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ABSTRACT

Populism has surged around the world in recent decades. One campaign activity that may be especially important for populist leaders is holding large rallies to gain unmediated support from "the people." In this paper, we explore whether populist leaders are particularly effective in gaining support via their rallies. We do this by studying the effect of campaign rallies held by Donald Trump and other U.S. Presidential candidates since 2008. To measure the short-run causal impact of rallies, we exploit the fact that some respondents in the CCES were surveyed a few days before a rally, while others were surveyed a few days afterwards. We find that Trump's rallies produced a short-lived increase in his support over Clinton (especially among leaning Republicans), intention to vote (especially among strong Republicans), and individual campaign contributions for him. We do not find consistent, robust effects for other candidates. In terms of channels, we find that local media coverage of all candidates increased around their rallies, suggesting that the quantity of media coverage alone does not explain the findings.

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An online appendix is available at: http://www.nber.org/data-appendix/w28043

1 Introduction

The rise of populism in recent decades has raised concerns about the future of liberal democracy, especially in the United States and Western Europe (Hawkins et al., 2019). The vote share of populist parties has tripled in Europe from 1998 to 2018 (The Guardian, 2018). The success of these parties is often attributed to individual leaders, figures such as Jorg Haider in Austria, Mateo Salvini in Italy, Recep Tayyip Erdogen in Turkey, and Narendra Modi in India. Commentators have even coined terms such as the "Trump effect", "Le Pen effect" or the "Haider phenomenon" to highlight their importance.

One campaign activity that is especially important for many populist leaders is holding large rallies (Jansen, 2011). These rallies help populists appeal to "the people" for their direct and unmediated support and promote the idea that they are themselves "one of the people." (Albertazzi and McDonnell, 2007; Mudde and Kaltwasser, 2017). As Lichtenstein (2019) notes: "Almost by definition, populists are unorganized in any meaningful sense. They do not function through and with an institution, except perhaps via intense engagement in partisan politics at the height of the campaign season. Mass rallies offer an emotive substitute for substantive political organization and engagement. This kind of populism is, therefore, the label attached to protest sentiment unmoored by institutional loyalties."

In this paper, we provide evidence that populist leaders are particularly effective in gaining support via their campaign rallies, at least temporarily. We do this by studying the effect of campaign rallies held by U.S. Presidential candidates since 2008. While the Republican Party is not easily characterized as populist, the current Republican U.S. President, Donald Trump, is. Hawkins et al. (2019) analyze the speeches of 215 world leaders around the world and find that Donald Trump is a populist leader with a score of 0.78 (87th percentile). The previous two presidents, Barack Obama and George W. Bush, have scores of 0.15 and 0.21, respectively.[1]

Further evidence of Trump's populistic style and appeal can be seen by examining the many ways his 2016 presidential campaign and unlikely victory represent a break from the past. Trump won the Republican nomination even though he was opposed by virtually all Republican elites (MacWilliams, 2016), and spent much less than the other leading contenders (National Public Radio, 2016).[2] And,

[1] Among 215 leaders from 66 countries analyzed by Hawkins et al. (2019), only Vladimír Mečiar (Slovakia), Recep T. Erdogan (Turkey), Mirek Topolanek and Vaclav Klaus (Czech Republic), Silvio Berlusconi and Giuseppe Conte (Italy), Andrés Manuel López Obrador (Mexico), Viktor Orban (Hungary), and Beate Szydlo (Poland) have a higher score than Donald Trump.

[2] For instance, for the New Hampshire primary, Donald Trump spent a total of $ 3.1 million on TV advertisements. As a comparison, Jeb Bush, Marco Rubio, Chris Christie, Bernie Sanders,

Trump won the presidency despite spending much less on his general election campaign than Democratic nominee Hillary Clinton, and even less, relatively, on paid television advertisements. Clinton outspent Trump by $769 million to $440 million overall, and she outspent him by about 3 to 1 in TV advertisements (The Center for Responsive Politics, 2017).[3] In the popular media, Trump was widely referred to as a populist.[4] Observers often draw comparisons between Trump and other nationalistic and anti-immigrant populist leaders, such as Matteo Salvini in Italy, Marine Le Pen in France, or Hungarian Prime Minister Viktor Orbán.

Trump's campaign rallies were different from those of his opponents and other recent presidential candidates. At these rallies, Trump's skills as a reality-TV star were on full display. The crowds often became passionate and broke into chants – "Build the Wall" or "Drain the Swamp" or "Lock Her Up" as well as the more mundane "Trump, Trump, Trump." These rallies were described as "identity festivals" that "enacted how Trump and his followers would like the country to be." (Scientific American, 2017). The Atlantic (2018) asserts that: "At the president's rallies, his devotees find the relief of belonging." According to Topic Magazine (2019), "Donald Trump's rallies are one of his greatest political tools."[5]

We study the impact of Trump's rallies on citizens' preferences over candidates, policy issues, and their intention to vote. To better isolate the effects of the rallies from other events, we use data from a large survey – the Cooperative Congressional Elections Study (CCES) – to exploit both time and geography. Some respondents in the CCES were surveyed a few days before a rally, while others were surveyed a few days afterwards. In addition, for many rallies, some of the respondents surveyed around the time of the rally lived near the rally site.[6] Thus, we compare the average change in political preferences and voting intentions around the time of the rally among respondents who live near a rally site, with the changes among

and Hillary Clinton spent $ 34.0, 16.7, 14.6, 9.1, and 4.9 million, respectively.

[3]As a comparison, the past presidential winners in 2012 and 2008 raised $ 769 and $ 730 million, respectively.

[4]For instance, see National Public Radio (2015), Newsweek (2015), and Politico Magazine (2016).

[5]Jones (1998) describes the goals of campaign rallies as follows: "Though, on the surface, campaign appearances may appear to be strictly theater, these do serve several important political purposes. First and foremost, campaign appearances are designed to attract the attention of both voters and local news media. Candidates want to alert people of the impending election and the stakes involved. Second, candidates intend for their visits to serve as a call to action – to encourage people to participate by voting or joining the local campaign effort. Last, but not least, campaign appearances serve as an attempt to directly persuade citizens to vote for the candidate. The candidate's stump speech serves as a ready-made justification for voting for the candidate and their fellow partisans." (Jones, 1998, p. 397). Despite being written nearly 20 years beforehand, this description seems to apply perfectly to Trump's campaign.

[6]As we show below, local newspaper and television news coverage of rallies were significantly higher in the media market areas where the rallies were held than in other areas, so respondents living near the rally sight were likely exposed to more coverage than other respondents.

those who live far away from the site. Since the 2016 CCES has a total sample size of almost 65,000, and since Trump held 71 rallies in 15 states during the survey period, mostly at sites in large media markets, even after restricting the sample we have many thousand respondents. Our identification strategy is similar to that employed by Chiang and Knight (2011) in their study of presidential newspaper endorsements in 2000 and 2004.[7]

Our findings are straightforward. First, we find that Trump rallies appear to have increased his support over Clinton by about 4.5 percentage points on average. The effects are short-lived, lasting about one week. Moreover, the effects are especially large for respondents who identify as "weak" Republicans and Republican-leaning independents. Second, Trump rallies also appear to have increased the intention to turn out for "strong" Republicans and Democrats, but not for other respondents. Third, rallies by Trump increased the individual campaign contributions for him. The effect is short-lived and dies out in less than six days. To compare how the effect of rallies by Trump differs from rallies by other presidential candidates, we use the same approach to study the rallies held by Hillary Clinton in 2016, as well as those held by Barack Obama and Mitt Romney in 2012, and by Obama and John McCain in 2008. For these candidates – none of whom could be called a populist – we find no consistent, robust effects.[8]

To explore the channels that may explain why Trump's rallies generate changes in voting intention and turnout, unlike rallies by other presidential candidates, we first analyze the local media coverage of rallies around the time these rallies were held. We find evidence that Trump's local media coverage increased around the time of his rallies, both on television news and in newspapers. We do not find similar effects on the amount of paid television advertising by either Trump or Clinton. So, it is possible that respondents' changed their vote intentions due to the additional coverage of the candidate on media. However, we find increases of similar magnitude in the coverage of almost all other presidential candidates around their rallies as well. This suggests that either the quality of Trump's coverage was different from that of other candidates, or that the effect of the additional coverage on respondents was different.

Our paper contributes to the growing literature on the political economy of populism. Most of the literature has focused on the theoretical underpinnings explaining the recent rise of populism. For instance, politicians may choose a

[7] One feature in Chiang and Knight (2011) that does not apply here is the distinction between "surprising" vs. "unsurprising" endorsements. It is possible that some of Trump's rallies were more surprising than others, but we do not attempt to measure that here. Hungerman et al. (2018) also employs a similar research design to study a completely different type of behavior: voluntary donations to churches.

[8] We do not find consistent changes in respondents' issue positions or the relative importance they give to different issues, nor on their perceptions of the candidates' issue positions.

populist platform either when voters perceive that politicians are influenced by the rich elite (Acemoglu, Egorov and Sonin, 2013) or when they are electorally disadvantaged (Eguia and Giovannoni, 2019). Pastor and Veronesi (2018) show that voters' dislike for inequality and a rise in inequality due to globalization may lead to an increase in support for populist leaders. There are limited empirical studies understanding the recent success of populist leaders (Hawkins and Littvay, 2019). Existing papers have shown that economic factors such as unemployment (Algan et al., 2017), economic insecurity (Guiso et al., 2017), and skilled-biased trade (Guriev, 2018) have lead to an increase in populism. We contribute to this literature by providing evidence that populist leaders' success may depend on connecting with voters via rallies. Since the effects seem short-lived, our findings might also help account for the fact that many populist leaders hold them frequently and not only during the months leading up to elections.

Our paper also contributes directly to a large literature that seeks to estimate the electoral effects of political rallies and campaigns in the U.S. The evidence from existing studies is mixed overall. For example, Heersink and Peterson (2017) using county-level election results from 1948 find that Truman's vote-share was significantly higher where he made campaign visits, but the same was not true for Dewey. Jones (1998), Althaus, Nardulli and Shaw (2002) and Gerber et al. (2011) study campaign visits and advertisements during presidential elections from 1972 to 2000 and conclude that the visits had a significant impact on the vote. Herr (2002) studies the 1996 election and finds that visits by Bill Clinton later in the electoral campaign were significantly related to his vote-share, but earlier visits were not; and visits by Dole were not related to the vote. Wendland (2017) studies campaign visits and advertising during the presidential primaries of 2008, 2012 and 2016, and finds mixed results.[9] For 2016, neither Clinton's nor Sanders's campaign visits were significantly related to vote choice. Among Republicans, Trump's visits were significantly related to vote choice, but visits by Cruz and Rubio were not.[10] Finally, Devine (2018) regresses county-level vote-share on campaign visits by Trump and Clinton and finds that no candidate's visits had a significant effect on the overall voting outcomes.[11]

[9] Also see Shaw and Gimpel (2012) for a field experiment in which they randomized Texas governor Rick Perry's schedule of visits for 3 days in January 2006.

[10] For 2008, visits by Clinton were significantly related to vote choice, but visits by Obama were not; nor were visits by McCain, Romney, or Huckabee. For 2012, Romney's visits were significantly related to vote choice, but visits by Santorum and Gingrich were not. Note that we refer here to statistical significance and Wendland's interpretation of the results. In many cases, the point estimates are quite large but so are the standard errors.

[11] However, analyzing the data separately by state, he finds that Clinton's visits appear to have affected the vote in Pennsylvania and, possibly, also in Michigan. He concludes that "Donald Trump did not win in Pennsylvania, Michigan, or Wisconsin as a direct result of his campaign visits to those decisive states" (Devine, 2018, p. 1).

Our findings contribute to this literature, both substantively and methodologically. Methodologically, our identification strategy is tighter than previous work – other than field experiments – since we exploit both geographical variation and high-frequency variation over time. This identification type of research design might be useful for studying the effects of other types of campaign activities as well. Substantively, we find that rallies have heterogeneous effects. In particular, as noted above, we find significant effects for Donald Trump but not for the five other presidential candidates studied. These findings are consistent with the hypothesis that rallies are a more important tool for more populist candidates.

Finally, our paper is also related to the political economy of media and persuasion. Prat and Strömberg (2013) provide a recent review of the literature. Extensive research has shown that political advertising (Spenkuch and Toniatti, 2018), introduction of Fox News (DellaVigna and Kaplan, 2007), and newspaper endorsements (Chiang and Knight, 2011) impact the partisan vote share. Our paper shows that (i) rallies are one way for politicians to gain free media coverage, but (ii) media coverage of rallies does not appear to translate into higher vote share for all candidates. This suggests that something other than the sheer amount of coverage is involved.

2 Data

In the following section, we first describe in detail the data sources used in the paper. We then provide summary statistics for the key variables employed in the paper.

2.1 Data source

Presidential Rallies: We obtain the location and date of presidential rallies for 2008, 2012, and 2016 Presidential candidates from the Democracy in Action website (Appleman, 2019). The website documents the information on each phase of the presidential campaign ranging from the pre-campaign to the presidential inauguration since 2000. Importantly for us, it contains a record of the travel calendar of all the presidential candidates from more than three months before the presidential elections up to the election day. We use this information to geo-code all the presidential rallies up to one week prior to the first interview date in our survey sample. That is, we geo-code all the presidential rallies on or after September 22nd, September 26th, and October 1st for 2016, 2012, and 2008 presidential elections, respectively.[12] Additionally, for the presidential rallies by

[12]The first set of interviews were conducted on September 28th, October 1st, and October 8th in 2016, 2012, and 2008 CCES survey, respectively.

Donald Trump, we manually collect information on the estimated attendees for each presidential rally. We collect information on the swing states in 2016, 2012, and 2008 presidential elections from the Ballotpedia (2016), Cillizza (2012), and Post (2008), respectively.[13]

Figure A1 shows the location of rallies by the Republican and Democratic presidential candidates in 2016 (Panel (a)), 2012 (Panel (b)), and 2008 (Panel (c)), on or after September 22nd, September 26th, and October 1st for the 2016, 2012, and 2008 presidential elections. In terms of numbers, we have a total of 76 rallies by Trump, 51 rallies by Romney, 55 rallies by McCain, 58 rallies by Clinton, 35 rallies by Obama in 2012, and 55 rallies by Obama in 2008. This translates into, on average, 1.65 rallies per day for Trump, McCain, and Obama in 2008, 1.28 rallies per day by Romney and Clinton, and 0.88 rallies per day by Obama in 2012. Most of the presidential rallies in the days leading up to the general elections are concentrated in the swing states. For example, all but two of the 76 rallies by Trump (one in New Mexico on October 30th, and one in Minnesota on November 5th) were held in swing states. Similarly, all of the 58 rallies by Clinton (except one in Massachusetts on September 28th and one in New York on October 20th) were held in the swing states.[14]

Survey data: We use 2008, 2012, and 2016 Cooperative Congressional Election Study (CCES) to measure the intention to vote for each presidential candidate and intention to turn out for a vote in the upcoming general elections (Ansolabehere, 2011, 2013, 2017). The CCES is a large sample survey that seeks to understand the voters' perception of the politicians and government, and how it varies over time and geography during the elections. Two features of the CCES survey make it especially useful for studying the effect of rallies by presidential candidates on voting intentions. First, the survey is conducted on a rolling basis over the 6 weeks leading up to the elections. The first set of interviews in the 2016, 2012, and 2008 CCES surveys were conducted on September 28th, October 1st, and October 8th, respectively. The last set of pre-election interviews were conducted one day before the general elections. The staggered nature of the interview provides us with an estimate of the voting intention for each presidential candidate before the rallies, which helps us gauge the changes in voting intentions

[13]The swing states in the 2016 presidential elections are: Arizona, Colorado, Florida, Iowa, Maine, Michigan, Nevada, New Hampshire, North Carolina, Ohio, Pennsylvania, Virginia, and Wisconsin. The swing states in the 2012 presidential elections are: Colorado, Florida, Iowa, Nevada, New Hampshire, North Carolina, Ohio, Virginia, and Wisconsin. The swing states in the 2008 presidential elections are: Colorado, Florida, Indiana, Missouri, Nevada, New Hampshire, North Carolina, Ohio, Pennsylvania, and Virginia.

[14]None of the rallies by Romney and Obama in 2012 were held in non-swing states. In 2008, Obama held rallies in the following non-swing states: Iowa, Michigan, New Mexico, and Wisconsin; and McCain held rallies in Arizona, Iowa, New Mexico, and Wisconsin.

for the *same* presidential candidate. We exploit this staggered nature of the interview structure in our empirical strategy by performing an event study around the date of the rally. Second, the sample size of CCES is much larger than most other political surveys – in 2016, 2012, and 2008, the CCES interviewed 64,600, 54,500, and 32,800 individuals, respectively. We require a large-scale survey to have sufficient power to detect the impact of presidential rallies on voting intentions. This is because we employ a demanding empirical specification, and potentially the impact of presidential rallies may not be large.

We combine the CCES data with the exact date of the presidential rallies to define the number of days at which each respondent is interviewed from the closest rally for each presidential candidate. This variable resets once there is another presidential rally by the same presidential candidate in the same geography. The increase in media coverage of the presidential candidates around their rally may be an important channel through which voters may hear about the rallies. The Federal Communications Commission (FCC) regulates the media market into local television market areas. Since local broadcast television is the primary method used by political candidates to reach the electorate, in the main analysis, we take media markets as the "treatment" geography level.

The rallies by presidential candidates may influence the voting outcomes through a change in voting intention for the candidate or through an increase in the intention to turn out to vote. We measure intention to turn out to vote in the coming elections as the answer to the question: *"Does R intend to Vote in 2008/2012/2016"*. The variable takes on a value of one if respondent answers *"Yes, definitely"*, and is zero otherwise. We measure the intention to vote for a candidate as one response to the question asking respondents their preference for the presidential candidate.[15]

To understand whether the presidential rallies impact the salience and preference over different policy dimensions, we also use the questions on the most important problem. The most important problem is asked as: *"What is the most important problem facing the country today?"*. The question is not asked in the 2012 wave. In addition, we use the question asking respondents their preference over different policy issues such as immigration, trade policy, and environmental policy.

To understand whether the presidential rallies impact the valence of the candidate and the opponent, we also use questions on the candidate characteristics.

[15]The question takes different wordings across 2008, 2012, and 2016 waves. In 2008, the question was stated as: *"For which candidate for President of the United States would you vote?"*. In 2012, the question is asked as: *"In the race for President of the United States, who do you prefer?"*. In 2016, the question was stated as: *"Which candidate for President of the United States do you prefer?"*.

2008 is the only year in which respondents are asked about candidate characteristics. We use the following questions to measure three different candidate characteristics: (i) Do you consider this candidate to be "Honest," (ii) Do you consider this candidate to be "Knowledgeable," and (iii) Do you consider this candidate to be "Experienced." We create a binary indicator equal to one if the respondent answers "yes", zero if the respondent answers "no", and missing if the respondent answers "don't know" or skips the question.

Advertisement data: We collect the information on the political advertisement for each political candidate during the 2008 and 2012 presidential campaigns from the Wesleyan Media and Wisconsin Advertising Projects, respectively (Goldstein et al., 2011; Fowler, Franz and Ridout, 2015). The data contains a complete record of all political advertisements aired on any national TV or cable networks. The data includes information on the ad length, date, and time when it was aired, the candidate favored by the ad, and some additional manually coded information on its content. Crucially for us, it also contains information on the media market where the ad was aired. We use the information on the date and the candidate favored by each ad to construct a daily measure of the number of advertisements aired by each political candidate in each media market. We use this measure to analyze whether the presidential candidates and their opponents use the political advertisement as substitutes or complements to their on-ground presidential campaign.

Media coverage and advertisement for 2016: To study how media coverage of candidates varies with presidential rallies, we collected data from an on-line archive of close-captioned TV clips from local TV stations.[16] The database contains the content of all news, advertisement, and TV shows segments broadcasted on the local TV stations that are affiliated with one of the major television networks: ABC, CBS, Fox or NBC. Altogether, we collected information for 103 TV stations across 26 media markets for the entire 2016. We perform an automated search to measure the media coverage and TV advertisement intensity of the presidential candidates for every half-an-hour bin during the day. We perform a search for the name of the candidate and the word "rally" to measure their media coverage. Additionally, we search for the name of the candidate and the word "I approve" to measure the advertising intensity of the candidate. We then aggregate the data to construct a daily measure of the media coverage and advertisement intensity of each candidate.

Newspaper articles: We collect the information on the newspaper coverage of each presidential candidate using the website newslibrary.com. We perform an automated search for the intersection of the term *"rally"* and name of the

[16]For details about the archive see Moskowitz (2018).

presidential candidate for each date in October and November of the election year. For example, for the news coverage of rallies of Donald Trump during October and November 2016, we perform a search for the terms "Donald Trump" and "rally". We use the results from this search to construct a state-level daily measure of newspaper coverage for each presidential candidate in the weeks leading up to the election, from October 1st to the day before election day.

Campaign contributions data: We use the data on 2008, 2012, and 2016 individual political contributions from the Federal Election Commission (2019). FEC records all individual campaign contributions over $200 given to a political candidate, political party, or political action committee (PAC). The data contains information on the name, occupation, and zip-code of the donor, the date and amount of contribution, and the receiving PAC, candidate, or party committee. We use the information on the date of the contribution and the receiving committee to construct a daily measure of the campaign contributions received by each presidential candidate up to two months before the general elections.

Election results: We collect the data on the 2004 to 2016 presidential election outcomes at the county level from David Leip's Atlas of U.S. Elections (Leip, 2018). The data contains information on the total number of votes received by the Republican and Democratic presidential candidate and total votes in each election. We use the data to construct vote share and lagged vote share for the Republican and Democratic presidential candidates from 2008 to 2016. We use county to media markets crosswalk provided by Sood (2016) to construct contemporaneous and lagged votes received by Republican and Democratic presidential candidates and total votes in the presidential elections.

American Community Survey (ACS) data: We construct the data on socio-economic and demographic characteristics of media markets from 2009, 2012, and 2016 5-year county-level estimates of American Community Survey (ACS). We use county to media markets crosswalk provided by Sood (2016) to create measures of local characteristics at the media market level.

2.2 Summary statistics

Table 1 presents summary statistics for the main variables used in the paper in the swing states. Panel A presents the summary statistics for the main dependent variables. In 2016, 49.7% of the respondents surveyed during our sample period stated that they intended to vote for the Republican candidate; the corresponding percentages for 2012 and 2008 are 44.3 and 44.9, respectively. In our main analysis we restrict to respondents who either intend to vote for the Republican or Democratic candidate, so among the percentage of respondents who intend to

vote for the Democratic candidate in each election is always 100 minus the Republican percentage. The intention to turn out was similar in 2016 and 2012 – 82.8% and 81.8%, respectively – and even higher in 2008 at 89.8%. On average, Trump received $\$1,513$ in daily individual campaign contributions from media markets in swing states. Panel B shows the summary statistics for the socio-economic variables. In terms of partisan self-identification, 20% of the respondents are strong and weak Democrats, 25% of the respondents are strong and weak Republicans, and 10% of the respondents are independents.

3 Empirical Strategy

In this section, we discuss the main empirical strategy used in the paper to estimate the impact of presidential rallies. The basic specification is as follows:

$$Y_{ijt} = \alpha_j + \theta_t + \beta \textit{Post-Rally}_{jt} + u_{ijt}, \tag{1}$$

where the dependent variable Y_{ijt} measures the intention to vote for a particular candidate, or the intention to cast a vote, for respondent i living in geographic unit j and interviewed on the date t. The variable $\textit{Post-Rally}_{jt}$ is an indicator variable equal to one for all respondents in the geography j on all dates on or after a rally by a presidential candidate, and zero otherwise. To capture heterogeneity in the effectiveness of rallies across different presidential candidates, we estimate the Equation 1 separately for each candidate.

All specifications include daily fixed effects, denoted via the term θ_t, and geographic area fixed effects, denoted via the term α_j. The former captures national trends, political campaign shocks, and other events that are common to all the individuals. It accounts for changes in the voter intention to vote for a candidate and turnout across the campaigning period. For example, voters interviewed closer to the date of the general election may have more information about the candidates' platforms relative to the voters interviewed several weeks earlier. The latter controls for the geographic-level factors that do not change over time or that evolve slowly, including demographic and socio-economic characteristics, electoral competitiveness, and average partisanship.

The coefficient β is the main parameter of interest. Since we include geographic and daily fixed effects, the estimation of β comes from changes in voting intention across treated and control geographies over time. That is, the estimation of β comes from comparing daily changes in the intention to vote for a candidate or intention to turn out to vote between geography where a presidential candidate organized a rally relative to other geographies. To further isolate the effects of rallies, we restrict attention to respondents interviewed within a narrow window

of 10 days around the time of each presidential rally. Thus, the idea behind our estimation strategy is roughly as follows: for each rally, compare average changes in Y_{ijt} among voters living in the geographic unit where the rally takes place, all of whom were surveyed within 10 days of the rally, with average changes in Y_{ijt} among voters living in other geographic areas interviewed on the same days (since we include fixed effects for each day); then average across all rallies to obtain the overall average effect.

Our preferred geographic units are media markets. This is for two main reasons. First, media markets strike a suitable balance between defining geography too finely or too coarsely. If we define the treatment at a geographically coarse level, say the state, then we may be classifying areas not affected by a presidential rally as if they were "treated." This is especially likely for large states such as Florida or Pennsylvania – individuals in Jacksonville or Tallahassee might not even know about rallies held in Miami. On the other hand, if we define the treatment at a geographically granular level, say the zip-code, then we may have the opposite problem. That is, many neighboring zip-codes around the rally site might be affected by a presidential rally, but we would be classifying them as "untreated." In addition, we may have very few "treated" individuals if the geographic units are too small.

Second, media coverage of the presidential candidates around their rallies may be an important channel through which voters learn about these events. The Federal Communications Commission (FCC) regulates broadcast, cable and satellite television using local television market areas. Since local television news is one of the primary sources of political information for voters, presidential rallies in the area within a media market are likely to receive greater media coverage. In Appendix Section A1.3, we present and discuss the main results considering alternative treatment geographies – county, commuting zone, and state.

We cluster the standard errors at the media market level to allow for arbitrary correlation in the residuals among respondents from the same media market. To ensure that a few outliers do not influence the results, we restrict attention to media markets with at least fifty respondents. Moreover, as noted above, in the media markets with a presidential rally, we only include respondents who were interviewed within a 10-day window around the rally. For media markets without a presidential rally, we keep all the respondents. In our baseline sample, we use the respondents who intend to vote for either Republican or Democratic presidential candidates.

To define the comparison group of "non-treated" respondents, we consider several different sub-samples of respondents who do not reside in the media market with a presidential rally. To begin, for each candidate we keep only the sample of

respondents who live in media markets where that presidential candidate held a rally at some point during the campaign. We then gradually increase the sample by including: respondents who live in media markets where either the candidate or his/her opponent held a rally during the campaign; those who live in media markets where at least one presidential candidate from the candidate's party held a rally since 2008; and those who live in media markets where at least one major-party presidential candidate held a rally since 2008. We also consider the analogous samples based on states rather than media markets: respondents living in states where the presidential candidate held a rally during the campaign; in states where either the candidate or his/her opponent held a rally during the campaign; and so on. Finally, we also estimate models that include all swing states, and models that include all states.

It is plausible that areas where a presidential candidate organizes a rally may be systematically different from areas where they do not. Presidential candidates focus heavily on battleground states during the final weeks of their campaigns.[17] For this reason, battleground states are much more likely to have a presidential rally relative to non-battleground states. Between September 22 and election day in 2016, only 2 out of the 76 rallies by Donald Trump, and 2 out of the 58 rallies by Hillary Clinton, were in non-battleground states. Since the dynamics of the voter behavior are potentially different in battleground and non-battleground states, among the different geographies mentioned above, respondents living in battleground states would seem to be an especially relevant comparison group. Thus, in our main specification, we focus on the media markets within a swing state.

If media markets in battleground states with and without presidential rallies differ systematically, then our estimates may not capture the causal effect of rallies. In Table A1, we compare media markets in the battleground states with and without presidential rallies for each presidential candidate. We see that the media markets with a rally tend to be more populated than other media markets in battleground states. This makes sense, since candidates want their campaigns to reach large numbers of voters. This correlation would be a problem if other characteristics vary systematically across media markets with and without rallies. For instance, we see that media markets with and without presidential rallies differ on race and income.

To see whether these correlations stem from candidates targeting more populated areas, in Table A2, we additionally control for population. The differences

[17] Althaus, Nardulli and Shaw (2002) study the determinants of campaign visits in presidential elections from 1972 to 2000. They find that candidates tend to visit media market areas with more voters and electorally competitive states more than other media markets and states. See also Stromberg (2008) who documents similar patterns for other years.

in local characteristics disappear once we control for variation in the population.[18] This suggests that presidential candidates do not systematically target media markets based on particular local characteristics, but aim to reach a larger section of the electorate.

To study whether the impact of presidential rallies on the voting intentions reflects a transitory or a long-lasting impact, we also perform event studies around presidential rallies, using the following specification:

$$Y_{ijt} = \alpha_j + \theta_t + \sum_{\tau=-4}^{\tau=4} \textit{Post-Rally}_{j,t-\tau} + \varepsilon_{ijt}, \tag{2}$$

where Y_{ijt} is again the intention to turn out or to vote for a candidate for respondent i living in the media market j and interviewed on the date t. In order to reduce measurement error due to small samples, we pool the daily interviews into three-day windows. The variable $\textit{Post-Rally}_{j,t-\tau}$ is a dummy equal to one for day 3τ before ($\tau > 0$) or after ($\tau < 0$) there was a presidential rally in the media market. The three days before the presidential rally ($\tau = -1$) is the omitted category. For media markets with multiple rallies by a presidential candidate, we reset the clock after each rally. In all specifications, we include individuals interviewed up to twelve days before a presidential rally and up to twelve days after a presidential rally.

4 Main Results

4.1 Impact of rallies on voting intention and turnout

Table 2, Panel 1, shows the impact of rallies by presidential candidates on the intention to vote for these candidates. We focus on media markets in swing states, where changes in voter decisions matter the most in U.S. presidential elections. In Column 1, we analyze the effect of rallies by Trump on the intention to vote for Trump. On average, the intention to vote for Trump increased by 4.5 percentage points during the 10 days after a Trump rally in media markets with Trump rallies relative to media markets in swing states without Trump rallies. This is a substantively large effect, corresponding to an increase of 10% of a standard deviation of the dependent variable. In Columns 2 to 6, we find that there is little impact of rallies by other candidates on the intention to vote for those candidates. The estimates are not statistically insignificant even at the 0.10 level.

Table 2, Panel 2, shows the impact of rallies by presidential candidates on the

[18] The only exception is that in 2012 Obama appears to have targeted media markets with a higher Democratic vote share and turnout in the previous general election.

intention to turn out to vote. In Column 1, we analyze the effect of rallies by Trump. We find that Trump rallies resulted in a 5.1 percentage point increase in the intention to vote. We do not find an impact of rallies by other candidates on the intention to turn out. None of the point estimates are statistically significant even at the .10 level, and the overall picture is that rallies by other candidates had little or no effect on turnout.

In addition to attracting votes, rallies may serve as a means to attract money. In Panel 3 of Table 2, we examine individual campaign contributions (not political action committees), using the same type of specification used in the other panels. Thus, the estimates in Panel 3 show the impact of rallies by presidential candidates on campaign contributions raised from individual donors around the time and place of a rally. In Column 1, we see that Trump rallies lead to a 70.2% increase in the individual campaign contributions in the media markets where he held a rally relative to other swing state media markets. The estimates imply, on average, a daily increase of $1130 in media markets where Trump held a rally. Column 4 suggests that Clinton rallies actually had a negative effect on local individual campaign contributions. Rallies by Clinton are associated with a 16.5% decrease in the local individual campaign contributions in the media market where she held a rally relative to other media markets. The remaining columns indicate that rallies by other presidential candidates do not affect individual campaign contributions, as least locally.

The patterns in Table 2 are robust across different samples. In Table 3, we focus on Trump. Analogous tables for other candidates can be found in the Appendix.

The three panels in Table 3 again correspond to the three dependent variables under study, but now the columns refer to different subsamples rather than different candidates. Consider Panel 1, on the intention to vote for Trump. If we consider all media markets where Trump held at least one rally during the 2016 campaign (Column 2), then the estimate is similar to that in Table 2 for swing states (Column 1).[19] The estimates are similar if we use the sample of media markets where either Trump or Clinton held a campaign rally (Column 3), or all media markets in states where Trump held at least one rally (Column 4). The estimates are slightly smaller but still substantively meaningful if we consider the sample of media markets in states where either Trump or Clinton held a rally in 2016 (Column 5), or simply all respondents (Column 6).

In Panel 2 the dependent variable is the intention to turn out. Most of the estimates are large in magnitude and statistically significant – those where the subsample consists of all swing states (Column 1), all states where Trump held at least one rally (Column 4), or states where either Clinton or Trump held a rally

[19]For convenience, we reproduce the estimates for Trump from Table 2 in Column 1 of Table 3.

(Column 5). The estimates in the other three columns are only about half as large and not statistically significant, however. As we discuss below, however, when we focus on loyal Republican voters the turnout effects are large and robust across all subsamples.

In Panel 3, we analyze the impact of Trump rallies on campaign donations across the various subsamples. Here, the estimates are all economically large and statistically significant. The estimates imply that Trump rallies lead to a 38.6% to 70.2% increase in the individual campaign contributions in the media markets where he held a rally.

We present analogous tables for the other five presidential candidates in the appendix. These tables show patterns similar to those in Table 2. Regardless of the sample chosen, none of them appear to have attracted more support among respondents. Nor is there consistent evidence that their rallies affected turnout or individual campaign donations. The results for Romney, McCain, Clinton, Obama in 2012 and Obama in 2008 are shown in Table A3, Table A4, Table A5, Table A6, and Table A7, respectively

4.2 Dynamics of the impact on voting intention and turnout

We now explore how the effect of rallies dissipates over time, via a series of event study analyses. This allows us to assess whether the effects estimated above are short-lived or represent a durable change in voters' preferences and intentions to vote. We focus our analysis on the rallies by Trump in the main text. In the Appendix, we also report the event study results for other candidates. To reduce noise, we aggregate the daily interviews to three-day periods.

Figure 1 shows the estimates of Equation 2 for rallies by Trump on the intention to vote for Trump. We present results using only the sample of media markets in swing states (Panel (a)), media markets with a rally by Trump (Panel (b)), media markets with a rally by Trump or Clinton (Panel (c)), states with a rally by Trump (Panel (d)), states with a rally by Trump or Clinton (Panel (e)), and all respondents (Panel (f)). We see that the estimates are virtually unchanged across different samples. There is a spike of about 5 percentage points in the intention to vote for Trump in the first three days after the rally (Panel (a)). The effect is short-lived, fading away after three days – the point estimates are less than one percentage point for days 3-5 and 6-8. These results show that Trump rallies had a short-lived effect on the intention to vote for Trump that dies out at most three days after the rally.

In our empirical strategy for estimating the impact of rallies by Trump, we compare changes in the voting intention for Trump in treated relative to control

media markets. Our empirical strategy implicitly assumes that, in the absence of a Trump rally in the media market, there would have been no difference in the voting intention in the treated and control media markets. In the figure, we also see the change in voting intention for Trump in the days leading up to the rally. If our empirical strategy is sound, we should see no difference in voting intention for Trump in days before the rallies. It is reassuring that there was no significant difference in the average intention to vote for Trump in the media markets where Trump ultimately held a rally relative to other areas. The estimates for pre-rally periods are all statistically insignificant and substantively small.

Figure 2 shows the estimates of Equation 2 for rallies by Trump on the intention to vote for each of the samples. We see an increase in the intention to vote in the first three days after the Trump rally. There is a 3.2 percentage point increase in the intention to vote in the first three days after the Trump rally in the sample of swing states (Panel (a)). We see that the estimates vary slightly across different samples. The effect dies out quickly in the estimations in Panels b, c, and f. We see that the estimated impact of the increase in voter intention lasts for up to eight days after the rally, dying out thereafter. The estimates for days 9 to 11 are 1.5 percentage point (less than half the estimates in days 0 to 8) and statistically insignificant at even 10% significance level. These results show that Trump rallies had a brief effect on the intention to vote that dies out at most a week after the rally. In the Appendix, Section A1.2, we discuss results for other candidates. We do not find evidence that rallies by other candidates systematically affected voting intention or turnout.

Figure 3 shows the effect of rallies on individual campaign contributions to Trump. There is a 41% increase in contributions to Trump in the first three days after Trump rallies in the sample of swing states (Panel (a)). We see that the dynamics of the effect are similar across different samples. The estimates are even larger in two of the large samples (Panels (d) and (f)). We see that the estimated impact of the increase in campaign contributions lasts for up to two days after the rally. These results show that Trump rallies had a transient effect on the individual campaign contributions.

For the other five presidential candidates, the dynamics of the intention to vote for the candidate are shown in Figures A2 to A6, the dynamics of the intention to turn out to vote are shown in Figures A7 to A11, and the dynamics of the individual campaign contribution to the candidate are shown in Figures A12 to A16. We discuss these results in Appendix Section A1.2.

4.3 Robustness

In this section, we demonstrate that the main results are robust to different ways of carrying out the main analysis. Our main results do not change if we include individual controls in our estimation (Results are shown in Table A8). Similarly, our results are unchanged if we drop observations in which there is more than one rally in the media market within ten days (see Table A9). Further, we also obtain qualitatively similar results if we carry out the analysis at county, commuting zone or state level (see Appendix Section A1.3).

4.3.1 Evidence to Support the Empirical Strategy Our empirical strategy relies on the quasi-random feature of the timing of the CCES interviews. That is, for the identification, we rely on the fact that a subset of individuals was surveyed at different points before and after the rally. The identification assumption needed for β parameters to reflect a causal impact of endorsements is that there was no strategic implementation of the CCES interviews in different areas over different days. This seems highly unlikely because the questionnaire and the rolling of interviews were decided together by a team of thirty-six research institutes around the U.S. well before its implementation. The survey was carried out by a widely-respected global market research company, YouGov.com. While it is highly unlikely that the survey design itself would have systematically selected different types of respondents before and after presidential rallies, there is some scope for self-selection. In particular, some individuals who were invited to participate in the survey may not participate on the day they were asked but only later – usually by a few days, but in some cases longer – and sometimes only after some prodding by YouGov. It is possible that some of these individuals might have been inspired to participate in the survey as a result of a presidential rally.[20]

To check for this type of selection, we conduct a battery of regression analyses to test whether the individuals interviewed after the rallies by presidential candidates differ systematically from individuals interviewed before the rallies on a wide set of observables. Specifically, for each variable, we estimate the following equation:

$$X_{ijt} = \gamma_0 + \gamma_1 \textit{Post-Rally}_{jt} + \varepsilon_{ijt}, \tag{3}$$

where X_{ijt} is a socio-economic and demographic characteristic of individual i living in the media market j and interviewed on the date t. Again, the variable $\textit{Post-Rally}_{jt}$ is a dummy variable equal to one for all respondents in the media market j on all dates on or after a rally by a presidential candidate and zero

[20]The principal investigator of the CCES, Steve Ansolabehere, told us that individuals with less interest in politics tended to respond later than those with more interest.

otherwise. We restrict our attention to respondents from battleground states.

Table 4 shows the estimates and standard errors of γ_1 from a regression of each characteristic on a constant and the Post-Rally dummy for rallies by Trump. We see that respondents interviewed after a Trump rally are similar to respondents interviewed before a Trump rally in terms of political orientation and political participation. In addition, the respondents who were interviewed after a rally by Trump are comparable to those interviewed before the rally on characteristics such as gender, race, age, education, employment, income, the importance of religion, and home-ownership. The only variable that is statistically significant is marital status. Respondents interviewed after a Trump rally are 3.3 p.p. more likely to be married relative to respondents interviewed before the rally. Given that we test for 17 variables, it is not unexpected to find that one of them is significant at the 10% level.

These results show that the respondents interviewed around the days of Trump rallies did not differ systematically along any important dimensions that we can measure. Table A10 shows the estimation of Equation 3 for rallies by other Republican presidential candidates, and Table A11 shows the estimation of Equation 3 for rallies by Democratic presidential candidates. For the non-political variables, there is no systematic pattern of differences among individuals interviewed before and after rallies. However, individuals that self-identify as Democrats are less likely to be surveyed after rallies by McCain, Clinton, and Obama, while individuals that identify as Republicans are more likely to be surveyed after rallies by Romney, McCain, Clinton, and Obama. To help alleviate concerns about possible differences between respondents before and after rallies by other presidential candidates, we report the heterogeneous impact of presidential rallies by the political orientation of voters in Section 5.

5 Potential Mechanisms

In this section, we explore potential mechanisms that may explain the findings. We first start by analyzing which voters are swayed by Trump rallies. We then analyze the impact of rallies on the media coverage of the candidate's rallies. We analyze how the TV and news coverage of candidate's rallies changes around the rally. We also examine whether candidates use advertisements as complements or substitutes to the on-ground campaigning.

5.1 Heterogeneous Effects Depending on Respondent Partisanship

In this section, we analyze the impact of rallies by presidential candidates on respondents with different partisan attachments. Analyzing the heterogeneous ef-

fect of rallies by political affiliation helps us understand which group of voters are influenced by rallies. We expect the impact of rallies by Republican (Democratic) presidential candidates to have the largest effect among leaning Republican (Democratic) and independent voters. In terms of turnout, presidential candidates surely hope that their rallies mobilize co-partisans. They might also hope that their rallies might suppress turnout among voters who identify with the opposition.

We estimate Equation 1 separately for voters with different political identification. We use the 7-point self-reported political identification to construct five categories: Strong Democrats, Weak Democrats, Independents, Weak Republicans, and Strong Republicans.[21] We focus on the sample of battleground states.

Table 5 shows the estimated impact of rallies by Trump on voters with different political identification. In Panel 1, we analyze the effect of rallies by Trump on the intention to vote for Trump. We see that there was no significant impact of rallies by Trump on Strong Democrats, Weak Democrats, or Independent voters (Columns 1 to 3). Trump rallies had an economically sizable and statistically significant effect on the intention to vote for Trump among the weak and strong Republicans. The effect is significant for the weak Republicans (Column 4). The voting intention for Trump increased by 11.2 p.p. among weak Republicans, which corresponds to an impact equal to 12% of the mean of the voting intention for Trump among this group. The voting intention for Trump increased by 3.3 p.p. among strong Republicans which corresponds to an effect equal to 3% of the mean of the voting intention for Trump among this group. In Table A24, we show that the results are robust to different samples.

In Panel 2, we analyze the impact of rallies by Trump on the intention to vote. We see that there was no impact of rallies by Trump on any group of voters except strong Republicans. The turnout increased by ten p.p. among strong Republicans which corresponds to an effect equal to 11% of the mean of the voting intention among this group. These results show that rallies by Trump motivated weak and strong Republicans to vote for him, and the strong Republicans to turn out to vote. In Table A25, we show that the results are robust to different samples.

5.2 Impact on TV coverage

We measure TV coverage of Trump and Clinton's rally in 2016 by analyzing the TV coverage of the candidates in the local television network. As noted above, the

[21] We combine the not strong and leaning Democrats (Republicans) and categorize them as weak Democrats (Republicans). We do this for two main reasons. First, not strong and leaning voters look very similar to each other in terms of their political choices. For instance, the likelihood of voting for Trump among not strong (leaning) Democrats is 0.11 (0.05). Similarly, the likelihood of voting for Trump among not strong (leaning) Republicans is 0.86 (0.94). Second, we combine the two groups to increase the power to detect an effect.

data contains complete close-captioned transcripts of non-entertainment coverage from 103 television stations from 26 media markets. We count the number of times the word "rally" and the candidate's name appears together in each 30-second clip in these transcripts. We aggregate this to construct daily TV coverage of the candidate's rallies as a percentage of the total number of clips.

Figure 4 presents plots of the data by day. In Panel (a), we see that TV coverage of Trump rallies increased by 0.32 p.p. and 0.22 p.p. on the day of the rally and the next day, respectively. The mean percentage of clips on Trump's rally is 0.10%. The effect implies that there are three times more clips on Trump's rally on the day of the rally, and two times more clips on Trump's rally the day after the rally. The additional media coverage is short-lived, and disappears two days after the rally. In Panel (b), we see that TV coverage of Clinton rallies increased by 0.23 p.p. and 0.17 p.p. on the day of the rally and the next day, respectively. The mean percentage of clips on Clinton's rally is 0.05%. The effect implies that there are five times more clips on Clinton's rally on the day of the rally, and three times more clips on Clinton's rally the day after the rally. The media coverage is again short-lived, lasting just two days.

A candidate's rally may lead to a change in the opponent's media coverage. Figure A19 shows the effect of a candidate's rally on the opponent's TV media coverage. In Panel (a), we see that TV coverage of Clinton increased by 0.17 p.p. and 0.13 p.p. on the day of the Trump's rally and the next day, respectively. In Panel (b), we see that TV coverage of Trump did not change around Clinton's rally. Together, these results show that TV coverage of both candidates increased around their rallies.

5.3 Impact on newspaper coverage

We measure the newspaper coverage of candidates from the News Library website. The website has more than 274 million newspaper articles from more than 1,000 newspapers. We merge each newspaper to the state of its headquarter's location. For each candidate, we search the number of times each candidate's name and the word "rally" appear in a newspaper article. We then aggregate the information at the state level to obtain coverage of each candidate's rally in a state daily from October 1st to the day before the election.

Figure 5 plots the newspaper coverage of candidates' rallies around the date of the rally. We see a consistent pattern across different panels. The newspaper coverage of candidates increased on the day of the rally. The increased coverage lasts for up to three days after the rally. The number of newspaper articles covering Trump's rallies increased by 10 and 8 on the day of the rally and the following

day, respectively (Panel (a)). These correspond to increases of 1.6 and 1.3 relative to the average number of newspaper articles covering Trump rallies. The number of newspaper articles on Romney's rally increased by 7, 7, and 5, on the date of the rally, the following day, and two days after the rally, respectively (Panel (b)). These corresponds to increases of 1.8 times the mean of the newspaper articles covering Romney on the day of the rally and the following day, and 1.3 times the mean two days after the rally. The number of newspaper articles on McCains's rally increased by 6, 9, and 3, on the date of the rally, the following day, and two days after the rally, respectively (Panel (c)). This corresponds to an increase of 0.9 times the mean of the newspaper articles covering McCain on the day of the rally, 1.4 times the mean on the following day, and 0.5 times the mean two days after the rally.

The rallies by Clinton resulted in an increase of 8 and 7 newspaper articles related to the rally on the date of the rally and the following day, respectively (Panel (d)). This effect corresponds to an increase equivalent to 1.4 times the mean of the newspaper articles on Clinton on the day of the rally, and 1.3 times the mean on the day after the rally. The number of newspaper articles on rallies by Obama in 2012 increased by 6 and 2 on the date of the rally and the following day, respectively (Panel (e)). This corresponds to an increase of 1.9 times the mean of the newspaper articles covering Obama on the day of the rally and 0.8 times the mean the day after the rally. The rallies by Obama in 2008 had more long-lived newspaper coverage. The Obama rallies were covered extensively for the up to six days after the rallies (Panel (f)). The number of newspaper articles on rallies by Obama increased by 13 and 14 on the day of the rally and the following day, respectively. The number of newspaper articles on rallies by Obama slowly declined from 7 two days after the rally to 4 six days after the rally. The immediate increase in the coverage of Obama corresponds to 1.8 times the mean of the newspaper articles on Obama.

These results show that the newspaper coverage of all presidential candidates increases around their rally. The magnitude of increase in newspaper coverage is similar across the candidates. The rise in newspaper coverage of all candidates (except Obama in 2008) lasted for less than two days after the rally. These results and the results on the TV media coverage of candidates together show that: (i) both the newspaper and TV coverage of rallies increases around the rallies and (ii) the magnitude of the rise in TV and newspaper coverage is similar across candidates. These results suggest that the media coverage of rallies by Trump alone can not explain why they were effective in persuading voters to vote for him.

5.4 Impact on advertisements

Theoretically, it is not clear how the advertisement intensity by candidates should change around their rallies. If candidates use on-the-ground campaigning as a substitute for campaigning through mass media, then advertisements might decrease around rallies by candidates. On the other hand, if candidates complement physical campaigning with campaigning through media, then the amount of advertising might increase around rallies by candidates. Finally, candidates might make independent decisions about physical and media campaigning strategies, in which case there would be no systematic change in advertisements around the rallies.

We measure advertisements by Trump and Clinton in 2016 by analyzing the TV coverage of the candidates in the local television network. We count the number of times the word "I approve" and the candidate's name appears together in every 30-second window in these close-captioned content scripts. We aggregate this to construct daily advertisement by each candidate as a percentage of the total clips. For 2008 and 2012, we collect the information on the political advertisement for each political candidate from the Wesleyan Media and Wisconsin Advertising Projects.

Figure 6 plots the change in the advertisement by candidates in the media market around their rallies. We see that the advertising intensity by Trump, Romney, Clinton, and Obama in 2012 does not change systematically around their rallies (Panels (a), (b), (d), and (e)). On the other hand, McCain and Obama in 2008 decrease their advertisement intensity in the week of their rally (Panels (c) and (f)). In Figure A17, we analyze how the advertisement by opponents changes around rallies by various presidential candidates. We see that the advertising intensity by opponents does not change systematically around rallies by Trump, Romney, Obama in 2012, and Obama in 2008 (Panels (a), (b), (e), and (f)). On the other hand, in 2008, Obama decreased his advertisement intensity around rallies by McCain, and Trump increased his advertisement intensity around rallies by Clinton. These results suggest that the advertisement intensity of candidates does not change systematically around their rallies. If anything, the advertising intensity by candidates decreases around their rallies.

5.5 Impact on issues

One way presidential rallies might impact voters is by making specific issues more salient among the voters. During rallies, candidates often choose to spend more time on policy issues on which they have (or believe they have) a significant advantage over their opponent. This may raise disproportionately the salience of particular policy issues over others.

In Table 6, we study how rallies by Trump and Clinton appear to influence the types of issues that respondents perceived as most import. We choose issues that were among the top ten voting issues in the 2016 election according to PEW Research Center (2016). We use the sample of voters in swing states in our analysis. Panel 1 shows the estimated impact of rallies by Trump, and Panel 2 shows the effect of rallies by Clinton. We see that there is little change in respondents' answers about the importance of different issues around rallies by Trump and Clinton. Most estimates are both statistically insignificant and economically negligible in magnitude. For example, after a Trump rally respondents are 0.8 and 1.4 p.p. less likely to quote national security (Column 2), and gun control (Column 4) as one of the most important problems, respectively. There is no impact of rallies by Trump on the immigration (Column 5) and government corruption (Column 9), which were two key policy issues of his campaign. Rallies by Clinton also appear to have little or no impact on the perceived importance of different issues. After Clinton rallies, respondents are 1 and 1.6 p.p. less likely to quote social security (Column 6) and government corruption (Column 9) as one of the most important problems, respectively.

Another channel through which presidential rallies may impact voters is by changing voters' preferences on certain policies. A candidate's rallies might convince some voters that the policy platform proposed by the candidate is better than that of their opponent, which may shift voters' preferences closer to those of the candidate.

In Table 7, we study rallies by Trump and Clinton appear to affect respondents' preferences over various issues, again using the sample of voters in swing states. Panel 1 shows the estimated impact of rallies by Trump, and Panel 2 shows the effect of rallies by Clinton. We find limited evidence of a change in the voter preference over critical issues highlighted during the 2016 elections. Rallies by Trump did not lead to a statistically significant change in the respondents agreeing with granting legal status to illegal immigrants (Column 1), increasing border patrol (Column 2), granting legal status to Dreamers (Column 3), accepting no Syrian refugees (Column 4), and deporting illegal immigrants (Column 5). We also see that the voters do not change the likelihood of agreeing with the Trans-Pacific Partnership (TPP) Act (Column 6), Highway and Transportation Funding (HTF) Act (Column 7), Iran Sanctions Act (Column 8), Medicare Accountability and Cost Reform (MACR) Act (Column 9), and repealing Affordable Care Act (Column 10).

Together, these results suggest that rallies by presidential candidates have little impact on voters' preferences over issues, and also little impact on voters' beliefs about the relative importance of issues.

5.6 Impact on valence

Voters often lack relevant information on the characteristics of the presidential candidates to form a judgment about the competence of the candidates. Rallies can highlight particular attributes of a candidate, which may provide voters with information to form a decision about the valence of the candidates.

Unfortunately, we do not have measures for valence of presidential candidates in the 2012 and 2016 CCES. Thus, we study the impact of rallies by McCain and Obama on the perception of the candidate's characteristics (Table A26 shows the results). We find that rallies by McCain do not change voters' opinion about his honesty and experience (Panel 1, Columns 1 and 3). The probability that voters think McCain is knowledgeable increases by 6.6 p.p. after his rallies. Rallies by McCain do not result in a change in the perception among the electorate about the honesty, knowledge, and experience of Obama (Panel 1, Columns 4 to 6). Rallies by Obama do not change voters' opinion about his honesty, knowledge, and experience (Panel 2, Columns 1 to 3) or change voters' perception about the honesty, and knowledge of McCain (Panel 2, Columns 4 and 5). The probability that voters think McCain is experienced decreases by 3.1 p.p. after rallies by Obama. These results suggest that rallies by presidential candidates may positively affect the valence of the candidate and negatively affect the valence of the opponent. Trump rallies were oriented to convince voters that he is the best businessman and would be an ideal choice for the country, while his opponent is a corrupt elitist politician whose family has exploited the nation. One may speculate that this type of framing of himself and his opponent may have contributed to an increase his valence and a decrease in valence of his opponent.

6 Effect of rallies on the elections

Do rallies have any effect on the "bottom line" – the voting outcomes in the general election? We address this here, by comparing media markets in which presidential candidates held rallies with other media markets. The results must be interpreted cautiously, because we do not have exogenous variation in either the location or timing of rallies. For example, it is possible that presidential candidates hold rallies in areas where they expect to gain the most – e.g., areas where there are more "undecided" voters or where the voters are responsive to their campaign messages – closer to the election. Nonetheless, the results are interesting, since they are broadly consistent with the main patterns found in section 4.1.

We estimate the following specification:

$$Y_i = \beta_1(\textit{Late Cand Rally})_i + \beta_2(\textit{Early Cand Rally})_i + \alpha Y_i^{lag} + \varepsilon_i, \qquad (4)$$

where Y_i is either the natural logarithm of votes cast for the Republican or Democratic candidate, or the natural logarithm of total votes cast in the general election. Y_i^{lag} is the lagged value of the dependent variable. We estimate the equation at the media market level (i.e., the unit of observation, i, is the media market). We distinguish between "late" candidate rallies held in the week before the election, and "early" rallies held more than 7 days before election day, since the estimates in previous sections show that rallies have only short-term effects. We restrict attention to media markets in swing states.

Table 8 shows the results. In Panel 1, we see that rallies by Trump in the last seven days are associated with a 6.9% increase in the Republican votes at the media market level (Column 1). We also see that rallies by Trump in the last seven days are associated with a 3.6% increase in the Republican votes relative to rallies by Trump more than seven days before the election. We do not see any impact of the rallies by Romney, McCain, Clinton, or Obama in 2012 on total votes received by these candidates (Columns 2-5). Rallies by Obama in 2008 in the last seven days before the election are associated with a 8.6% increase in Democratic votes. These results suggest that rallies by Trump led to an increase in votes for him in the 2016 general elections.[22]

In Panel 2, we analyze the effect of rallies by each candidate on total turnout. In Column 1, we see that rallies by Trump in the last seven days before the election are associated with a 6% increase in the turnout at the media market level. This is 5% greater than the estimated coefficient on rallies held seven days before the election. There is no statistically significant relationship between turnout and rallies by Romney, McCain, Clinton, or Obama in 2012 (Columns 2-5). Rallies by Obama in 2008 in the last seven days before the election appear to increase turnout by 6.5%. These results suggest that rallies by Trump led to an increase in turnout in the 2016 general elections.

We also ran specifications in which the definition of "close to the election" was changed from 7 days to 6, 5, 4, 3, or 2 days. Table A27 shows the results for Trump. Overall, the choice of thresholds does does not matter much, for either dependent variable. Using thresholds of 3, 4, 5, or 6 days yields point estimates similar to those shown in Table 8. In all cases, the estimated effect of rallies held close to the election is higher than for rallies held earlier.

[22]We analyze the Republican votes instead of vote share because vote *shares* do not matter at the media market level. Vote shares matter only at the state level, because of the winner-take-all method for allocating electors used in almost all states. In unreported analysis, we find that the impact of rallies by Trump on the Republican vote share is small and, for the most part, statistically insignificant. This finding, combined with overall increase in turnout, suggests that Democratic voters are not dissuaded to vote due to rallies by Trump.

7 Conclusion

In this paper, we provide evidence that populist leaders may be particularly effective in gaining support via their campaign rallies, at least temporarily. We do this by studying the effect of campaign rallies held by U.S. Presidential candidates since 2008, comparing the rallies held by Trump – clearly the most populist presidential candidate in recent history – with those by Hillary Clinton, Mitt Romney, John McCain, and Barack Obama. We study the impact of rallies on a variety of outcomes, including voters' preferences over the candidates, citizens' intentions to turn out and vote, campaign donations by individuals, and citizens' issue positions. To better isolate the effects of the rallies from other events, we use data from a large survey – the Cooperative Congressional Elections Study (CCES) – to exploit both time and geography.

We find that Trump rallies increased his support over Clinton by about 4.5 percentage points on average. The effects are short-lived, lasting about one week. The effects are especially large for respondents who identify as "weak" Republicans and Republican-leaning independents. We also find that Trump rallies led to an increase in the intention to turn out among "strong" Republicans and Democrats, but not for other respondents. Rallies by Trump also increased individual campaign contributions to him, at least for a few days. By contrast, using the same approach, we find little or no impact of the rallies held by Clinton in 2016, as well as those held by Obama and Romney in 2012, and by Obama and McCain in 2008. These candidates' rallies had little or no effect on the intention to vote for the candidate, no clear positive effect on campaign donations, and no clear, systematic, effects on turnout.

In terms of mechanisms, we find that rallies by Trump lead to an additional coverage of Trump on media and newspaper. However, we find increases of similar magnitude in the coverage of almost all other presidential candidates around their rallies as well. This suggests that either the quality of Trump's coverage was different from that of other candidates, or that the effect of the additional coverage on respondents was different.

These results provide suggestive evidence that rallies are a more important tool for more populist candidates. Populist leaders' success may depend on connecting with voters via rallies. Since the effects seem short-lived, our findings might also help account for the fact that many populist leaders hold them frequently and not only during the months leading up to elections.

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Table 1: Summary statistics

Variable	N	Mean	SD
Panel A: Main Political Variables			
Voting Intention for Trump	16,625	0.497	0.500
Voting Intention for Romney	17,009	0.443	0.497
Voting Intention for McCain	10,142	0.449	0.497
Intention to Vote (Turn Out) 2016	16,625	0.828	0.378
Intention to Vote (Turn Out) 2012	17,008	0.818	0.386
Intention to Vote (Turn Out) 2008	10,141	0.898	0.303
ln(Campaign Cont. to Trump)	1260	3.961	3.670
Panel B: Socio-economic Variables			
Strong Democrat	42,865	0.206	0.404
Weak Democrat	42,865	0.200	0.400
Independents	43,437	0.090	0.286
Weak Republican	42,865	0.240	0.427
Strong Republican	42,865	0.263	0.440
Male	43,776	0.483	0.500
White	43,776	0.779	0.415
Black	43,776	0.119	0.324
Age	43,776	47.839	17.143
Completed High School	43,776	0.320	0.466
College dropout	43,776	0.236	0.425
Married	43,776	0.546	0.498
Unemployed	43,776	0.072	0.258
Income $<$ Median	43,776	0.517	0.500
Religion Important	43,776	0.702	0.457
Owns a home	43,776	0.633	0.482

Notes: The Table shows summary statistics for the main variables used in the paper. Columns 1 to 3 show the total number of observations, mean, and standard deviation of the variables, respectively. Panel A consists of the main dependent variables, while Panel B consists of other political and socio-economic variables of the respondents. The data is constructed using 2008, 2012, and 2016 waves of CCES survey. All observations are weighted by the common content weight variable. The sample consists of respondents in a media market interviewed 10 days around a presidential candidate rally for media markets with a presidential rally, and all observations for media market without a presidential rally. We further restrict attention to (i) observations where respondent intends to vote for one of the Republican and Democratic presidential candidates; (ii) media markets with more than 50 interviews; and (iii) respondents from the battleground states. Variable *Campaign Cont. to Trump* is constructed using 2016 individual campaign contributions files from FEC.

Table 2: Impact of presidential rallies on voting intention, turnout, and campaign contributions

	(1)	(2)	(3)	(4)	(5)	(6)
Candidate	Trump	Romney	McCain	Clinton	Obama'12	Obama'08
Variable	Intention to Vote for Candidate					
Post-Candidate	0.045**	-0.032	-0.004	-0.013	-0.027	-0.012
	(0.018)	(0.022)	(0.023)	(0.024)	(0.030)	(0.027)
Observations	9,506	6,884	6,762	12,122	7,577	6,059
Clusters	67	65	76	72	64	75
Variable	Intention to Vote (Turn Out)					
Post-Candidate	0.051***	0.034	-0.004	-0.024	-0.028	-0.023
	(0.017)	(0.027)	(0.014)	(0.040)	(0.033)	(0.026)
Observations	9,506	6,883	6,762	12,122	7,577	6,059
Clusters	67	65	76	72	64	75
Variable	Log(Campaign Contributions to Candidate)					
Post-Candidate	0.702**	-0.723	0.242	-0.191**	-0.109	-0.558
	(0.282)	(0.463)	(0.531)	(0.083)	(0.392)	(0.370)
Observations	1,260	378	324	1,625	588	450
Clusters	38	25	27	38	25	27

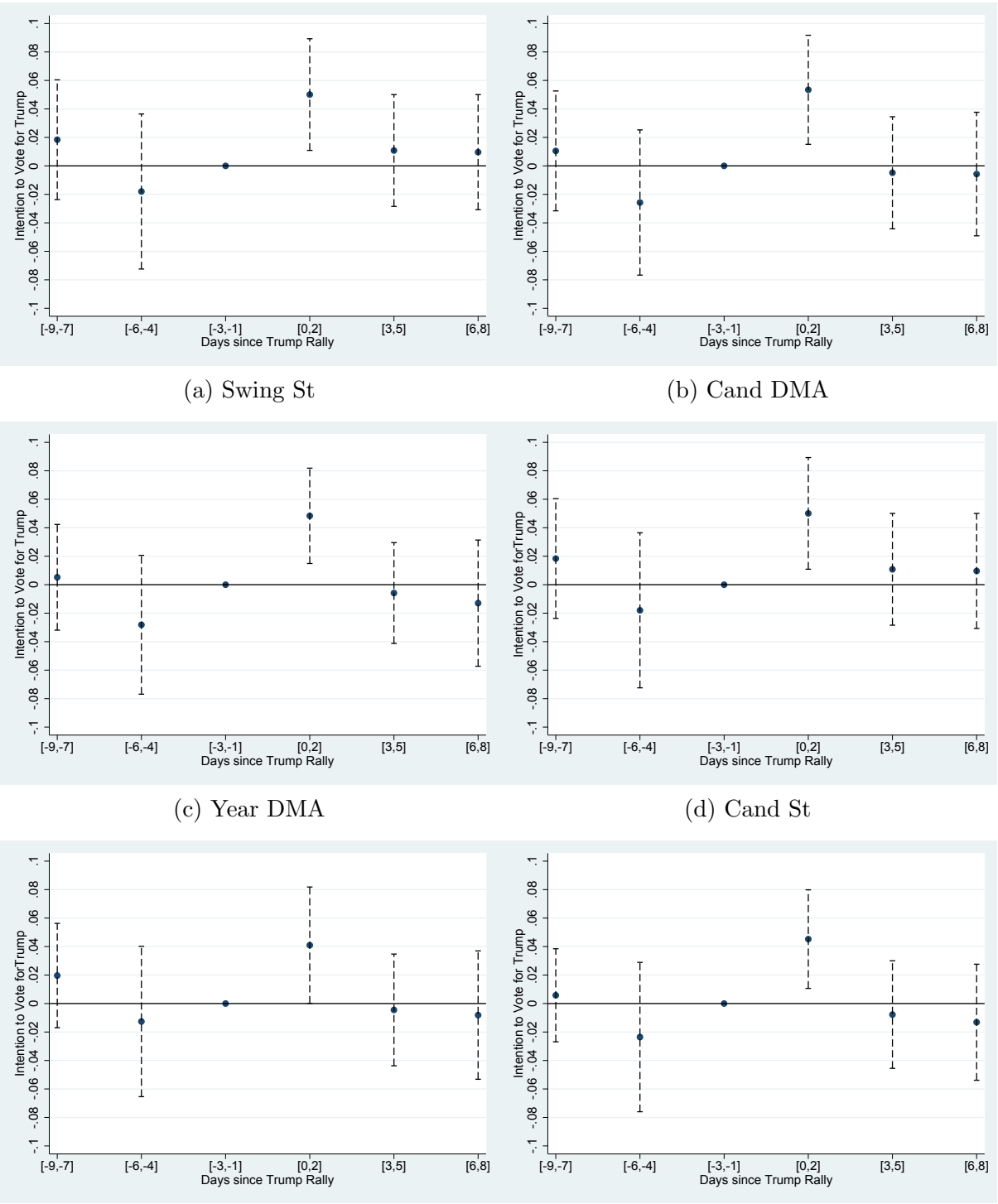
Notes: The Table shows OLS estimation of Equation 1 for presidential rallies. In Panels 1 to 3, the dependent variables are: the binary indicator equal to one if the respondent intends to vote for the candidate, the binary indicator equal to one if the respondent intends to turn out to vote, and natural logarithm of campaign contributions received by the candidate, respectively. The main independent variable is the binary indicator equal to one for respondents interviewed after a candidate's rally. In Columns 1 to 6, candidates considered are: Trump, Romney, McCain, Clinton, Obama in 2012, and Obama 2008. In Panels 1 and 2, data is constructed using 2008, 2012, and 2016 waves of CCES survey. All estimates are weighted by the common content weight variable. The sample is further restricted to: (i) observations where respondent intends to vote for one of the Republican or Democratic presidential candidates; (ii) media markets with more than 50 interviews; (iii) respondents interviewed 10 days around the rally for media markets with a rally. In Panel 3, data is constructed using 2004 to 2016 individual campaign contributions file from FEC. The unit of observation is day by media market. Estimations include sample 5 days around the rally for media markets with a rally. In Panels 1 to 3, (i) sample is restricted to media markets in swing states for that election year; (ii) all estimations include media market and date fixed effects.

Table 3: Impact of Trump rallies on voting intention, turnout, and campaign contributions

	(1)	(2)	(3)	(4)	(5)	(6)
Sample	Swing St	Cand DMA	Year DMA	Cand St	Year St	All
Variable	Voting Intention for Trump					
Post-Trump	0.045**	0.052***	0.047**	0.046**	0.037*	0.035*
	(0.018)	(0.018)	(0.018)	(0.018)	(0.019)	(0.021)
Observations	9,506	8,769	13,817	9,643	15,410	35,522
Clusters	67	42	45	71	85	145
Variable	Intention to Vote (Turn Out)					
Post-Trump	0.051***	0.026	0.022	0.051***	0.047***	0.023
	(0.017)	(0.020)	(0.018)	(0.017)	(0.016)	(0.017)
Observations	9,506	8,769	13,817	9,643	15,410	35,522
Clusters	67	42	45	71	85	145
Variable	Log(Campaign Contributions to Trump)					
Post-Trump	0.702**	0.404*	0.386*	0.599**	0.555**	0.394**
	(0.282)	(0.211)	(0.201)	(0.235)	(0.260)	(0.170)
Observations	1,260	676	965	1,648	2,344	10,100
Clusters	38	46	51	52	64	209

Notes: The Table shows OLS estimation of Equation 1 for Trump presidential rallies. In Panels 1 to 3, the dependent variables are: the binary indicator equal to one if the respondent intends to vote for Trump, the binary indicator equal to one if the respondent intends to turn out to vote, and natural logarithm of campaign contributions received by Trump, respectively. The main independent variable is the binary indicator equal to one for respondents interviewed after a rally by Trump. Columns 1 to 6 consider the following samples: swing states for that election; media markets where the candidate had a rally; media markets where the candidate or opponent had a rally; states where the candidate had a rally; states where the candidate or opponent had a rally; all respondents, respectively. In Panels 1 and 2, data is constructed using 2016 wave of CCES survey. All estimates are weighted by the common content weight variable. The sample is further restricted to: (i) observations where respondent intends to vote for one of the Republican or Democratic presidential candidates; (ii) media markets with more than 50 interviews; (iii) respondents interviewed 10 days around the rally for media markets with a rally. In Panel 3, data is constructed using 2014 and 2016 individual campaign contributions files from FEC. The unit of observation is day by media market. Estimations include sample 5 days around the rally for media markets with a rally. In Panels 1 to 3, (i) sample is restricted to media markets in swing states for that election year; (ii) all estimations include media market and date fixed effects.

Figure 1: Impact of Trump rally on intention to vote for Trump



(a) Swing St

(b) Cand DMA

(c) Year DMA

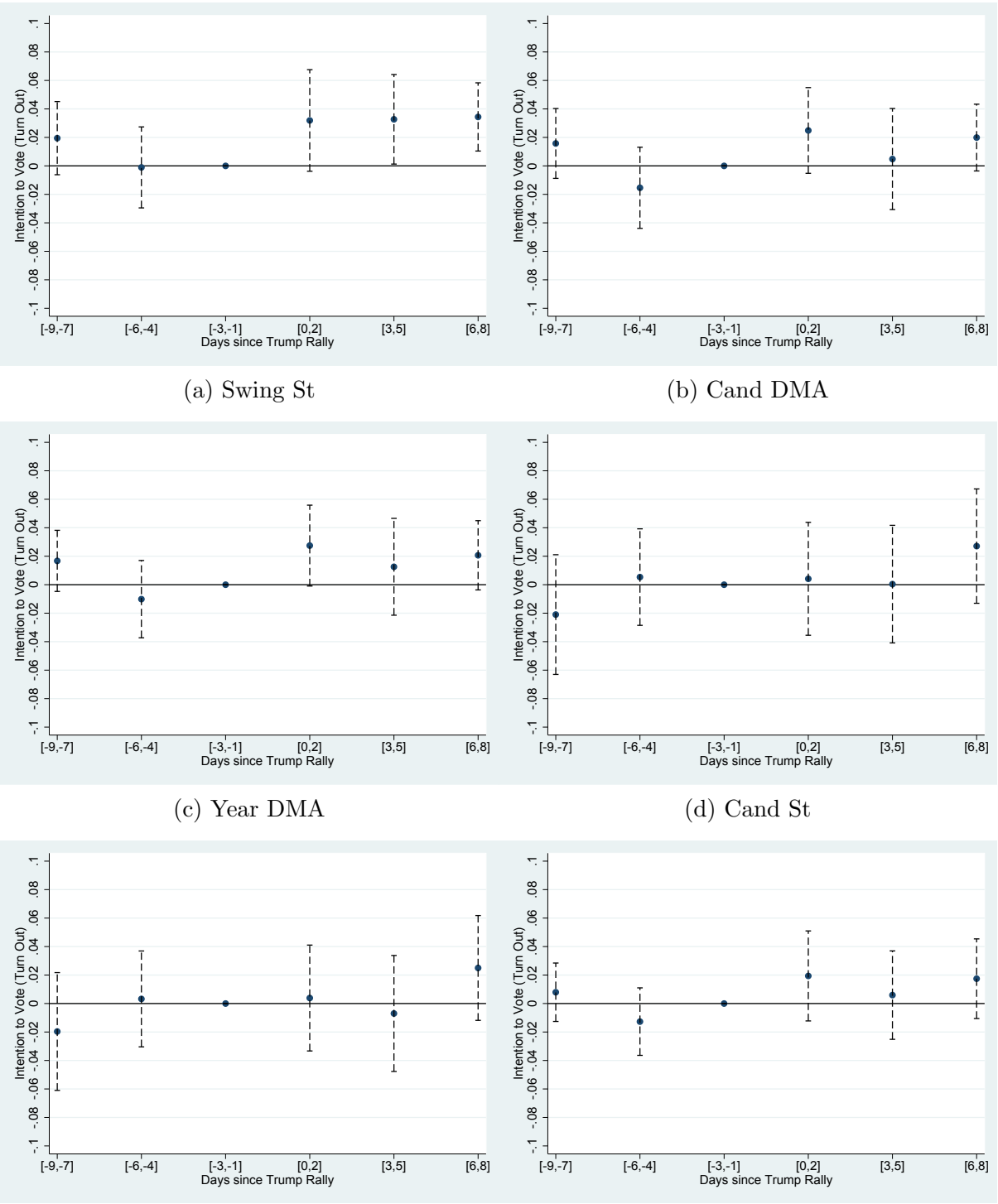
(d) Cand St

(e) Year St

(f) All

Notes: The Figure shows the result from OLS estimation of Equation 2 for Trump rallies. In Panel (a) the sample consists of all media markets in the swing states. In Panel (b) the sample is restricted to media markets with a Trump rally. In Panel (c) the sample consists of all media markets with a Trump or Clinton rally. In Panel (d) the sample consists of all media markets in the states where Trump held a rally. In Panel (e) the sample consists of all media markets in the states where Trump or Clinton held a rally. In Panel (f) the sample consists of all media markets. The figure plots the estimated coefficient and standard error of the difference in the voting intention for Trump in media markets with a Trump rally relative to other media markets. The data is constructed using 2016 wave of CCES survey. All estimates are weighted by the common content weight variable. The sample is further restricted to: (i) observations where respondent intends to vote for either Trump or Clinton; (ii) media markets with more than 50 interviews; (iii) 12 days around the rally for media markets with a rally, and all other observations for other media markets.

Figure 2: Impact of Trump rally on Intention to Vote (Turn Out)



(a) Swing St

(b) Cand DMA

(c) Year DMA

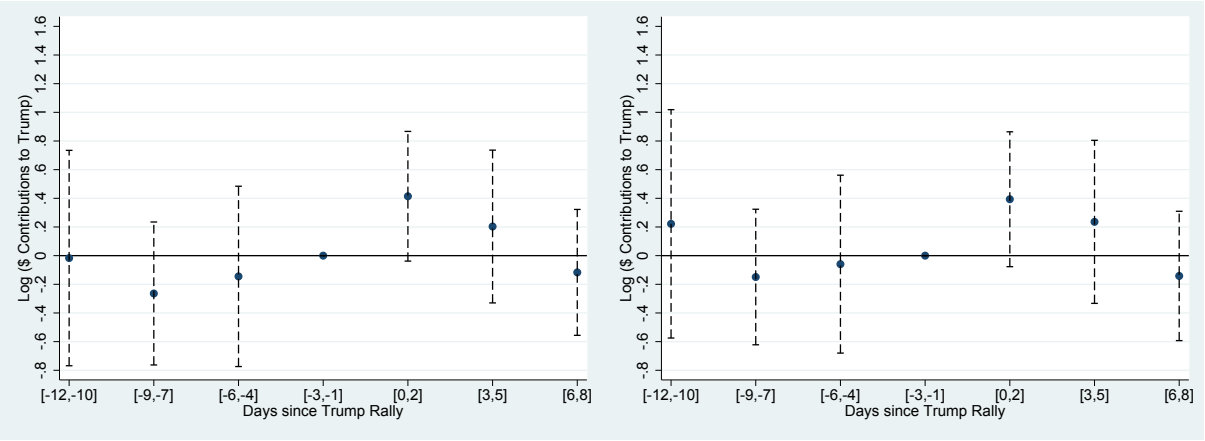
(d) Cand St

(e) Year St

(f) All

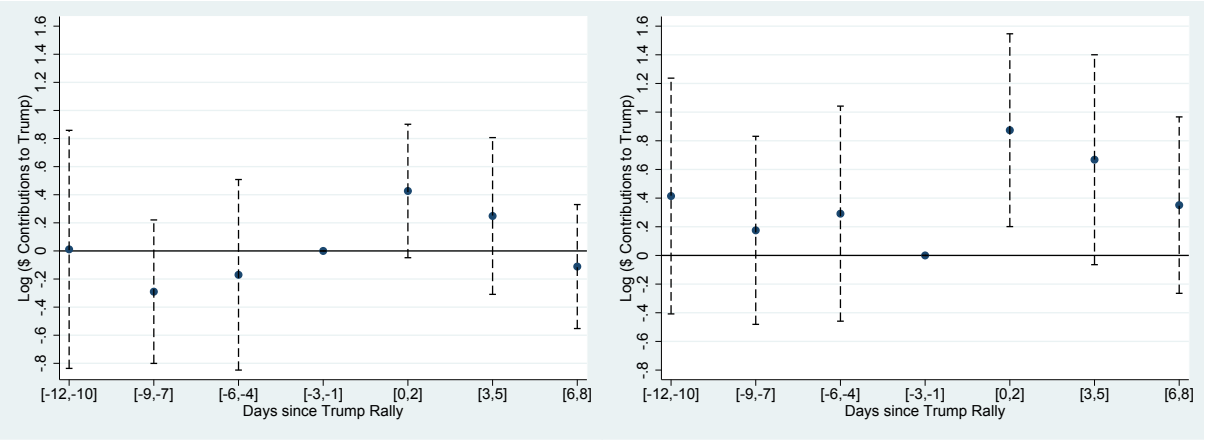
Notes: The Figure shows the result from OLS estimation of Equation 2 for Trump rallies. In Panel (a) the sample consists of all media markets in the swing states. In Panel (b) the sample is restricted to media markets with a Trump rally. In Panel (c) the sample consists of all media markets with a Trump or Clinton rally. In Panel (d) the sample consists of all media markets in the states where Trump held a rally. In Panel (e) the sample consists of all media markets in the states where Trump or Clinton held a rally. In Panel (f) the sample consists of all media markets. The figure plots the estimated coefficient and standard error of the difference in the voting intention in media markets with a Trump rally relative to other media markets. The data is constructed using 2016 wave of CCES survey. All estimates are weighted by the common content weight variable. The sample is further restricted to: (i) observations where respondent intends to vote for either Trump or Clinton; (ii) media markets with more than 50 interviews; (iii) 12 days around the rally for media markets with a rally, and all other observations for other media markets.

Figure 3: Impact of Trump rally on campaign contributions



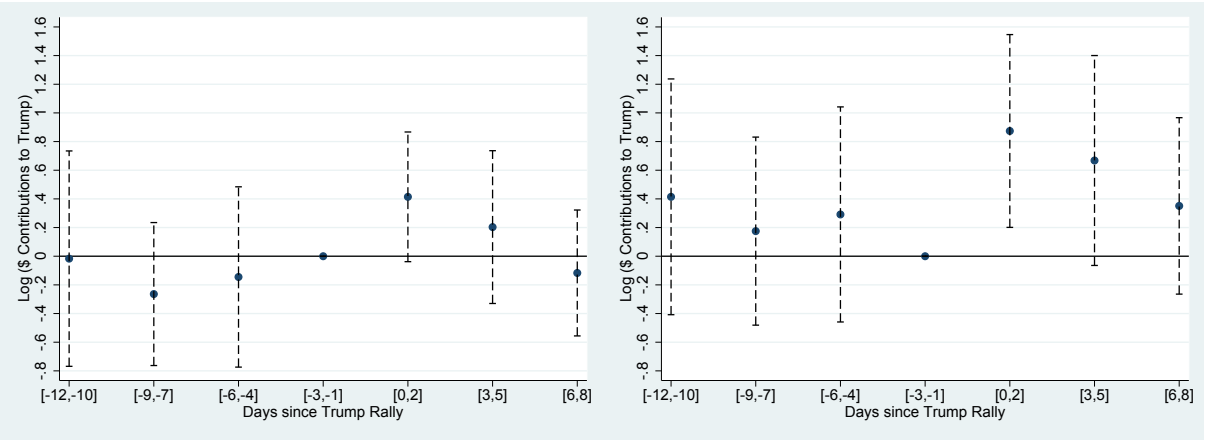
(a) Swing St

(b) Cand DMA



(c) Year DMA

(d) Cand St



(e) Year St

(f) All

Notes: The Figure shows the result from OLS estimation of Equation 2 for Trump rallies. The unit of observation is media market-day. In Panels (a) to (f), the main dependent variable is the natural logarithm of individual campaign contributions to Trump. In Panel (a) the sample consists of all media markets in the swing states. In Panel (b) the sample is restricted to media markets with a Trump rally. In Panel (c) the sample consists of all media markets with a Trump or Clinton rally. In Panel (d) the sample consists of all media markets in the states where Trump held a rally. In Panel (e) the sample consists of all media markets in the states where Trump or Clinton held a rally. In Panel (f) the sample consists of all media markets. The figure plots the estimated coefficient and standard error of the difference in the natural logarithm of individual campaign contributions to Trump in the media market with a Trump rally relative to other media markets in the swing states. The data is constructed using individual campaign contributions files from the FEC. All estimates include media market and day fixed effects.

Table 4: Comparing respondents around Trump rally

Variable	(1) Constant	(2) Post Rally
Strong Democrat	0.220	0.013
	(0.009)	(0.013)
Weak Democrat	0.193	0.002
	(0.010)	(0.016)
Independents	0.111	-0.007
	(0.008)	(0.012)
Weak Republican	0.221	-0.014
	(0.009)	(0.014)
Strong Republican	0.253	0.006
	(0.010)	(0.016)
Voted in prev. election	0.749	0.023
	(0.014)	(0.023)
Male	0.495	-0.022
	(0.014)	(0.019)
White	0.806	-0.033
	(0.019)	(0.027)
Black	0.114	-0.013
	(0.017)	(0.026)
Age	50.071	0.577
	(0.770)	(1.155)
Completed High School	0.341	-0.025
	(0.013)	(0.027)
College dropout	0.230	0.006
	(0.009)	(0.013)
Married	0.532	0.033*
	(0.010)	(0.017)
Unemployed	0.060	-0.006
	(0.006)	(0.008)
Income < Median	0.563	-0.034
	(0.014)	(0.024)
Religion Important	0.651	-0.003
	(0.011)	(0.019)
Owns a home	0.683	-0.034
	(0.017)	(0.024)

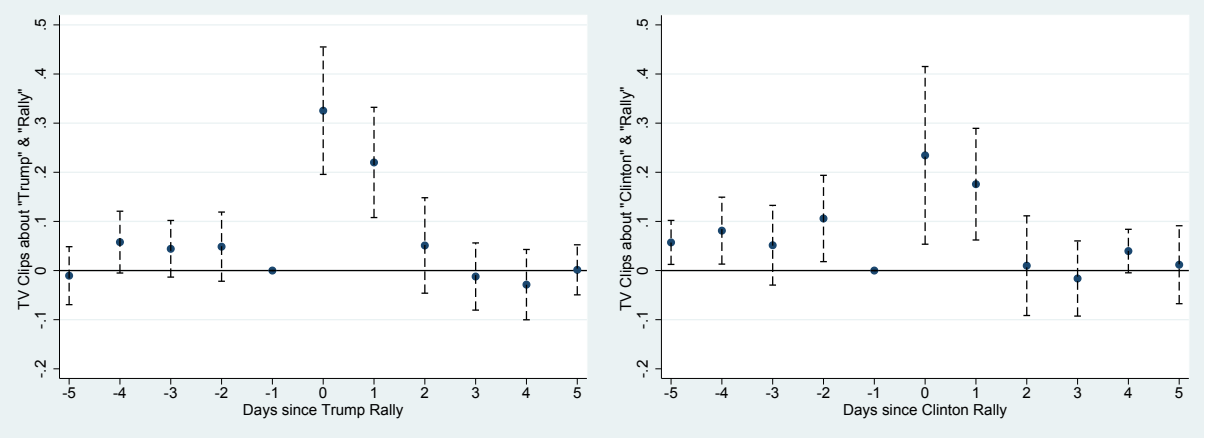
Notes: The Table shows OLS estimation of Equation 3 for Trump rallies. Column 1 shows the coefficient (standard error in parentheses) of γ_0 and Column 2 shows the coefficient (standard error in parentheses) of γ_1, respectively. The data is constructed using 2016 wave of CCES survey. All estimates are weighted by the common content weight variable. The sample consists of respondents in a media market interviewed 10 days around a Trump rally for media markets with a Trump rally, and all observations for media markets without a Trump rally. We further restrict attention to (i) observations where respondent intends to vote for either Trump or Clinton; (ii) media markets with more than 50 interviews; and (iii) respondents from the battleground states.

Table 5: Heterogeneous Impact of Trump rallies

VARIABLES	(1) Vote-Trump	(2) Turnout
Post-Trump * Strong DEM	0.022	0.063**
	(0.015)	(0.028)
Post-Trump * Weak DEM	0.003	0.030
	(0.017)	(0.034)
Post-Trump * Independent	0.023	0.037
	(0.054)	(0.046)
Post-Trump * Weak REP	0.087***	0.035
	(0.022)	(0.039)
Post-Trump * Strong REP	0.043***	0.061*
	(0.015)	(0.032)
Observations	9,357	9,357
R-squared	0.703	0.096
Clusters	67	67

Notes: The Table shows OLS estimation of Equation 1 for Trump rallies for voters with different political ideology. In Column 1 the dependent variable is the binary indicator equal to one if the respondent intends to vote for Trump. In Column 2, the dependent variable is the binary indicator equal to one if the respondent intends to vote (turnout). The main independent variables are the interactions of binary indicator equal to one for respondents interviewed after a Trump rally with (i) respondents who categorize themselves as Strong Democrats, (ii) respondents who categorize themselves either as weak or leaning Democrats, (iii) respondents who categorize themselves as independents, (iv) respondents who categorize themselves either as weak or leaning Republicans, and (v) respondents who categorize themselves as Strong Republicans. All estimations include media market and date fixed effects. All estimations include sample 10 days around the rally for media markets with a rally. The data is constructed using 2016 wave of CCES survey. All estimates are weighted by the common content weight variable. The sample is further restricted to: (i) observations where respondent intends to vote for one of the Republican or Democratic presidential candidates; (ii) media markets with more than 50 interviews; (iii) respondents in the swing states.

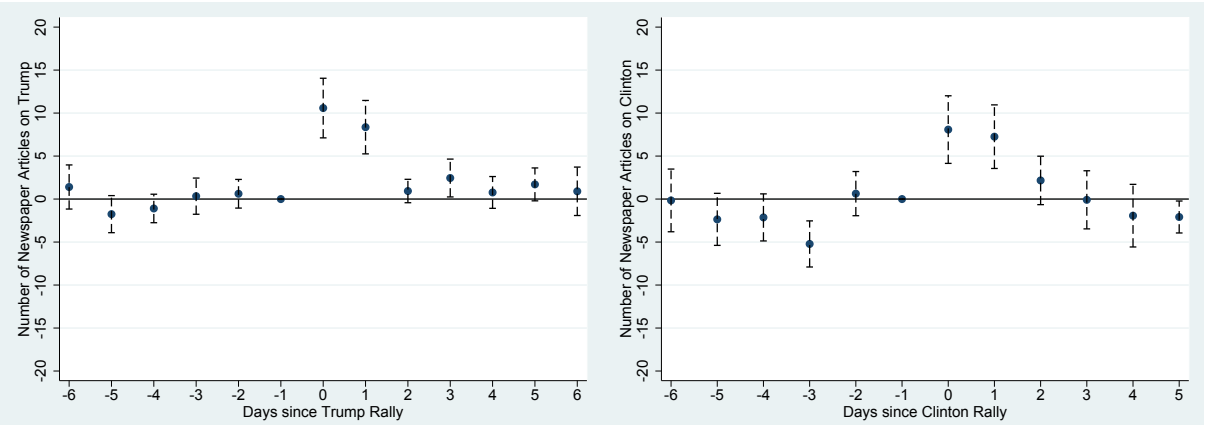
Figure 4: TV coverage of candidates around rally in 2016



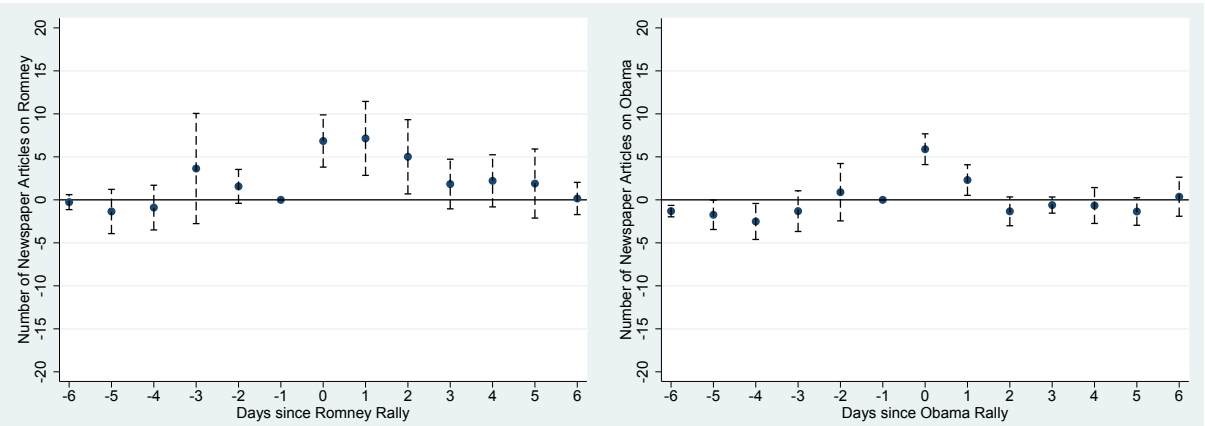
(a) Trump (b) Clinton

Notes: The Figure shows the result from OLS estimation of Equation 2 for presidential rallies. In Panels (a) and (b), the main dependent variables are the natural logarithm of number of TV clips about Trump's rally and Clinton's rally, respectively. The main independent variables are days since respective candidate's rally. The figure plots the estimated coefficient and standard error of the difference in the natural logarithm of number of TV clips about the candidate in the media market with the candidate rally relative to other media markets. The data is constructed using close captioned TV scripts. All estimates include media market and day fixed effects.

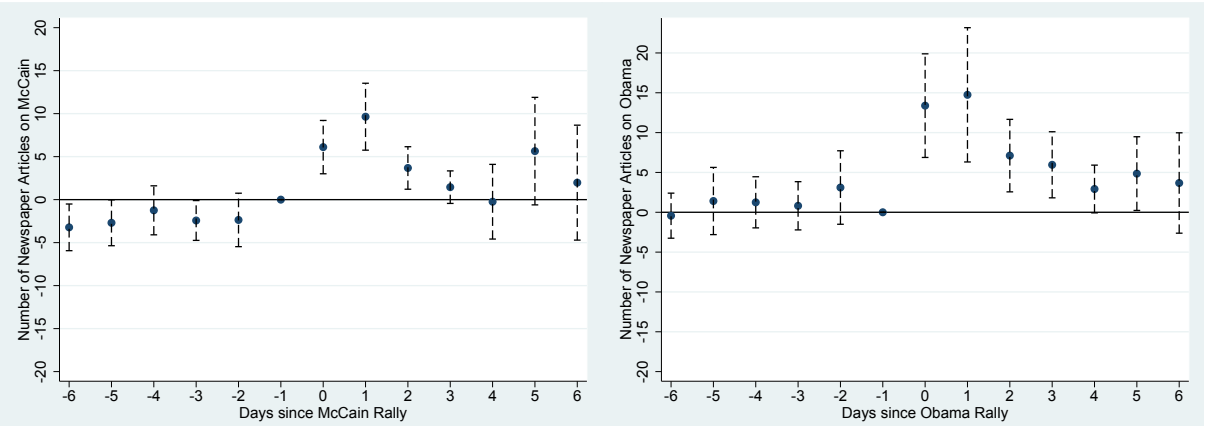
Figure 5: Newspaper coverage of candidates around rally



(a) Trump (b) Clinton



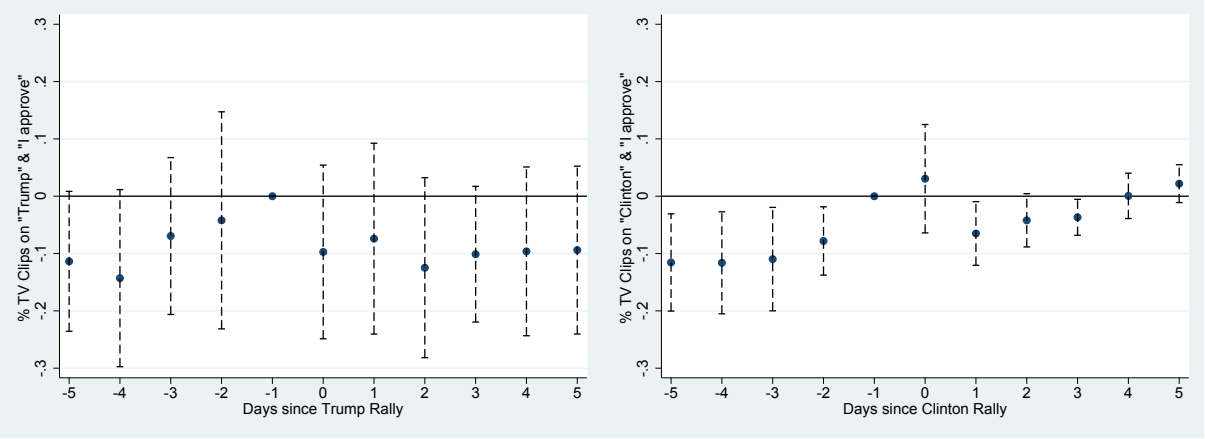
(c) Romney (d) Obama (2012)



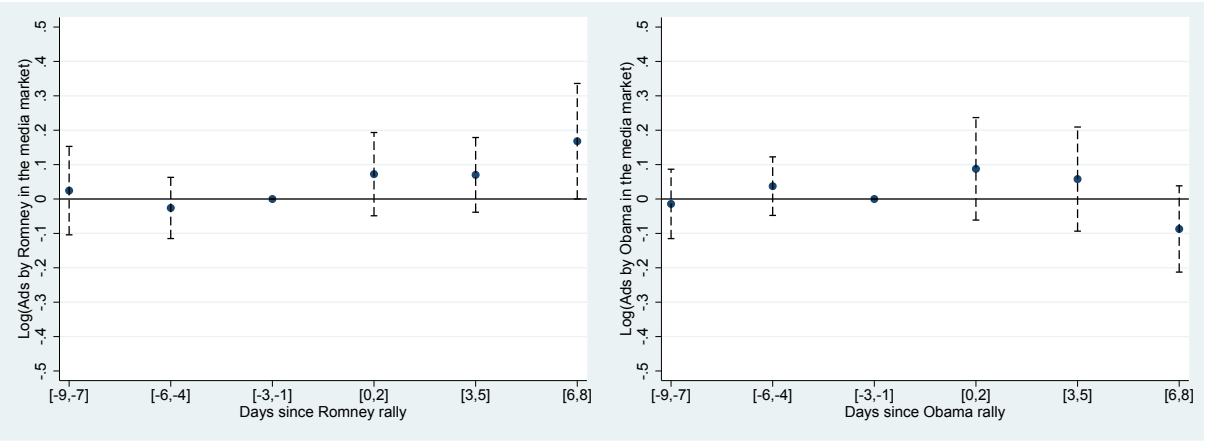
(e) McCain (f) Obama (2008)

Notes: The Figure shows the result from OLS estimation of Equation 2 for presidential rallies. In Panels (a) to (f), the main dependent variable is the number of newspaper articles on Trump, Clinton, Romney, Obama in 2012, McCain, and Obama in 2008, respectively. The main independent variables are days since respective candidate's rally. The figure plots the estimated coefficient and standard error of the difference in the number of newspaper articles on the candidate in the state with the candidate rally relative to other states. The data is constructed using a newspaper archive website. All estimates include state and day fixed effects.

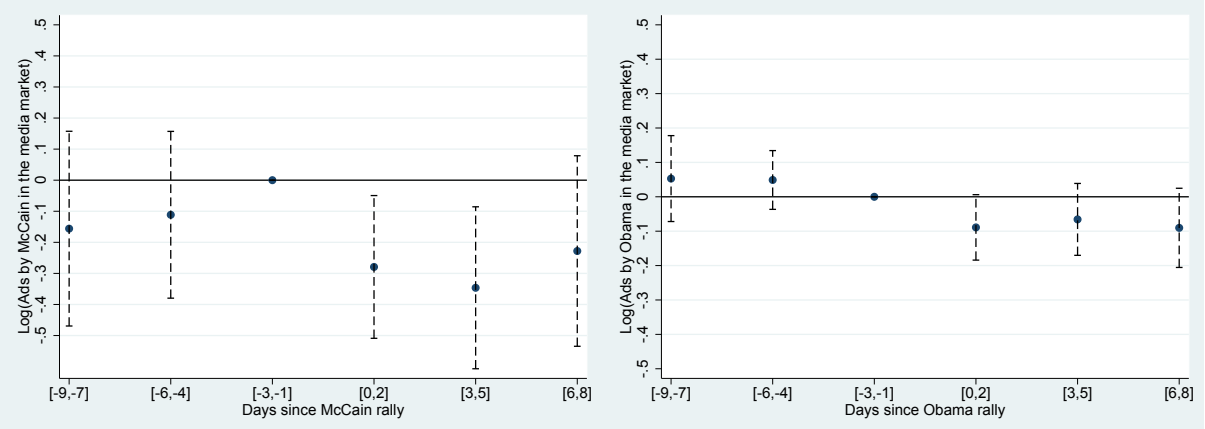
Figure 6: TV Advertisement by candidates around rally



(a) Trump (b) Clinton



(c) Romney (d) Obama (2012)



(e) McCain (f) Obama (2008)

Notes: The Figure shows the result from OLS estimation of Equation 2 for presidential rallies. In Panels (a) to (f), the main dependent variable is the natural logarithm of number of TV advertisements by Trump, Clinton, Romney, Obama in 2012, McCain, and Obama in 2008, respectively. The main independent variables are days since respective candidate's rally. The figure plots the estimated coefficient and standard error of the difference in the natural logarithm of number of TV advertisement by the candidate in the media market with the candidate rally relative to other media markets in the swing states. The data in Panel (a) and (b) is constructed using scrapped data of TV clips from three major television networks. The data in Panels (c) and (d) is constructed using Wisconsin Advertising Project. The data in Panels (e) and (f) is constructed using Wesleyan Media Project. All estimates include media market and day fixed effects.

Table 6: Impact of rallies in 2016 on the importance of issues

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Most Important Problem:									
	Economy and Jobs	National Security	Health Care	Gun Control	Immigration Policy	Social Security	Race Relations	Environment Policy	Government Corruption	Defense Spending
Post-Trump	-0.003	-0.008**	0.001	-0.014***	-0.006	-0.006	-0.003	-0.007	-0.003	-0.002
	(0.005)	(0.003)	(0.005)	(0.004)	(0.005)	(0.005)	(0.005)	(0.006)	(0.003)	(0.006)
Observations	9,506	9,506	9,506	9,506	9,506	9,506	9,506	9,506	9,506	9,506
Mean	.202	.207	.207	.164	.178	.202	.159	.142	.196	.173
Clusters	67	67	67	67	67	67	67	67	67	67
Variable	Most Important Problem:									
	Economy and Jobs	National Security	Health Care	Gun Control	Immigration Policy	Social Security	Race Relations	Environment Policy	Government Corruption	Defense Spending
Post-Clinton	-0.014	-0.009	-0.009	-0.000	-0.008	-0.010*	-0.012	0.012	-0.016**	-0.005
	(0.010)	(0.009)	(0.010)	(0.011)	(0.011)	(0.005)	(0.017)	(0.015)	(0.008)	(0.006)
Observations	11,989	11,989	11,989	11,989	11,989	11,989	11,989	11,989	11,989	11,989
Mean	0.195	0.200	0.202	0.156	0.172	0.196	0.154	0.138	0.190	0.167
Clusters	70	70	70	70	70	70	70	70	70	70

Notes: The Table shows OLS estimation of Equation 1 for presidential rallies in 2016. The main dependent variable is binary indicator equal to one if the respondent thinks an issue is the important problem. The variable takes on value of one if the respondent lists an issue as "very high importance" or "somewhat high importance", and is zero otherwise. In Columns 1 to 10, the dependent variables are the binary indicator equal to one if the respondent says: economy and jobs; national security; health care; gun control; immigration; social security; race relations; environmental policy; government corruption; and defense budget are the most important problem. In Panels 1 and 2, the main independent variables are the binary indicator equal to one for respondents interviewed after a Trump, and Clinton rally, respectively. All estimations include media market and date fixed effects. All estimations include sample 10 days around the rally for media markets with a rally. The data is constructed using 2016 wave of CCES survey. All estimates are weighted by the common content weight variable. The sample is further restricted to: (i) observations where respondent intends to vote for one of the Republican or Democratic presidential candidates; (ii) media markets with more than 50 interviews; (iii) respondents in the swing states.

Table 7: Impact of rallies in 2016 on the preference over policy

Variable	(1) Grant Legal Status	(2) Increase Border Patrol	(3) Legal status to Dreamers	(4) No Syrian Refugees	(5) Deport Illegal Immigrants	(6) Agree with: TPP	(7) Agree with: HTFA	(8) Agree with: Iran Sanctions	(9) Agree with: MACRA	(10) Repeal ACA
Post-Trump	-0.043	0.020	-0.046	-0.041	-0.016	-0.058*	-0.029	0.025	-0.021	0.019
	(0.029)	(0.032)	(0.038)	(0.101)	(0.024)	(0.031)	(0.022)	(0.021)	(0.035)	(0.018)
Observations	9,506	9,506	9,506	2,286	9,506	9,506	9,506	9,506	9,506	9,506
Mean	0.541	0.545	0.453	0.402	0.447	0.518	0.846	0.825	0.669	0.552
Clusters	67	67	67	67	67	67	67	67	67	67

Variable	Grant Legal Status	Increase Border Patrol	Legal status to Dreamers	No Syrian Refugees	Deport Illegal Immigrants	Agree with: TPP	HTFA	Iran Sanctions	MACRA	Repeal ACA
Post-Clinton	0.033	0.013	0.001	-0.082	-0.026	0.014	-0.001	0.004	0.040	-0.038
	(0.029)	(0.020)	(0.025)	(0.180)	(0.024)	(0.025)	(0.038)	(0.025)	(0.034)	(0.028)
Observations	11,989	11,989	11,989	2,819	11,989	11,989	11,989	11,989	11,989	11,989
Mean	0.538	0.546	0.451	0.406	0.449	0.517	0.843	0.823	0.664	0.554
Clusters	70	70	70	70	70	70	70	70	70	70

Notes: The Table shows OLS estimation of Equation 1 for presidential rallies in 2016. The main dependent variables are binary indicators equal to one across different policy preferences. In Columns 1 to 5, the dependent variables are the binary indicator equal to one if the respondent is in favor of granting legal status to illegal immigrants, increasing ICE patrol on the border, granting legal status to dreamers, accepting no Syrian refugees, and deporting illegal immigrants, respectively. In Columns 6 to 10, the dependent variables are the binary indicator equal to one if the respondent is in favor of Trans-Pacific Partnership (TPP) Act, Highway and Transportation Funding (HTF) Act, Iran Sanctions Act, Medicare Accountability and Cost Reform (MACR) Act, and Repealing Affordable Care Act (ACA), respectively. In Panels 1 and 2, the main independent variables are the binary indicator equal to one for respondents interviewed after a Trump, and Clinton rally, respectively. All estimations include media market and date fixed effects. All estimations include sample 10 days around the rally for media markets with a rally. The data is constructed using 2016 wave of CCES survey. All estimates are weighted by the common content weight variable. The sample is further restricted to: (i) observations where respondent intends to vote for one of the Republican or Democratic presidential candidates; (ii) media markets with more than 50 interviews; (iii) respondents in the swing states.

Table 8: Impact of presidential rallies on DMA electoral outcomes

Variable	(1)	(2)	(3)	(4)	(5)	(6)
	Log(REP Votes)			Log(DEM Votes)		
Candidate came $\leq$ 7 days ago	0.069**	-0.033*	-0.037	0.037	0.012	0.086**
	(0.030)	(0.019)	(0.031)	(0.042)	(0.017)	(0.035)
Candidate came $>$ 7 days ago	0.033	-0.012	0.002	0.010	-0.002	0.065
	(0.024)	(0.026)	(0.038)	(0.037)	(0.017)	(0.041)
Lagged Log(REP Votes)	0.958***	1.013***	1.006***			
	(0.010)	(0.011)	(0.013)			
Lagged Log(DEM Votes)				1.045***	1.018***	0.962***
				(0.018)	(0.008)	(0.018)
Candidate	Trump	Romney	McCain	Clinton	Obama 2012	Obama 2008
Observations	61	42	54	61	42	54
Difference	0.036*	-0.022	-0.039	0.027	0.014	0.021
	(0.020)	(0.027)	(0.029)	(0.040)	(0.016)	(0.044)
Variable	Log(Total Votes)					
Candidate came $\leq$ 7 days ago	0.060***	-0.010	-0.043	0.019	-0.003	0.065***
	(0.019)	(0.012)	(0.029)	(0.022)	(0.012)	(0.024)
Candidate came $>$ 7 days ago	0.010	-0.019	0.008	0.017	-0.020	0.023
	(0.015)	(0.016)	(0.031)	(0.020)	(0.013)	(0.025)
Lagged Log(Total Votes)	0.992***	1.014***	1.004***	0.998***	1.013***	0.981***
	(0.007)	(0.007)	(0.014)	(0.008)	(0.006)	(0.012)
Candidate	Trump	Romney	McCain	Clinton	Obama 2012	Obama 2008
Observations	61	42	54	61	42	54
Difference	0.050***	0.009	-0.051	0.002	0.017	0.042*
	(0.016)	(0.017)	(0.030)	(0.021)	(0.015)	(0.025)

Notes: The Table shows OLS estimation of effect of presidential rallies on general election outcomes. The unit of observation is media market. In Panel 1 (Columns 1 to 3) the dependent variable is the natural logarithm of votes for Republican presidential candidate. In Panel 1 (Columns 4 to 6) the dependent variable is the natural logarithm of votes for Democratic presidential candidate. In Panel 2 the dependent variable is the natural logarithm of total votes in the presidential elections. The variable *Candidate came $>$ 7 days ago* is equal to one if the candidate had a presidential rally in the media area more than 7 days before the general elections, and is zero otherwise. The variable *Candidate came $\leq$ 7 days ago* is equal to one if the candidate had a presidential rally in the media area at most 7 days before the general elections, and is zero otherwise. The sample is restricted to media markets within swing states.