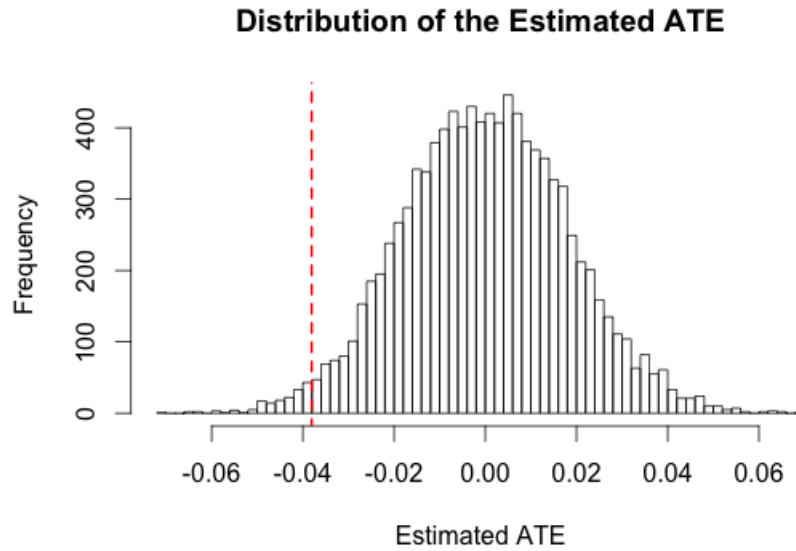
Figure 10: Randomization Inference Quartile 3 for Voter Experiment

Distribution of the Estimated ATE
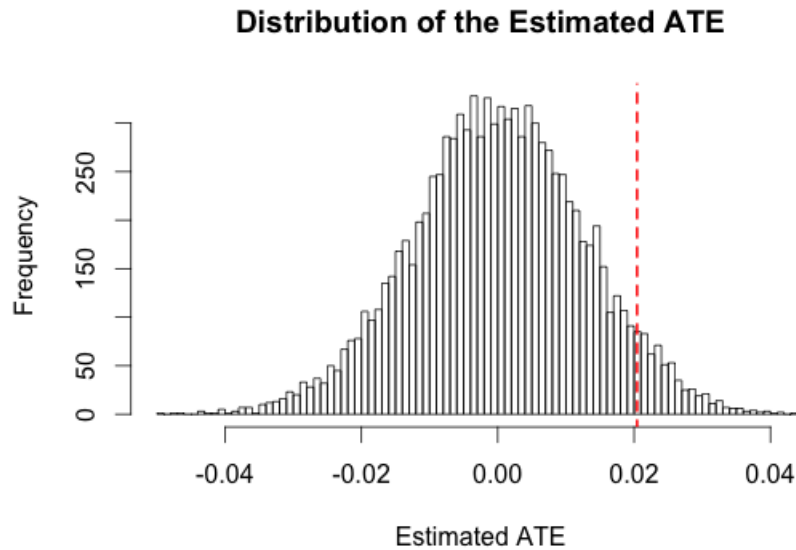
Here I conduct randomization inference within quartiles 2 and 3 of the first election to calculate an exact p-value under the sharp null of no treatment effect. To implement randomization inference, I ran 10,000 permutations of the treatment to the neighborhoods in the sample and estimate the coefficient. This generates a distribution of coefficients. In quartile 3, I find that the p-value is .09 and in quartile 2, I find that the p-value is .03.

Table 1: Individual Level Data Extreme Voter

Quartile	Decile	Share Extreme	Vote Share Diff
Q1	2	0.64	-0.33
Q1	3	0.75	-0.15
Q2	4	0.55	0.07
Q3	5	0.59	0.17
Q4	6	0.76	0.24
Q4	7	0.68	0.32
Q4	8	0.67	0.43

This table uses the individual level data from the survey I conducted with more than 1,770 voters. This data include voter policy preferences. I use the vector of policy preferences to predict whether someone self-reports that they support the incumbent or opposition. I then calculate the distributions of these predicted values and label the top and bottom 25th percentiles of the distribution as "extreme." Within each neighborhood, I calculate the proportion of extreme voters. I then match the data with the administrative neighborhood level vote share data. Decile corresponds to the distribution of the vote share differential between the incumbent and the opposition. Quartile corresponds to the distribution of vote share from the sample in the voter experiment. First, I find that the proportion of extreme voters in a neighborhoods is higher where the differential vote share between the two parties is higher. Moderate voters are concentrated where the vote share differential is low. Table 1 shows the average proportion of extreme voters across the distribution. We see that the lowest mean shares are .55 and .59. Within each of the 7 deciles, which overlap with the distribution of vote share differentials for the experiment, I count the total number of neighborhoods that have a proportion of extreme voters that is less than .55. The fourth and fifth deciles, where the vote share differential between the incumbent and opposition is .07 and .17 respectively, are where I am most likely to observe polarization.

Table 2: Past Vote Share by Party

Quartiles	No	Vote Share Diff
1	0.50	-0.21
2	0.63	-0.03
3	0.69	0.12
4	0.80	0.41
N	450	450

The second column includes the average "No" vote share across neighborhoods within each quartile. The third column shows the average past vote share differential between the incumbent and opposition parties by quartile. Past vote share is defined as the average neighborhood level vote share of the two general elections held in 2015.[27] This variable was used for stratification. The first quartile is where the incumbent is strongest. The sample here only includes the control group.

Table 3: Neighborhood Average of People Reached per Street

	(1)		(2)	
Quartile	Mean	N	Mean	N
1	0.10	25	0.12	21
2	0.14	25	0.18	20
3	0.12	25	0.15	20
4	0.13	25	0.17	19

Mean reach is the average number of registered voters per street who opened their door to the canvassers. Column 2 excludes neighborhoods that the party volunteers could not reach because of the threat of arrest.

Table 4: Balance Across Quartiles

	Aggregate	
	Control Mean	Coefficient
Num Reg Voters 2015 Nov	2719.938	-118.691
Num Valid Casts 2015	2364.375	-98.763
Num Opp Votes 2015 June	1102.021	3.557
Num Opp Votes 2015 Nov	1148.521	-3.216
Opp Neigh Share 2015 June	0.442	-0.004
Opp Neigh Share 2015 Nov	0.445	-0.010*
Turnout 2015 Nov	0.873	0.005

Balance test across the treatment and control groups across all pre-specified variables. Balance is tested across the whole sample and within each quartile. Asterisks indicate that coefficient is statistically significant at the 1% ***, 5% **, and 10% * levels.

Table 5: Balance Q1 and Q2

	Q1		Q2	
	Control Mean	Coefficient	Control Mean	Coefficient
Num Reg Voters 2015 Nov	2068.120	-448.004	2194.040	-514.933
Num Valid Casts 2015	1763.280	-397.516	1877.320	-471.269
Num Opp Votes 2015 June	395.240	-100.008	721.440	-168.158
Num Opp Votes 2015 Nov	400.920	-109.903	736.400	-190.868
Opp Neigh Share 2015 June	0.219	-0.014	0.401	0.010
Opp Neigh Share 2015 Nov	0.213	-0.016	0.386	-0.008
Turnout 2015 Nov	0.856	-0.006	0.869	0.002

Balance test across the treatment and control groups across all pre-specified variables. Balance is tested across the whole sample and within each quartile. Asterisks indicate that coefficient is statistically significant at the 1% ***, 5% **, and 10% * levels.

Table 6: Balance Q3 and Q4

	Q3		Q4	
	Control Mean	Coefficient	Control Mean	Coefficient
Num Reg Voters 2015 Nov	2893.400	66.418	3218.160	421.990
Num Valid Casts 2015	2527.240	65.028	2832.480	408.926
Num Opp Votes 2015 June	1187.200	3.802	1776.840	278.760
Num Opp Votes 2015 Nov	1228.920	-16.983	1892.360	305.083
Opp Neigh Share 2015 June	0.486	-0.006	0.613	-0.008
Opp Neigh Share 2015 Nov	0.485	-0.015*	0.637	-0.003
Turnout 2015 Nov	0.882	0.011*	0.877	0.013

Balance test across the treatment and control groups across all pre-specified variables. Balance is tests across the whole sample and within each quartile. Asterisks indicate that coefficient is statistically significant at the 1% ***, 5% **, and 10% * levels.

Table 7: Door-to-Door Results: Aggregate Effect Across Quartiles (Weighted)

	(1) No Vote Share	(2) Turnout Rate
Treatment	0.0002	0.0016
	(0.0062)	(0.0011)
Mean	.654	.87
N	550	550
R squared	.867	.839

The dependent variable in columns 1 is the share that voted "No" at the neighborhood level in the 2017 Referendum. The dependent variable in column 2 is the turnout rate. Strata fixed effects are included and pre-specified controls that are listed in the balance tables are included. Asterisks indicate that coefficient is statistically significant at the 1% ***, 5% **, and 10% * levels.

Table 8: No Vote Share by Quartile (Weighted)

	Referendum June 2017				Presidential 2018				General 2018			
	(1) Q1	(2) Q2	(3) Q3	(4) Q4	(5) Q1	(6) Q2	(7) Q3	(8) Q4	(9) Q1	(10) Q2	(11) Q3	(12) Q4
Treatment	-0.008	-0.035***	0.013**	0.008*	-0.015	-0.036***	0.016**	0.006	-0.017	-0.038***	0.016**	0.006
	(0.019)	(0.011)	(0.006)	(0.004)	(0.020)	(0.012)	(0.007)	(0.004)	(0.020)	(0.012)	(0.007)	(0.004)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mean	.496	.628	.694	.798	.478	.597	.676	.79	.478	.589	.664	.782
N	138	137	138	137	138	137	138	137	138	137	138	137
R squared	.358	.625	.679	.842	.348	.616	.691	.793	.323	.587	.68	.809

The dependent variable is the share that voted "No" at the neighborhood level. Each column shows the estimation result for each quartile of the past vote share distribution. Regressions are weighted by the number of registered voters. All pre-specified controls are included in the regression; including, past voting and turnout behavior. There are 25 treatment neighborhoods in each quartile across the two treatment groups. Asterisks indicate that coefficient is statistically significant at the 1% ***, 5% **, and 10% * levels.

Table 9: No Vote Share by Quartile (Weighted)

	Referendum June 2017				Presidential 2018				General 2018			
	(1) Q1	(2) Q2	(3) Q3	(4) Q4	(5) Q1	(6) Q2	(7) Q3	(8) Q4	(9) Q1	(10) Q2	(11) Q3	(12) Q4
Economy & Terrorism	0.011 (0.029)	-0.038*** (0.013)	0.018** (0.007)	0.003 (0.004)	0.004 (0.031)	-0.036*** (0.013)	0.019* (0.010)	0.005 (0.004)	0.005 (0.031)	-0.036*** (0.012)	0.019* (0.011)	0.003 (0.004)
Checks & Balances	-0.027 (0.028)	-0.032** (0.014)	0.006 (0.007)	0.014** (0.006)	-0.033 (0.028)	-0.036** (0.017)	0.013* (0.008)	0.008 (0.007)	-0.038 (0.028)	-0.041** (0.018)	0.012* (0.007)	0.010 (0.007)
Mean	.496	.628	.694	.798	.478	.597	.676	.79	.478	.589	.664	.782
N	138	137	138	137	138	137	138	137	138	137	138	137
R squared	.365	.626	.682	.844	.354	.616	.691	.793	.331	.587	.681	.809

The dependent variable is the share that voted "No" at the neighborhood level. Each column shows the estimation result for each quartile of the past vote share distribution. Regressions are weighted by the number of registered voters. All pre-specified controls are included in the regression; including, past voting and turnout behavior. There are 25 treatment neighborhoods in each quartile across the two treatment groups. Asterisks indicate that coefficient is statistically significant at the 1% ***, 5% **, and 10% * levels.

Table 10: Turnout Share by Quartile (Weighted)

	Referendum June 2017				Presidential 2018				General 2018			
	(1) Q1	(2) Q2	(3) Q3	(4) Q4	(5) Q1	(6) Q2	(7) Q3	(8) Q4	(9) Q1	(10) Q2	(11) Q3	(12) Q4
Treatment	0.000	0.005***	0.001	0.002	0.003	0.006	-0.004	0.001	0.004	0.006	-0.002	0.002
	(0.003)	(0.002)	(0.002)	(0.002)	(0.004)	(0.004)	(0.003)	(0.002)	(0.003)	(0.004)	(0.003)	(0.002)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mean	.86	.865	.878	.876	.856	.864	.879	.882	.856	.864	.878	.881
N	138	137	138	137	138	137	138	137	138	137	138	137
R squared	.781	.824	.813	.873	.717	.721	.722	.748	.724	.736	.722	.744

The dependent variable is the turnout rate at the neighborhood level. Each column shows the estimation result for each quartile of the past vote share distribution. Regressions are weighted by the number of registered voters. All pre-specified controls are included in the regression; including past voting and turnout data. Asterisks indicate that coefficient is statistically significant at the 1% ***, 5% **, and 10% * levels.

Table 11: Turnout Share by Quartile (Weighted)

	Referendum June 2017				Presidential 2018				General 2018			
	(1) Q1	(2) Q2	(3) Q3	(4) Q4	(5) Q1	(6) Q2	(7) Q3	(8) Q4	(9) Q1	(10) Q2	(11) Q3	(12) Q4
Economy and Terrorism	0.004** (0.002)	0.003 (0.002)	-0.000 (0.003)	-0.001 (0.003)	0.005 (0.004)	0.000 (0.003)	-0.007** (0.004)	0.000 (0.003)	0.006 (0.004)	0.001 (0.003)	-0.007* (0.004)	0.002 (0.003)
Checks and Balances	-0.003 (0.003)	0.007*** (0.002)	0.003 (0.003)	0.006** (0.002)	0.002 (0.005)	0.012** (0.005)	0.001 (0.004)	0.002 (0.003)	0.003 (0.004)	0.011** (0.005)	0.003 (0.004)	0.002 (0.003)
Mean of Outcome	.86	.865	.878	.876	.856	.864	.879	.882	.856	.864	.878	.881
N Neighborhoods	138	137	138	137	138	137	138	137	138	137	138	137
R squared	.783	.824	.813	.877	.717	.727	.729	.748	.724	.74	.731	.744

The dependent variable is the turnout rate at the neighborhood level. Each column shows the estimation result for each quartile of the past vote share distribution. Regressions are weighted by the number of registered voters. All pre-specified controls are included in the regression; including past voting and turnout data. Asterisks indicate that coefficient is statistically significant at the 1% ***, 5% **, and 10% * levels.

Table 12: No Vote Share by Quartile (Weighted) and Threatened Neighborhoods Dropped

	Referendum June 2017				Presidential 2018				General 2018			
	(1) Q1	(2) Q2	(3) Q3	(4) Q4	(5) Q1	(6) Q2	(7) Q3	(8) Q4	(9) Q1	(10) Q2	(11) Q3	(12) Q4
Treatment	-0.000	-0.038***	0.010*	0.007	-0.005	-0.040***	0.014**	0.003	-0.006	-0.042***	0.013*	0.003
	(0.025)	(0.010)	(0.006)	(0.005)	(0.025)	(0.012)	(0.007)	(0.004)	(0.025)	(0.012)	(0.007)	(0.004)
Mean	.496	.628	.694	.798	.478	.597	.676	.79	.478	.589	.664	.782
N	134	132	133	131	134	132	133	131	134	132	133	131
R squared	.36	.633	.68	.84	.35	.629	.69	.795	.325	.598	.679	.812

The dependent variable is the share that voted "No" at the neighborhood level. In this specification, the neighborhoods that the party volunteers could not canvass because of aggression were dropped. Each column shows the estimation result for each quartile of the past vote share distribution. Regressions are weighted by the number of registered voters. All pre-specified controls are included in the regression; including, past voting and turnout data. Asterisks indicate that coefficient is statistically significant at the 1% ***, 5% **, and 10% * levels.

Table 13: Turnout Share by Quartile and Threatened Neighborhoods Dropped (Weighted)

	Referendum June 2017				Presidential 2018				General 2018			
	(1) Q1	(2) Q2	(3) Q3	(4) Q4	(5) Q1	(6) Q2	(7) Q3	(8) Q4	(9) Q1	(10) Q2	(11) Q3	(12) Q4
Treatment	0.000	0.005***	0.001	0.002	0.003	0.006	-0.004	0.001	0.004	0.006	-0.002	0.002
	(0.003)	(0.002)	(0.002)	(0.002)	(0.004)	(0.004)	(0.003)	(0.002)	(0.003)	(0.004)	(0.003)	(0.002)
Mean	.86	.865	.878	.876	.856	.864	.879	.882	.856	.864	.878	.881
N	138	137	138	137	138	137	138	137	138	137	138	137
R squared	.781	.824	.813	.873	.717	.721	.722	.748	.724	.736	.722	.744

The dependent variable is the turnout rate at the neighborhood level. Each column shows the estimation result for each quartile of the past vote share distribution. Regressions are weighted by the number of registered voters. All pre-specified controls are included in the regression; including past voting and turnout data. Asterisks indicate that coefficient is statistically significant at the 1% ***, 5% **, and 10% * levels.

Table 14: No Vote Share by Quartile (Unweighted)

	Referendum June 2017				Presidential 2018				General 2018			
	(1) Q1	(2) Q2	(3) Q3	(4) Q4	(5) Q1	(6) Q2	(7) Q3	(8) Q4	(9) Q1	(10) Q2	(11) Q3	(12) Q4
Treatment	0.011	-0.027**	0.020**	0.013**	0.007	-0.021	0.021**	0.009	0.009	-0.027*	0.018*	0.010
	(0.021)	(0.012)	(0.009)	(0.007)	(0.022)	(0.015)	(0.011)	(0.007)	(0.022)	(0.014)	(0.010)	(0.008)
Mean	.496	.628	.694	.798	.478	.597	.676	.79	.478	.589	.664	.782
N	138	137	138	137	138	137	138	137	138	137	138	137
R squared	.402	.398	.489	.682	.405	.43	.532	.6	.403	.435	.521	.616

The dependent variable is the share that voted "No" at the neighborhood level. Each column shows the estimation result for each quartile of the past vote share distribution. Regressions are weighted by the number of registered voters. All pre-specified controls are included in the regression; including past voting and turnout behavior. There are 25 treatment neighborhoods in each quartile across the two treatment groups. Asterisks indicate that coefficient is statistically significant at the 1% ***, 5% **, and 10% * levels.

Table 15: Turnout Share by Quartile (Unweighted)

	Referendum June 2017				Presidential 2018				General 2018			
	(1) Q1	(2) Q2	(3) Q3	(4) Q4	(5) Q1	(6) Q2	(7) Q3	(8) Q4	(9) Q1	(10) Q2	(11) Q3	(12) Q4
Treatment	-0.001	0.015***	0.001	0.003	-0.001	0.011**	-0.004	0.001	0.000	0.012**	-0.002	0.003
	(0.004)	(0.005)	(0.003)	(0.003)	(0.005)	(0.005)	(0.004)	(0.005)	(0.005)	(0.005)	(0.004)	(0.004)
Mean	.86	.865	.878	.876	.856	.864	.879	.882	.856	.864	.878	.881
N	138	137	138	137	138	137	138	137	138	137	138	137
R squared	.725	.784	.702	.787	.66	.72	.607	.607	.657	.727	.614	.612

The dependent variable is the turnout rate at the neighborhood level. Each column shows the estimation result for each quartile of the past vote share distribution. Regressions are weighted by the number of registered voters. All pre-specified controls are included in the regression; including past voting and turnout data. Asterisks indicate that coefficient is statistically significant at the 1% ***, 5% **, and 10% * levels.

Appendix

Facebook Experiment

Finally, in considering the effectiveness of alternative strategies, I compare the results of the door-to-door campaign to a randomized, country-wide Facebook campaign that was also implemented by the opposition. It is claimed that advertisements shown through Facebook should only be exposed to a user if it is compatible with their user preferences. Relative to the door-to-door campaign, a user has full discretion to choose to click on a link or video.

The experimental design of the Facebook campaign was similar to that of the door-to-door campaign, but the sampled areas were more representative of the entire country. The finest level at which voters can be targeted through Facebook in Turkey is by zip code. The individuals from the opposition party faced a budget constraint and so wanted to focus on "moderate" areas defined by vote share differential. As in the case of the door-to-door campaign, administrative voter choice and turnout data is observed at the neighborhood leve. There are multiple neighborhoods within a zip code. Zip codes where any party had more than 60% of the vote share in the general elections in 2015 were dropped. Zip codes were randomly selected to be exposed to a set of videos on Facebook urging voters to vote "No."[28] Randomization was stratified by octiles of past vote share for the incumbent party at the zip code level. In this campaign, the content of the videos varied. Some of the videos showed experts discussing information on issues like the economy and terrorist activity and others showed regular citizens using various arguments to urge others to vote "No." The online campaign started two weeks before the referendum.

The equations below show the specification that were run at the zip code and neighborhood level. Y_z is neighborhood level "No" vote shares or turnout data aggregated up to the zip code and Y_{nz} is at the neighborhood level. T_z is an indicator for whether the zip code was in the treatment group and δ_o are octile fixed effects. X_z includes average vote shares for three out of four parties (so that rank condition is not violated) from the past two general elections that were both held in 2015.

$$Y_{zo} = \alpha + \beta_1 T_z + \delta_o + \gamma_1 X_z + \epsilon_{zo} \tag{4}$$
$$Y_{nzo} = \alpha + \beta_2 T_z + \delta_o + \gamma_2 X_{nz} + \epsilon_{nzo} \tag{5}$$

Equation (1) shows estimation at the zip code and equation (2) shows estimation at the neighborhood level; in the latter, standard errors were clustered at the zip code level. The estimates of both regressions are the same when the neighborhood level regression is weighted by the number of registered voters per neighborhood as shown in Table A1 and Table A2. However, an unweighted version of the latter estimates a negative effect of the campaign, indicating that small neighborhoods were negatively affected by the campaign. This result

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[28]On Facebook, the advertiser enters a daily budget for its ads/campaigns.

is shown in Table A3 and is shown by quartile of past vote share (the mean of the outcome shows that the quartiles are decreasing in the "No" vote share). This result is consistent with the fact that had less information beforehand were more responsive. The effects are in "moderate" areas, similar to the door-to-door campaign as shown in Figure A1. If anything, the Facebook campaign caused a small decrease in the "No" vote share. We conclude that the opposition party was again unsuccessful in changing vote share. In comparison to the door-to-door campaign, it is more difficult to interpret the Facebook results because the content in the videos varied and it is not possible to measure the effects by video. Moreover, I cannot provide a framework to explain why the campaign only decreased the "No" vote share. The main conclusion is that the targeted door-to-door campaigning is found to be the most effective strategy.

Table A1: Facebook Campaign - Vote Share "No" at Zip Code Level

	(1) All	(2) All With Controls
Treatment	0.001	0.002
	(0.004)	(0.002)
2015 MHP Vote Share		-0.277***
		(0.020)
2015 HDP Vote Share		-0.219***
		(0.016)
2015 AKP Vote Share		-1.086***
		(0.025)
2015 Turnout		0.165***
		(0.029)
Mean of Outcome	0.517	0.517
Number of Observations	1119	1119
R squared	.779	.943

The dependent variable is percent vote No. Column 1 shows the result across the distribution (octiles) without controls and column 2 shows the result with controls. Asterisks indicate that coefficient is statistically significant at the 1% ***, 5% **, and 10% * levels. Includes octile strata fixed effects. The mean outcome shows that quartile is decreasing in the "No" vote share.

Table A2: Facebook Campaign - Vote Share "No" at the Neighborhood Level With Weights

	(1) All	(2) All With Controls
Treatment	0.001	-0.001
	(0.004)	(0.002)
2015 AKP Vote Share		-1.108***
		(0.008)
2015 MHP Vote Share		-0.296***
		(0.017)
2015 HDP Vote Share		-0.257***
		(0.012)
2015 Turnout		0.112***
		(0.029)
Mean of Outcome	0.521	0.521
Number of Observations	16297	16297
R squared	.518	.95

The dependent variable is percent vote No. Column 1 shows the result across the distribution (octiles) without controls and column 2 shows the result with controls. Asterisks indicate that coefficient is statistically significant at the 1% ***, 5% **, and 10% * levels. Includes octile strata fixed effects. The mean outcome shows that quartile is decreasing in the "No" vote share.

Table A3: Facebook Campaign - No Pct Neighborhood Level By Quartile No Weights

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Q1	Q1 Controls	Q2	Q2 Controls	Q3	Q3 Controls	Q4	Q4 Controls
Treatment	-0.029*	-0.001	-0.046***	-0.019***	0.006	0.001	-0.010	-0.004
	(0.017)	(0.005)	(0.017)	(0.007)	(0.019)	(0.011)	(0.010)	(0.007)
2015 AKP Vote Share		-1.096***		-1.101***		-1.070***		-1.069***
		(0.015)		(0.014)		(0.024)		(0.015)
2015 MHP Vote Share		-0.235***		-0.281***		-0.202***		-0.324***
		(0.022)		(0.030)		(0.036)		(0.028)
2015 HDP Vote Share		-0.254***		-0.357***		-0.290***		-0.305***
		(0.046)		(0.030)		(0.031)		(0.078)
2015 Turnout		-0.005		0.012		-0.031		-0.017
		(0.033)		(0.063)		(0.054)		(0.031)
Octile F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mean of Outcome	0.625	0.625	0.512	0.512	0.424	0.424	0.347	0.347
Number of Observations	3228	3228	3778	3778	4257	4257	5034	5034
R squared	.0529	.882	.0267	.841	.00327	.792	.0229	.838

The dependent variable is percent vote No. Columns 2, 4, 6, and 8 show the results for each quartile with controls. Asterisks indicate that coefficient is statistically significant at the 1% ***, 5% **, and 10% * levels. Includes octile strata fixed effects. The mean outcome shows that quartile is decreasing in the "No" vote share.

Figure A1: Facebook Campaign - Neighborhood Level Vote Share "No"
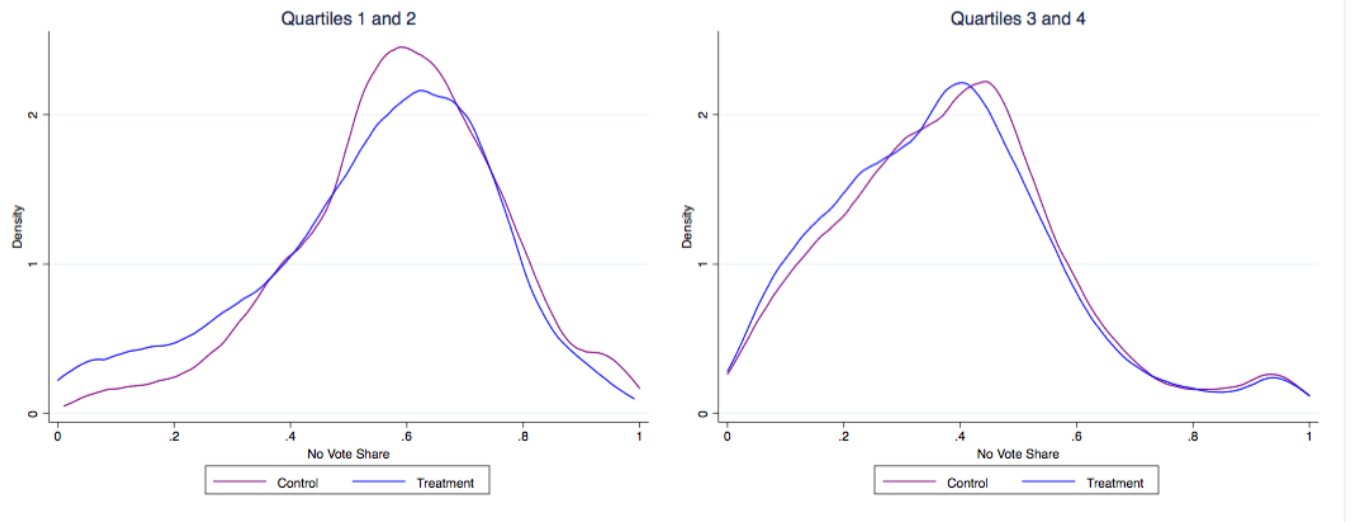
The dependent variable is the "No" vote share at the neighborhood level and each panel is split by the bottom and upper quartiles. Quartiles 1 and 2 correspond to zip codes where the "No" vote share was relatively higher.

Figure A2: **Sample from Report Sent to MPs**

The figures show whether voters disagree, are neutral, or agree with the following statement: **I believe the arrests made during the OHAL are correct**.

The major difference with Figures 11 and 12 above is that the majority of CHP voters are now against the arrests, but still less than half (47%). Voters generally agreed with the arrests at the time of the survey. Perhaps, this is not surprising given the concern with national security.

The figures show how voters responded to the following question: **What is the most pressing issue in Turkey for you?**

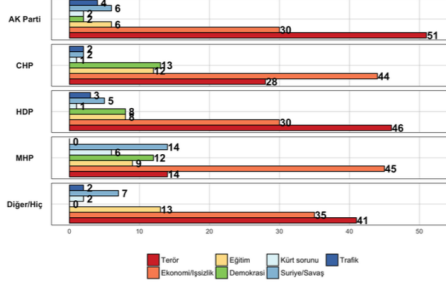Figure 1: By self-reported party (Diğer/Hiç means they did not report a party)
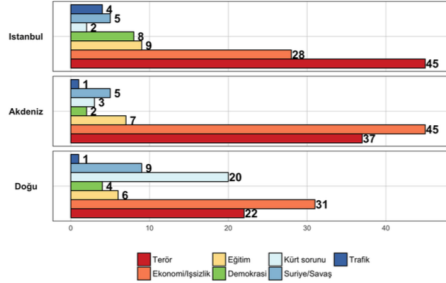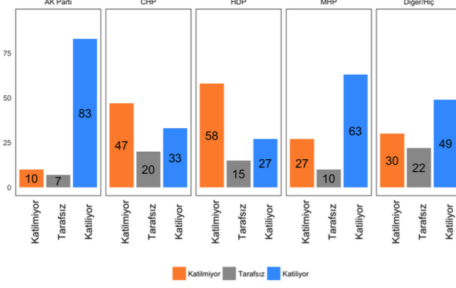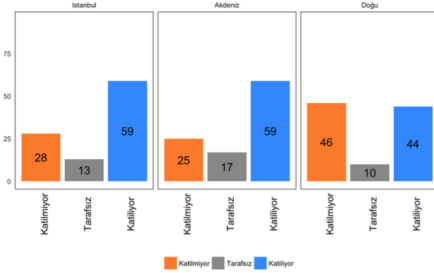

Figure 13: By party

Margin of error: 3% (AK Parti), 9% (CHP), 7% (MHP), 11% (HDP), and 6% (Diğer)r

Figure 2: By region

Figure 14: By region

Margin of error: 5% (Istanbul), 6% (Akdeniz), and 7% (Doğu)

This figure shows two sample pages from the voter report that was sent to the politicians. All results were shown by self-reported party and by region. The panel on the left shows the first figures that were provided on the issues that voters self-reported as most important to them. The figures on the right-hand side provide information on an issue that relates to terrorism. The attempted coup was widely regarded as a terrorist attack. The figures provide information on how voter responded to the statement: "I agree with the arrests made during the state of emergency." The reports were sent in Turkish.