

The Effects of Election Festivals on Voter Turnout: A Field Experiment Conducted During a Presidential Election

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Introduction

During the final days of the 2016 general election, Civic Nation coordinated a series of non-partisan election festivals designed to encourage voter turnout in targeted precincts across the country. Previous experimental research (Addonizio, Green, and Glaser 2007) indicates that festivals held at polling sites significantly increase voter turnout. Prior research, however, focused solely on low-salience elections, such as municipal or primary elections. The study reported here is the first to assess the effectiveness of festivals held in the context of a high-salience election. Festivals appear to increase turnout substantially and cost-effectively, but further research in high-salience elections is needed to pin down these effects with more statistical precision.

Hypothesis

Our principal hypothesis is that precincts in which poll location festivals are held will see increased turnout compared to control precincts in which no mobilization efforts occur. Addonizio et al. (2007) estimated that festivals increased turnout by 2 to 3 percentage points in low-salience elections. Extrapolation of their findings to higher salience elections implies that festivals increase turnout by 6 to 7 percentage points in contexts where the expected turnout in the control group was approximately 50 percent.²

Experimental Design

Following Addonizio, Green and Glaser (2007), we used block randomization to assign precincts to treatment or control conditions. At each regional site other than San Antonio, collaborating organizations identified two locations suitable for a festival. We then randomly assigned one of the two locations to the treatment condition; the collaborating organization held

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² This extrapolation reflects the fact that Addonizio et al. (2007) modeled the log-odds of turnout rather than the turnout percentage. The implied movement in percentage-points grows larger as the base rate of turnout approaches 50%.

its festival in that location. In San Antonio, the partner organization identified four festival sites, and we randomly selected two of the four for festivals. A total of nine festival locations in eight regional blocks were allocated in this manner.

The appendix presents a descriptive overview of each festival. In eight of the nine sites, festivals were held on Election Day near polling sites; in the remaining site, the festival was held during the early voting period at a voting location. In each case, the festival was preceded by advertising that itself may have increased turnout. The average treatment effect estimated below therefore represents the combined effect of advance advertising and the festivals themselves.

Outcome Measures

After the election, we used publicly available data to total the number of votes cast in the voting precinct(s) covered by the treatment and control sites. We also compiled voter registration figures for each of the sites so that turnout in each site could be expressed as the ratio of total votes cast to the number of registrants. This approach assumes attempts to publicize the festival did not induce people to register to vote. We may sidestep this assumption by using voter registration figures from a previous election rather than registration in 2016; however, doing so produces similar results, so for simplicity we use voter turnout rates as our outcome measure.

Results

Table 1 displays the turnout percentages for the 2012, 2014 and 2016 elections for each of our experimental units, as well as the change in turnout from 2012 to 2016 and a difference-in-differences comparison between treatment and control units within each block.

Raw turnout scores are higher in treatment than control precincts in five of the eight blocks, but the effects of festivals come into focus when we look at changes between 2012 and 2016. The difference-in-differences comparison in the rightmost column reveals that in all eight experimental blocks, treatment precincts exhibited a greater increase—or a smaller decrease—in 2016 turnout rates compared to their respective turnout rates in 2012.³

We use regression analysis to estimate the strength of this apparent positive effect of festivals on precinct turnout. Column 1 in Table 2 displays the results of a regression of turnout on a treatment indicator, controlling for dummy variables for each of the blocks. This regression in effect compares treatment and control outcomes within experimental blocks. Without accounting for precincts' turnout rates in prior elections, we estimate that festivals raise turnout by about 6 percentage points. This estimate, however, is subject to a fair amount of statistical uncertainty. The one-sided *p*-value of the treatment coefficient (calculated using randomization

³ We find no effect among blocks in other states that were originally scheduled to host a poll party but ultimately could not for logistical reasons and did not advertise the events. This null finding suggests that the mere planning process for hosting a poll party does not influence turnout.

inference, see Gerber and Green 2012) is 0.08, suggesting that even if festivals had no true effect, we would expect to obtain an estimate this large from one in twelve similar experiments.⁴

In Column 2, we again estimate the average effect of festivals, this time controlling for precinct turnout rates in the 2012 and 2014 elections. Due to the small number of precincts in our experimental analysis, we leverage covariate information from surrounding non-experimental precincts.⁵ In keeping with our pre-analysis plan, we first estimate the relationship between prior turnout rates and the 2016 turnout rate in non-experimental precincts in the same congressional districts as our experimental precincts.⁶ Within each block, we use the regression coefficients on lagged turnout in 2014 and 2012 to create a new outcome variable that adjusts the 2016 turnout rate by subtracting off the expected vote share based on 2014 and 2012 turnout rates.⁷ The use of this covariate-controlled outcome measure greatly increases the precision of our estimate of the average treatment effect. The coefficient of 0.038 suggests that the festivals on average produced a 3.8 percentage point increase in turnout. Randomization inference under this model specification yields a one-tailed *p*-value of 0.02. In other words, in the absence of any treatment effect, the probability of obtaining an estimate as large as 3.8 merely by chance is about one-in-fifty.⁸

Conclusion

With just eight sets of voting precincts, this experiment is too small to isolate the turnout effects of election festivals with great precision. Nevertheless, our results suggest that Civic Nation's poll festivals had a positive effect on voter turnout in treatment precincts. Our best guess is that festivals increased turnout by roughly 4 percentage points.⁹

This estimate implies that festivals rank among the most cost-effective get-out-the-vote techniques. The 2016 Civic Nation festivals cost a total of \$27,922.¹⁰ An average treatment effect of 3.8 percentage points implies that these festivals and the advertising that preceded them

⁴ See Appendix B, Figure B1 for a graphical representation of this result.

⁵ Because we estimate the coefficients on lagged turnout using non-experimental observations only, we avoid small sample bias associated with regression analysis. See Gerber and Green (2012, p.104).

⁶ Our pre-analysis plan may be found at <https://osf.io/52b5n/>.

⁷ See Appendix A for a table of these results and the equation used to create the adjusted outcome variable.

⁸ See Appendix B, Figure B2 for a graphical representation of this result.

⁹ Addonizio et al. (2007) regressed the log-odds of turnout on a treatment indicator, block indicators, and the log-odds of past turnout. They obtained an estimate of 0.261 with a standard error of 0.091. When we regress the log-odds of turnout in 2016 on block and treatment indicators, we obtain an estimate of 0.259, with a standard error of 0.175. Adding the log-odds of turnout in 2012 to our regression decreases the estimated treatment effect to 0.216 and decreases the standard error to 0.069. If we include log-odds of turnout in both 2012 and 2014 in our model, we obtain an estimated treatment effect of 0.190 with a standard error of 0.084.

¹⁰ This total includes both direct costs of the festival—advertising, food and beverages, staff, venue and entertainment—as well as the value of in-kind donations from local businesses.

increased turnout by approximately 829 votes in treatment precincts. This implies an average cost of $\$27,922/829 = \34 per vote. This cost-per-vote figure is similar to the inflation-adjusted estimate of \$35 per vote reported by Addonizio et al. (2007). This cost-per-vote assessment is also quite competitive with other voter mobilization tactics, such as phone calls or direct mail (see Green and Gerber 2015, p.158). Although further experimentation is required to pin down the effects of festivals with more statistical precision, our results tentatively suggest that election festivals rank among the most effective and economically efficient methods of increasing voter turnout.

References

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Table 1. Participation Across Experimental Units

State	Location	Block	Assignment	Turnout			Change in Turnout	
				2012	2014	2016	2016-2012	Diff-in-Diff
TN	Chattanooga	1	Treatment	65%	33%	67%	2%	1%
TN	Chattanooga	1	Control	52%	18%	54%	2%	-
TN	Nashville	2	Treatment	60%	27%	55%	-4%	11%
TN	Nashville	2	Control	48%	16%	33%	-15%	-
CA	Downtown Long Beach	3	Treatment	65%	15%	59%	-6%	11%
CA	Downtown Long Beach	3	Control	76%	24%	60%	-16%	-
CA	Bixby Knolls Long Beach	4	Treatment	75%	33%	72%	-3%	1%
CA	Bixby Knolls Long Beach	4	Control	78%	42%	75%	-3%	-
OH	Columbus	5	Treatment	48%	8%	56%	8%	1%
OH	Columbus	5	Control	47%	9%	53%	7%	-
TX	San Antonio Sul Ross	6	Treatment	49%	27%	50%	1%	5%
TX	San Antonio Joe Ward	6	Treatment	61%	39%	63%	2%	5%
TX	San Antonio Carnahan	6	Control	64%	34%	63%	-1%	-
TX	San Antonio Ed Rawlinson	6	Control	44%	10%	40%	-5%	-
NC	NC State University	7	Treatment	61%	27%	60%	-1%	11%
NC	NC A&T University	7	Control	54%	15%	43%	-11%	-
NC	Chapel Hill	8	Treatment	48%	23%	57%	9%	1%
NC	Chapel Hill	8	Control	54%	26%	63%	8%	-

Table 2. OLS Regression Estimates of the Effects of Festivals on 2016 Turnout

	<u>Raw Results</u>	<u>Outcome Adjusted for Prior Turnout</u>
	(1)	(2)
Treatment	0.064 (0.042)	0.038 (0.016)
Block indicators	Yes	Yes
N	18	18
One-tailed <i>p</i> -value	0.083	0.022

Conventional OLS standard errors in parentheses. Robust standard errors are estimated to be smaller. *P*-values for the estimated treatment effect are calculated using randomization inference based on the full set of 768 possible random assignments.

Appendix A: Covariate Adjustment

Table A1. Relationship between Prior Turnout Rates and 2016 Turnout Rate

	2016 Turnout Rate						
	Chattanooga (Block 1)	Nashville (Block 2)	Long Beach (Blocks 3+4)	Columbus (Block 5)	San Antonio (Block 6)	NC Universities (Block 7)	Chapel Hill (Block 8)
2012 Turnout Rate	0.223*** (0.063)	0.243*** (0.053)	0.548*** (0.060)	1.120*** (0.154)	0.499*** (0.035)	0.311** (0.155)	0.292*** (0.082)
2014 Turnout Rate	0.454*** (0.068)	0.750*** (0.047)	0.490*** (0.057)	-0.357** (0.156)	0.449*** (0.042)	0.649*** (0.110)	0.470*** (0.050)
Constant (Intercept)	0.410*** (0.028)	0.165*** (0.022)	0.131*** (0.027)	0.052 (0.064)	0.135*** (0.012)	0.179*** (0.067)	0.279*** (0.037)
N	112	157	144	68	231	115	35
R ²	0.623	0.894	0.913	0.606	0.875	0.768	0.951

* p < .1; ** p < .05; *** p < .01

Conventional OLS standard errors in parentheses. Robust standard errors are estimated to be smaller.

Adjusted Outcome Equation:

$$\widehat{TurnoutRate}_{2016} = TurnoutRate_{2016} - \hat{\beta}_{2012} TurnoutRate_{2012} - \hat{\beta}_{2014} TurnoutRate_{2014}$$

Appendix B: Randomization Inference

Figure B1. Randomization Inference, Raw Results

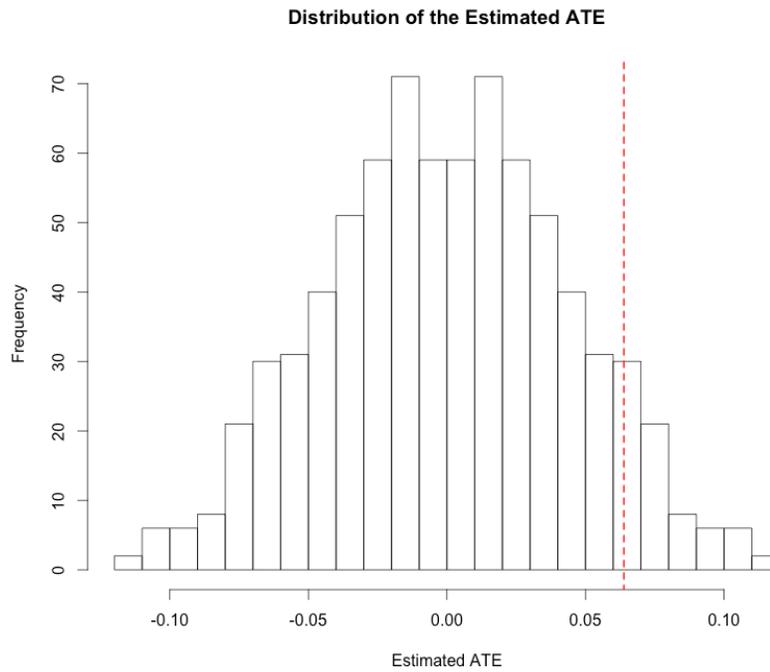
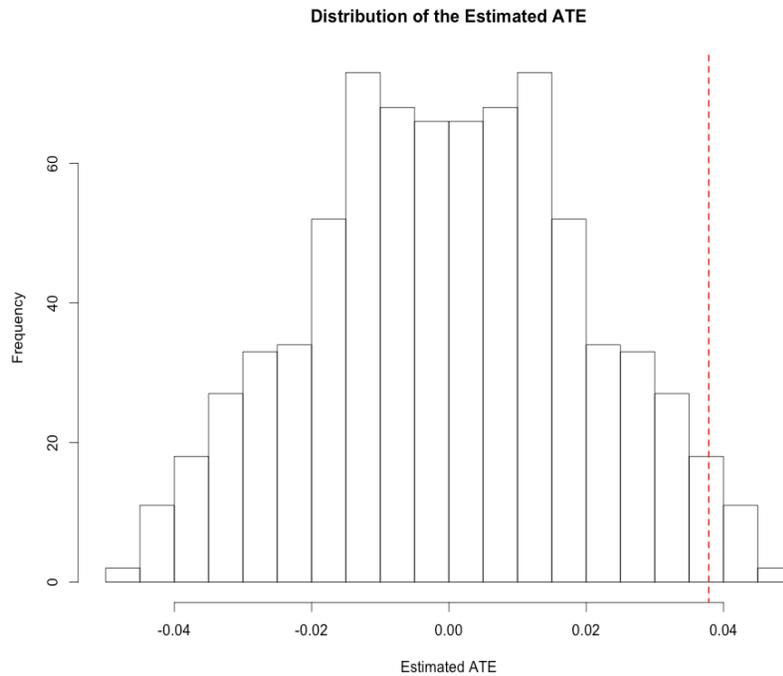


Figure B2. Randomization Inference, Outcome Adjusted for Prior Turnout



These graphs display the distribution of estimated treatment effects across all possible random assignments under the sharp null hypothesis that festivals had no true effect on turnout rates. The dotted red lines represent our estimated treatment effect under each model specification.

Appendix C: Descriptions of Festivals

Location	Organization	Event Time	Proximity to Polls	Food/Beverages Provided	Event Activities	Event Advertising	Estimated Attendance
Chattanooga, TN	TN Action Foundation	11/8/16 12pm-7:30pm EST	Adjacent to the polling location.	Pizza, cake, and cookies were provided, as were bottled waters and soft drinks.	A local radio station did a live broadcast from the event, which included a DJ playing for most of the afternoon. There was a live dance troupe performance, as well as a board where people could post “I voted because...” forms.	Advertising included radio promotions as well as door-to-door canvassing and flyer distribution. Robo-calls and text messages also targeted likely voters. Facebook ads were aired leading up to the event.	Approximately 700 people came through the event.
Nashville, TN	TN Action Foundation	11/8/16 12pm-7pm EST	Across the street from the polling location, set back from the road.	Cookout with grilled hot dogs as well as popcorn and sodas.	There was a photo booth set up, as well as an arts and crafts table. Recorded music was played and there were lawn games like corn hole set up around the pavilion.	Door-to-door canvassing was conducted and flyers distributed in the treatment precinct. Robo-calls and text messages were sent to likely voters. TN Action also aired Facebook ads.	Around 90 attendees.
Downtown Long Beach, CA	Place Make the Vote	11/8/16 11am-8pm PST	Directly across the street from the polling location.	There were grilled cheese sandwiches and Mexican food trucks. Bottled water and snacks were also distributed.	Lawn games and a photo booth were the main attractions. Recorded music was played and there was a bike valet for people who rode their bikes to the event.	Door hangers, robo-calls and multiple rounds of text message advertisements were sent. There was also an announcement in the DLBA’s monthly e-newsletter. A Facebook event page was created, along with advertisements on Facebook.	225 attendees.

Location	Organization	Event Time	Proximity to Polls	Food/Beverages Provided	Event Activities	Event Advertising	Estimated Attendance
Bixby Knolls Long Beach, CA	Place Make the Vote	11/8/16 11am-8pm PST	Adjacent and within view of the polling location.	Bottled water, pizza, and snacks were provided, as well as a barbeque food truck.	This event had arts and crafts tables, lawn games, a photo booth and a DJ. Giveaways included stickers and pins as well as silk screened tote bags.	Advertising consistend of door hangers, event posters, press releases, flyers and event stickers. Email newsletters and Facebook event reminders, as well as robo-calls and text message reminders were sent.	290-300 attendees.
Columbus, OH	Defend Our Future	11/8/16 6:30am - 7:30pm EST	Corner lot adjacent to the polling location entrance.	Coffee and donuts, Chipotle burritos and pizza were distributed. Snacks were available.	The coordinators created a large banner, which guests could sign with the reason that they were voting. Live and recorded music were played throughout the day.	Door-to-door canvassing and flyer distribution occurred leading up to the event, as well as limited phone bank calls and targeted Facebook advertisements.	337 attendees.
Joe Ward San Antonio, TX	MOVE San Antonio	11/8/16 3pm-7pm CST	Parking lot adjacent to the polls.	Food consisted of sodas and bottled water, pizza, chips, candy and a food truck with sno-cones.	Recorded music was played; there were lawn games such as corn hole and bean bag tic tac toe. MOVE staff dressed up in banana and robot costumes.	Staff conducted canvassing in the treatment precinct the weekend before the election and distributed flyers and voter guides. Text message and Facebook advertisements were also sent out.	About 90 attendees.
Sul Ross San Antonio, TX	MOVE San Antonio	11/8/16 3pm-7pm CST	By the road where people entered the polling location.	Sodas and bottled water, pizza, chips, and candy were provided.	MOVE staff dressed up in banana and robot costumes and there were signs supporting the efficacy of voting. Activities included lawn games and recorded music.	Neighborhood canvassing was conducted the weekend before the election, along with flyer distribution. SMS messages and Facebook advertisements were also sent.	115-125 attendees.

Location	Organization	Event Time	Proximity to Polls	Food/Beverages Provided	Event Activities	Event Advertising	Estimated Attendance
Chapel Hill, NC	Sierra Club	11/8/16 3pm-7:30pm EST	Parking lot around the corner from, but adjacent to, the polling location entrance.	Sub sandwiches and burritos were given out, as well as candy, snacks and bottled water.	There was recorded music played throughout the event, with lawn games for people to play.	Flyers were distributed, along with direct-mail advertisements to students living in nearby dorms. One round of robo-calls were made to land lines, and a Facebook event page was created.	75 attendees.
Raleigh, NC	Sierra Club	11/2/16 3:30pm-5:30pm EST	The event was held about a half a mile away from the early voting polling place.	Pizza and sandwiches were given out during the event, as well as bottled beverages.	There was a DJ playing music during the event, as well as puppies dressed up in red, white and blue in wagons for attendees to play with.	Flyers were distributed around campus leading up to the event. Robo-calls and text messages were sent. A Facebook event page was made and limited Facebook advertising was also done.	200 attendees