ARE POLITICAL AND CHARITABLE GIVING SUBSTITUTES?
EVIDENCE FROM THE UNITED STATES

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ABSTRACT

We provide evidence that individuals substitute between political contributions and charitable contributions. We document these findings using micro data from the American Red Cross and from the Federal Election Commission. As a source of causal identification, we exploit exogenous shocks to charitable and political giving. First, we show that foreign natural disasters, which are positive shocks to charitable giving, crowd out political giving. Second, we show that political advertisement campaigns, which are positive shocks to political giving, crowd out charitable giving. Our evidence suggests that individuals give to political and charitable causes to satisfy similar needs. Our findings also suggest that some of the drivers of charitable giving, such as other-regarding preferences, may be driving political giving too.

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1   Introduction

Donations comprise a substantial fraction of household expenditures. In the United States, individual donations to charity and to political causes account for more than 2% of GDP (Giving USA (2018), Federal Electoral Commission (2017)). These two types of giving, political and charitable, have a lot in common. For example, whereas a minority of very large donations might exert some influence, a typical donation from an individual is virtually never large enough to be influential on its own. And those who donate to charity are more likely to donate to politics, relative to those who do not (Yörük, 2015). Despite these commonalities, there is little research on the relation between charitable and political giving. In this paper, we fill this gap by studying whether charitable and political giving are substitutes.

The degree of crowding out between charitable and political giving can shed light on an open question in the social sciences: why do people give money to political campaigns? In the case of charitable giving, decades of research finds that its leading drivers are other-regarding preferences, such as impure altruism or warm-glow (e.g., Andreoni, 1989). In the case of political donations, however, there is still no such consensus. Some scholars propose that political donations, even small ones, are driven by strategic incentives (Bouton et al., 2018). Others argue that they fulfill a consumption role (Ansolabehere et al., 2003). We provide a new approach to answering this question: if political and charitable giving satisfy the same needs, individuals will behave as if charitable and political giving are substitutes.

We study the substitutability between charitable and political giving using data from the United States. We employ data on charitable donations to the American Red Cross (ARC) and data on political donations from the Federal Election Commission (FEC). These two giving categories are roughly comparable in magnitude: donations for disaster relief average $1.2 billion per year (Rooney (2018)), while individual contributions to political campaings average $1.55 billion per year (Federal Electoral Commission (2017)).

Our identification strategy is based on shocks to the attractiveness of political and charitable giving. First, we measure if shocks that positively affect charitable giving crowd out political giving. Second, we study whether shocks that positively affect political giving crowd out charitable giving.

We start with the study of natural disasters that occur outside of the United States. Foreign natural disasters are unlikely to directly impact the financial means that U.S. households have

to give, because they occur outside of the country. On the other hand, these foreign disasters constitute a positive shock to charitable donations by U.S. households because they receive media coverage in the United States (Eisensee and Strömberg, 2007; Karlan et al., 2012; Cadena and Schoar, 2011).

According to anecdotal accounts, there is a significant increase in charitable giving concentrated in the six weeks after a large foreign natural disaster hits (Schwab (2010); Rooney (2018)). Using data at the county-week level, we find strong support for these anecdotal accounts: in the six weeks following a large foreign natural disaster, donations to the American Red Cross increase by 27.2% (p-value=0.015). Next, we use the same specification to measure the effects of these natural disasters on political giving. If charitable and political giving are substitutes, we should observe a decline in political giving after the disasters hit. Consistent with this hypothesis, we estimate a 3.75% (p-value=0.043) decline in political donations in the six weeks following foreign natural disasters. Put differently, we find that an increase in charitable donations crowds out political donations by a factor of around 0.14 (= $\frac{3.75\%}{27.2\%}$).

To rule out alternative explanations, we conduct several robustness tests. We use the timing of the natural disasters as a falsification test in an event-study fashion. We show that charitable and political giving change right after a disaster, but they do not change in the weeks prior to the disaster. We also estimate the effects of disasters on placebo outcomes (individuals' spending on retail, groceries, and lottery tickets) and find estimates that, as expected, are close to zero, statistically insignificant and precisely estimated. Last, we show that our findings remain robust when using different time periods and when using different definitions of large natural disasters.

Next, we study a shock in the opposite direction: does charitable giving decline after a positive shock to political giving? We use political ads as shocks to the attractivness of political giving. Just like the natural disasters, the political ads can act as reminders of political giving or increase the salience of the politician's need for contributions. To isolate exogenous variation in political advertising, we follow the identification strategy from Spenkuch and Toniatti (2018), Shapiro (2018) and Wang et al. (2018), consisting of sharp geographic discontinuities in advertisement markets. Specifically, we match counties across the boundaries of Nielsen's Designated Market Areas (DMAs). DMA boundaries are set in advance, independently of political races, and each has access to identical media outlets and advertising. Thus, two households that are in close proximity and similar in observable characteristics can receive a different number and type of political ads if they are located

on opposite sides of a DMA boundary. Because advertising spending is fixed within DMAs but varies between them, we can identify and isolate political information shocks.

We analyze the effects of political ads using monthly level data. We pair every county to their opposite county in the DMA boundary. As expected, we find that political ads act as positive shocks to political giving: a log-increase in political ad spending increases political giving by around 9.2% (p-value<0.001) relative to its paired county across the DMA boundary. If political giving and charitable giving are substitutes, we should expect that charitable giving declines in the aftermath of the political ad. Consistent with that hypothesis, we find that a log-increase in political ad spending decreases charitable giving by around 0.7% (p-value=0.015). In other words, we find that an increase in political donations crowds out charitable donations by a factor of 0.08 ($= \frac{0.7\%}{9.2\%}$).

This finding survives several robustness checks. For example, we use the timing of advertisement spending as a falsification test in an event-study fashion. Despite changes in political and charitable giving right after a political ad, there is no such effect in the weeks prior to the ad. And using micro-data on solicitation mailings from the American Red Cross, we show that the decline in charitable giving is not driven by a decline in outreach efforts by the charity.

The evidence of bi-directional crowding out suggests that charitable and political giving are substitutes to a degree that is statistically and economically significant. Strategic motives are unlikely to explain this crowd-out, as political donations do not improve outcomes for foreign disaster victims and donations to the American Red Cross do not improve election outcomes for candidates. Instead, our preferred interpretation for the crowding out between charitable and political giving is based on other-regarding preferences. In other words, individuals believe that their charitable and political contributions are alternative ways to help society: when one way becomes more attractive, it crowds out the other way.[1]

Our findings have some implications for policy makers and for researchers. One implication for policy makers is that policies designed to restrict or promote political donations might have consequences for charitable giving. For example, relaxing caps on individual political contributions could crowd out some charitable contributions. Thus, these unintended effects should be taken into account when comparing the costs and benefits of these policies. One implication for researchers is that shocks to one type of donation may be used as a source of exogenous variation in studying the effects of other types of donations. As a proof of concept, we measure the effect of political

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[1]Moreover, our results may suggest that individuals have a mental account for giving that encompasses both charitable and political giving (Thaler, 1985, 1999; Hastings and Shapiro, 2013).

contributions on electoral outcomes using natural disasters as a source of exogenous variation in contributions. We find that, consistent with the logic in Ansolabehere et al. (2003), a decline in small, individual contributions improves the electoral prospects of incumbents.[2]

Our paper is related to a literature on the determinants of charitable and political giving. The literature on charitable giving emphasizes the role of other-regarding preferences such as altruism (Andreoni, 1989; Ottoni-Wilhelm et al., 2017; Becker, 1974) and warm-glow (Andreoni, 1989).[3] For political donations, however, there is no comparable consensus on the drivers of giving (Ansolabehere et al., 2003; Bouton et al., 2018). Some studies attribute political donations to instrumental motives such as to influence the policies that benefits the donors the most (Snyder Jr, 1990, 1992; Fisher, 1994; Bertrand et al., 2014). Other studies claim that individual donations to politicians are driven by a consumption motive (Ansolabehere et al., 2003). We contribute to this literature by showing that individuals view political and charitable giving as substitutes. This finding suggest that other-regarding preferences, which have important roles in charitable giving, also may have important roles in political donations.

The two most closely related papers are Bertrand et al. (2018) and Yörük (2015). Bertrand et al. (2018) show that charitable giving is sometimes used as a means of political influence. For example, grants given to charitable organizations in a congressional district increase when that district's representative can influence relevant policies (e.g., by sitting on certain committees). Bertrand et al. (2018) also explore a connection between charitable giving and political giving, though the connection runs in the exact opposite direction. In other words, while Bertrand et al. (2018) shows that large charitable donations are sometimes used to influence politicians, our evidence suggests that small donors give to political campaigns to feel good about themselves.

To the best of our knowledge, Yörük (2015) is the only other study that investigates the relationship between charitable and political donations. Studying household surveys of donations between 1990 and 2001, the author uses variations in income and itemized deductions in taxes to identify the

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[2]On the one hand, the finding that extra outside spending can reduce, rather than exacerbate, the incumbency advantage in the U.S. is also consistent with Petrova et al. (2019). On the other hand, this finding contrasts with that of Avis et al. (2017), who show that after a policy change to limit campaign spending in Brazil, political competition increased by creating a larger pool of candidates, which also reduced the incumbency advantage.

[3]These theories suggest that charitable giving is a feel-good consumption item. There are, of course, other documented reasons why individuals give to charity, such as peer pressure (DellaVigna et al., 2012; Andreoni et al., 2017) and bragging rights (Glazer and Konrad, 1996; Harbaugh, 1998; Montano-Campos and Perez-Truglia, 2019)). Indeed, in addition to economics, giving is an important area of study in marketing and psychology (Jenni and Loewenstein, 1997; List and Lucking-Reiley, 2002; Kogut and Ritov, 2005; Landry et al., 2006; Shang and Croson, 2006; Small et al., 2007; Small and Simonsohn, 2007; Alpizar et al., 2008; Liu and Aaker, 2008).

relationship between charitable and political giving. The author concludes that these two types of donations are complementary, as a higher tax is associated with lower charitable giving and lower political giving. However, the main challenge for these results is that taxes can be associated with a host of unobservable factors such as wealth or altruism. Our study contributes by advancing the causal identification. Based on two natural experiments, we reach exactly the opposite conclusion: charitable and political giving are substitutes, not complements.

The rest of the paper is organized as follows. Section 2 describes the data sources. Section 3 presents the effects of foreign natural disasters on charitable and political giving. Section 4 discusses the effects of political ads on giving. Section 5 discusses the interpretation and implications of the findings. The last section concludes.

2   Data

In this section, we describe all the datasets and variable definitions used in the analysis.

Charitable Donations. We use proprietary data from the American division of the Red Cross (RC).[4] RC is a humanitarian organization that provides emergency assistance, disaster relief, and disaster preparedness education in the United States and abroad. The dataset consists of records of individual donations made to the organization, with donor information anonymized. For each donor, we have data on their zip code, the date, and amount of donations, as well as any appeals or fundraising materials sent to them by RC and when the donation requests were sent. Our analyses use data from the period between 2006 and 2011.

Political Contributions. Political contributions dataset comes from Federal Elections Commission (FEC). The data are available at the individual level and the name and addresses of the individuals are listed, along with the date of the donation. We aggregate the data at the county level. The contributions are recorded and made public when an individual's contributions (over single or multiple giving occasions) exceed $200.

Natural Disaster Dataset. Since domestic disasters may result in negative economic shocks and therefore influence one's income and ability to donate, we focus on the information shocks associated with disasters that took place outside of the United States. We collect data on those

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[4]The dataset was made available by the Wharton Customer Analytics Initiative (WCAI) of the Wharton School of University of Pennsylvania.

disasters using the Emergency Events Database (EM-DAT).[5] We focus on large disasters, defined as those disasters resulting in 300 or more deaths. There are a variety of types of disasters such as earthquakes, floods, storms, and volcano eruptions. The dates of these disasters and post-disaster periods are shown in Figure 1.

Political Advertising. The data for political advertising is obtained from Wisconsin Advertising Project (for years before 2010) and its successor Wesleyan Media Project (for the 2010 and later years). We refer the reader to Fowler et al. (2015) for a detailed description of the data (as well as basic descriptive statistics). The source for this ad data is Kantar Media/CMAG. Kantar Media is a commercial firm, which specializes in providing detailed, real-time tracking information to corporate and political clients. These tracking data represent the most comprehensive and systematic collection on the content and targeting of political advertisements. The data include two types of information. First, frequency information tells when and where ads aired. It contains precise and detailed information on the date, time, market, station, and television show of each airing. Second, the data provide information about each ad's content in the form of a video file for each unique creative or individual ad. CMAG gathers such data by using a market-based tracking system, deploying Ad Detectors in each media market in the U.S. In addition to all local advertising activity, these detectors track advertisements on the major national networks, as well as national cable networks. The system's software recognizes the electronic seams between programming and advertising and identifies the digital fingerprints of specific advertisements. When the system does not recognize the fingerprints of a particular spot, the advertisement is captured and downloaded. Thereafter, the system automatically recognizes and logs that particular commercial wherever and whenever it airs. Studies that examine advertising data obtained from television stations and compare them with this CMAG data find that the company's system is highly reliable in tracking the universe of ads aired. After receiving the data from CMAG, the Wesleyan Media Project processes and codes the ad tracking data from all 210 media markets in the United States. In this process, using videos of ads captured by CMAG, project staff first researches the entity responsible for airing each political spot, distinguishing between those paid for by candidates, parties, and interest groups. Finally, the Wesleyan Media Project codes the content of each ad on an extensive battery of questions.[6]

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[5] According to the site, the database includes all disasters starting from 1900 until the present, conforming to at least one of the following criteria: 10 or more people dead; 100 or more people affected; the declaration of a state of emergency; or a call for international assistance.

[6] We also tried to use the full Kantar database to identify Red Cross TV ads. However, we identified only 76 instances of ARC ever running those ads on TV.

Retail Spending. We use the Retail Scanner data of Nielsen, provided by University of Chicago's Kilts Center, to investigate the spending on other items for consumers. The data include purchases from all Nielsen-tracked categories, including food, nonfood grocery items, health and beauty aids, and select general merchandise. The data represent approximately 40,000 - 60,000 US households that continually provide information about the makeup of their households, the products they buy, as well as when and where they make purchases. The Retail Scanner Data consist of weekly purchase and pricing data generated from participating retail store point-of-sale systems in all US markets. Data include from approximately 35,000 grocery, drug, mass merchandiser, and other stores. Products from all Nielsen-tracked categories are included in the data, such as food, nonfood grocery items, health and beauty aids, and select general merchandise.

Lottery Purchases. We gather data on lottery purchases from lottoreport.com, which summarizes the total Mega Millions lottery sales from the states GA, IL, MD, MA, MI, NJ, NY, OH, TX, VA and WA.

Redbook Retail Index. Johnson Redbook index data come from tradingeconomics.com and include measures of sales growth in the U.S. retail sales. The index is based on the sales data of around 9,000 large general merchandise retailers representing over 80% of the equivalent official retail sales series collected and published by the U.S. Department of Commerce.[7]

Appendix Tables A.1 through A.4 provide detailed summary statistics on all the variables used for the analysis.

3 The Effects of Foreign Natural Disasters

3.1 Main Results

We use the following specification:

$$Y_{c,t} = \alpha_1 \cdot I_t^{+0/+6} + \left[\alpha_2 \cdot I_t^{+7/+8} + \alpha_3 \cdot I_t^{-2/-1}\right] + \mathbf{X_{c,t}}\beta + \epsilon_{c,t} \tag{1}$$

The dependent variable $Y_{c,t}$ stands for either the total contributions to the Red Cross in county c and week t, or the corresponding total contributions to political campaigns. These dependent variables can take the value of zero, so we use inverse hyperbolic sine transformation instead of

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[7]Source: https://tradingeconomics.com/united-states/redbook-index

the logarithmic function (Burbidge et al. (1988)) – as discussed below, our results are robust to alternative specifications.

The binary variable $I_t^{+0/+6}$ takes the value of 1 during the week of the disaster t and the following 6 weeks, thus α_1 captures the effect of a natural disaster on giving. We use a window of 6 weeks after the disaster because of the abundant anecdotal evidence that the effects of disasters on donations are concentrated in that time period. For example, Schwab (2010) claims that "disaster donations are typically (...) made within the six weeks following a disaster." And Rooney (2018) also argues that "most Americans who donate to support disaster relief (...) make these donations within six weeks of a big disaster."[8] To assess whether this time window is appropriate, we include the binary variable $I_t^{+7/+8}$, which takes the value 1 during the seventh and eight week after the disaster. Thus, α_2 measures if there are any substantial effects beyond the initial 6 weeks. Lastly, $I_t^{-2/-1}$ takes the value 1 during the two weeks before the start of the disaster. The coefficient α_3 provides an event-study falsification test, by measuring if there are any differences in contributions right before the disaster hits. If the timing of the disasters is truly exogenous, we should expect α_3 to be zero.

$\mathbf{X_{c,t}}$ is a vector of control variables: month-of-the-year dummies, year dummies and the time until the next election (to control for the fact that donations to politics are more likely to arrive closer to the election date), the number of mailings sent out by the Red Cross in the previous weeks and county fixed effects.[9] To take into account that the shock is essentially the same within every week, but standard errors within state might be correlated, we use two-way clustering by week and state. As a robustness check, Appendix Table A.5 presents the results using a time series specification.

The effects on charitable donations are presented in Table 1. The results for the full sample is reported in columns (1)–(3), while the results for the subsample of nonzero donations is reported in columns (4)--(6). The coefficient on $I_t^{+0/+6}$ from column (1) suggests that the charitable donations to RC increase by approximately 28.4% during the 6 weeks following a disaster. This effect is statistically significant at 1% level. In column (2), we add the variable $I_t^{-2/-1}$ for the event-study falsification test. The coefficient on $I_t^{+0/+6}$ remains almost the same in terms of its magnitude and statistical significance. On the contrary, the coefficient on $I_t^{-2/-1}$ is closer to zero and is statistically insignificant. This evidence supports the premise that the timing of the disasters is indeed as good

[8]This anecdotal evidence is also consistent with the findings from Eisensee and Strömberg (2007) that news media keep reporting about major foreign disasters during 40 days after the events.

[9]The results remain quantitatively and qualitatively similar if we exclude mailing controls from the specification (see Appendix Table A.11).

as random. Column (3) also includes the variable $I_t^{+7/+8}$. The coefficient on this variable is smaller and statistically insignificant, indicating that, consistent with the anecdotal accounts, the effects on charitable contributions are concentrated in the first six weeks after the disaster hits. Columns (4)--(6) repeat the estimation for the sample of county-week observations with nonzero donations. These results are quantitatively and qualitatively similar to the ones in columns (1)--(3). Overall, the results in Table 1 imply that foreign natural disasters, indeed, constitute a positive shock to charitable donations.

In turn, Table 2 shows that the foreign natural disasters have a negative and significant effect on political contributions. The coefficient on $I_t^{+0/+6}$ from column (1) indicates that, in the six weeks after a disaster hits, there is an average decline in political giving of 3.75%. The coefficients on $I_t^{-2/-1}$ from columns (5)–(6) show that there are no pre-trends: these coefficients are closer to zero and statistically insignificant. The coefficient on $I_t^{+7/+8}$ from column (6) indicates that the effects on political giving are also concentrated in the six weeks after the disaster hits. Overall, the results in columns (1)–(3) show that natural disasters negatively affect political donations suggest that charitable donations crowd out political donations. The results for the sample of nonzero donations are reported in columns (4)--(6), and are qualitatively similar (since most county-week observations for political donations are nonzero, the sample sizes in columns (1)--(3) is not very different from the sample sizes in columns (4)--(6)). In sum, Table 2 indicates that the natural disasters decreased political giving.

Last, we can combine the estimates to quantify the degree of crowd out. The estimates presented above imply that charitable donations crowd out political donations by a factor of 0.14 ($= \frac{3.75\%}{27.2\%}$).

3.2   Additional Robustness Checks

The results above can have a simple explanation: budget constrained individuals have lower income after making one type of donation and are likely to spend less on other expense categories. Alternatively, one may wonder whether there is some other factor going on that reduces income and thus spending across all giving and consumption categories. To rule out these confounding stories, we conduct a series of "placebo" tests with expenditures in other categories unrelated to giving.

Our main placebo outcome is based on retail expenditures, based on disaggregated Nielsen data. The results for this county-level outcome are summarized in Table 3 below. The coefficients for the period after disasters are marginally statistically significant, but economically negligible, with the

opposite sign of the corresponding coefficients for political donations variables, and very precisely estimated. This is consistent with negligible effect of disasters on overall patterns of retail spending. In sum, the evidence is not consistent with a simple budget constraint explanation.

We conduct a number of additional robustness checks that are reported in the Appendix. We use the time series specification to look at other placebo outcomes for which we have time series data: spending in lottery tickets, retail expenses (based on data from Redbook) and retail expenses (based on data from Nielsen). These results, summarized in Table A.6, indicate placebo effects that are very close to zero, statistically insignificant and very precisely estimated. In the benchmark specifications, we assumed that charitable information shocks come from large disasters resulting in 300 fatalities at a minimum. As a robustness check, in the Appendix we vary the fatality threshold for disasters to be included in the sample. The results are qualitatively and quantitatively similar. Another concern is that the results may be driven by a particular outliers, such as a year with many disasters or an intense political race. To assess the robustness of the results, the Appendix reports the results for a leave-one-year-out specifications. The results are, again, quantitatively and qualitatively robust.

4 The Effects of Political Advertising Shocks

4.1 Main Results

Next, we carry out a similar exercise using political advertising as an information shock. Unlike natural disasters, spending on political advertising, therefore the arrival of political information shocks, is endogenous. A host of correlated unobservables may determine both the advertising spending and political contributions within a county. Thus, we cannot just interpret any OLS relationship between political advertising and different kinds of donations as causal evidence.

To address the identification issue, we focus on the political advertising in Designated Market Areas (DMA), which are geographical media market units defined by A.C. Nielsen. DMAs do not follow administrative and political maps. DMA boundaries determine which local television stations a consumer of cable or satellite dish gets with his or her subscription (Shapiro, 2018).[10] FCC gives local broadcasting licenses at the DMA level, and, as a result, practically all ads are purchased at

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[10]Please see Shapiro (2018) and Spenkuch and Toniatti (2018) for details on the historical development of DMAs. DMAs were established originally to make the sale of advertising easier to advertisers.

the DMA level (Goldstein and Freedman, 2002). As a result, households within the same DMA are exposed to similar TV content and ads. The cross sectional variation due to discontinuous boundaries of DMAs allow individuals across DMA boundaries to be exposed to different frequency of political ads, resulting in a quasi-random source of variation in the political ads the individuals are exposed to. As a result, based on the border discontinuities, we can use political information shocks and estimate the elasticity of individual contributions to political candidates.

We focus on monthly, not weekly, data for two reasons. First, and most importantly, campaign ads have high degree of auto-correlation in weekly data. Thus, it is not possible to estimate a precisely timed effect with essentially a cross sectional source of exogenous variation.[11] Second, while some papers suggest that the impact of campaign advertising effect is short-lived (Gerber et al., 2011), others argue that some dynamic effects can last for six weeks (Hill et al., 2013), with Urban and Niebler (2014), similar to us, using monthly frequency.

We match counties across DMA boundaries based on their distance and then run a first differences regression, regressing donations on advertising spending.[12] We then run a first differences model with the outcome variable ΔY representing the difference between the total political contributions between the county pair pc in month t. We look at the dollar values of ads expenditures, employing logarithmic sine transformation, as we do with donations variables:[13]

$$\Delta Y_{pc,t} = \alpha_1 \Delta Log(D_{pc,t}^{+0/+1}) + \alpha_2 \Delta Log(D_{pc,t}^{-1}) + \theta \Delta \mathbf{X}_{pc,t} + \epsilon_{pc,t} \tag{2}$$

$\Delta Log(D_{pc,t}^{+0/+1})$ represents the difference in the total political advertising spending between the counties in pair pc in the first month following month t. Similar to (1), we also include the falsification term $\Delta Log(D_{pc,t}^{-1})$, corresponding to a shock happening in the future. $\mathbf{X}_{pc,t}$ is a vector of control variables that includes demographics characteristics and county pair and week fixed effects.

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[11]Note that Gordon and Hartmann (2013), Spenkuch and Toniatti (2018), and Wang et al. (2018) all argue that it can be problematic to estimate a precisely timed effect with cross-sectional source of variation. We have built in placebo tests in the baseline specification to deal with this concern.

[12]In particular, for each county pair that does not belong to the same DMA, we calculate the distance between them and then we looked at the pairs of counties that are closer than 10 miles from each other. The identification here assumes had the DMA boundary not fallen between the two counties randomly, they would be exposed to identical political information shocks. This methodology has been adopted by others before us (e.g., Shapiro, 2018).

[13]Since there is considerable variation in the prices of advertising between TV channels, day time vs. prime time advertisement options, and from one TV show to another within a given channel, we use dollar spending (as opposed to the number of ads aired) to better approximate the number of individuals which are exposed to the information shock. Typically, these two variables show a strong positive correlation.

The results are presented in Table 4. Columns (1) and (2) show that political ads positively affect political donations, with the elasticity of 0.09: i.e. if the difference in political ads expenditures goes up by 10%, the corresponding difference in donations across DMA border is 0.9%. This estimate is consistent with relatively low persuasion rates obtained by the studies of political advertising (e.g., Spenkuch and Toniatti (2018)). The ads aired in the future do not affect current political (column (2)) or charitable (column (4)) donations. Next, we also observe that political ads negatively affect charitable donations (columns (3) and (4)). The magnitude of the effect implies that 10% increase in the difference in political ads expenditures across the border leads to 0.07% decrease in charitable donations differential.

In sum, the results from Table 4 indicate that the political ads increase political giving and decreased charitable giving. Moreover, we combine the estimates to quantify the degree of crowd out. The estimates presented above imply that political donations crowd out charitable donations by a factor of 0.079 ($= \frac{0.73\%}{9.22\%}$). This crowding out factor is smaller than the corresponding estimate reported based on the natural disasters, but still in the same order of magnitude.[14]

4.2 Additional Robustness Checks

In Table 4, we also estimate the impact of political ads on disaggregated retail expenses from Nielsen. We find that, consistent with the results for natural disasters, retail expenses do not negatively respond to political ads. The coefficient for the cross-border difference in political ads is 0.0581% for Nielsen expenditures in column (5), which is close to zero, statistically insignificant and also precisely estimated. As a result, we can rule out the negative effects of up to 0.17%. For the sake of comparison, our baseline coefficients from columns (1) and (3) imply elasticities 9% and 0.77% respectively. Last, it is possible that RC anticipates that increased political advertising will steal donors' attention away, or will reduce individuals' budget for giving, and, as a result, they may reduce the number of solicitations they send. In the Appendix, we show that this channel cannot explain our findings.

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[14]There are at least two potential reasons why this ratio is different from the ratio for foreign natural disasters. First, the nature of the shocks is different, since political ads are anticipated, at least to some extent. Second, Red Cross contributions could be more sensitive to major TV events compared to political ones, thus the impact of different kinds of shocks could be asymmetric here.

5   Discussion

In this section, we discuss the interpretation of our findings as well as some of their implications.

We find that political and charitable giving crowd out each other. One simple explanation for this crowding out is that giving to charitable and political causes are both motivated by the same type of other-regarding preferences. People use both types of contributions to satisfy their other-regarding preferences, and have to allocate resources between the two in the presence of budget constraint. As a result, a shock to the the "emotional attachment" to a specific cause (such as a natural disaster or a political ad) leads individuals to make a larger donations to this cause and and a smaller donation to the alternative cause. Another model that can explain the results is mental accounting (Thaler, 1985, 1999; Hastings and Shapiro, 2013). If charitable and political giving are bucketed under the same mental account, increased giving in one donation category would disproportionately crowd out other donation categories such as charitable giving.

Our evidence has implications for our understanding of the motivations behind political donations. Economists and political scientists have studied individual motivations for giving to politicians. A large part of the literature from these research studies remain inconclusive. Two alternative explanations have been put forward. A large part of the literature either assumes or argues that campaign contributions are made with some instrumental motivation (e.g. Grossman and Helpman (1996), Mian et al. (2010), or Bouton et al. (2018), just to mention a few). This is a more natural explanation for large political donations, which may have a significant probability of affecting policies or gaining political favors. For small donations, however, the possibility of influencing a politician's policy position is practically impossible and thus this instrumental channel seems puzzling (Tullock, 1972; Ansolabehere et al., 2003). Still, the literature often assumes that even small donations are driven by instrumental considerations (Bouton et al. (2018)). Instead, our evidence supports the view that political donations are driven by other-regarding preferences. In the words of Ansolabehere et al. (2003): "political giving should be regarded as a form of consumption not unlike giving to charities, such as the United Way or public radio" (page 118).

Last, our findings imply that researchers could use the substitutability between political and charitable giving for identifying the causal effects of these donations. In Appendix A we provide a proof of concept, by using the foreign disasters to measure the effects of campaign donations on electoral outcomes. The results suggest that higher campaign contributions hurt rather than help the electoral prospects of the incumbents.

6 Conclusions

We provide evidence that individuals see political donations and charitable donations as substitutes. Using data from the American Red Cross and the Federal Election Commission, we show that foreign natural disasters can act as information shocks to the need for charitable giving and thus decrease political contributions, and that political advertising can act as information shocks to the need for political contributions and thus decrease charitable donations. In other words, we provide evidence that political and charitable giving crowd out each other.

Our findings have a number of implications. They suggest that small political donations are not driven by instrumental motives. Instead, these donations may be driven by the same factors believed to drive charitable giving such as altruism and warm-glow. Our findings also imply that policies aimed at promoting or restricting one type of donation could have unintended consequences for other type of donations. For example, relaxing restrictions on campaign contributions could unintentionally result in lower charitable contributions. Our findings also have implications for fundraisers in the political and charitable sectors: charitable organizations may expect electoral cycles to affect their fundraising efforts as political advertisements and campaigns encourage individuals to make political contributions. Last, our findings suggest that researchers could use shocks to one type of donation as a source of exogenous variation for measuring the causal effects of other types of donations. For example, we provided a proof of concept by using foreign natural disasters to estimate the effects of campaign contributions on electoral outcomes.

References

Alpizar, F., Carlsson, F., and Johansson-Stenman, O. (2008). Anonymity, reciprocity, and conformity: Evidence from voluntary contributions to a national park in costa rica. *Journal of Public Economics*, 92(5-6):1047–1060.

Andreoni, J. (1989). Giving with impure altruism: Applications to charity and ricardian equivalence. *Journal of Political Economy*, 97(6):1447–1458.

Andreoni, J., Rao, J. M., and Trachtman, H. (2017). Avoiding the ask: A field experiment on altruism, empathy, and charitable giving. *Journal of Political Economy*, 125(3):625–653.

Ansolabehere, S., De Figueiredo, J. M., and Snyder Jr, J. M. (2003). Why is there so little money in US politics? *Journal of Economic Perspectives*, 17(1):105–130.

Avis, E., Ferraz, C., Finan, F., and Varjão, C. (2017). Money and politics: The effects of campaign spending limits on political competition and incumbency advantage. Technical report, National Bureau of Economic Research.

Becker, G. S. (1974). A theory of social interactions. *Journal of Political Economy*, 82(6):1063–1093.

Bertrand, M., Bombardini, M., Fisman, R., and Trebbi, F. (2018). Tax-exempt lobbying: Corporate philanthropy as a tool for political influence. Technical report, National Bureau of Economic Research.

Bertrand, M., Bombardini, M., and Trebbi, F. (2014). Is it whom you know or what you know? an empirical assessment of the lobbying process. *American Economic Review*, 104(12):3885–3920.

Bouton, L., Castanheira, M., and Drazen, A. (2018). A theory of small campaign contributions. Technical report, National Bureau of Economic Research.

Burbidge, J. B., Magee, L., and Robb, A. L. (1988). Alternative transformations to handle extreme values of the dependent variable. *Journal of the American Statistical Association*, 83(401):123–127.

Cadena, X. and Schoar, A. (2011). Remembering to pay? reminders vs. financial incentives for loan payments. Technical report, National Bureau of Economic Research.

DellaVigna, S., List, J. A., and Malmendier, U. (2012). Testing for altruism and social pressure in charitable giving. *The Quarterly Journal of Economics*, 127(1):1–56.

Eisensee, T. and Strömberg, D. (2007). News droughts, news floods, and US disaster relief. *The Quarterly Journal of Economics*, 122(2):693–728.

Federal Electoral Commission (2017). Statistical summary of 24-month campaign activity of the 2015–2016 election cycle. Technical report.

Fisher, J. (1994). Why do companies make donations to political parties? *Political Studies*, 42(4):690–699.

Fowler, E. F., Franz, M., and Ridout, T. N. (2015). Political advertising in 2012. *Version 1.0. Middletown, Conn.: Wesleyan Media Project*.

Gerber, A. S., Gimpel, J. G., Green, D. P., and Shaw, D. R. (2011). How large and long-lasting are the persuasive effects of televised campaign ads? results from a randomized field experiment. *American Political Science Review*, 105(1):135 – 150.

Giving USA (2018). Giving USA 2018. the annual report on phylantropy for the year of 2017. Technical report.

Glazer, A. and Konrad, K. A. (1996). A signaling explanation for charity. *The American Economic*

Review, 86(4):1019–1028.

Goldstein, K. and Freedman, P. (2002). Campaign advertising and voter turnout: New evidence for a stimulation effect. *Journal of Politics*, 64(3):721–740.

Gordon, B. R. and Hartmann, W. R. (2013). Advertising effects in presidential elections. *Marketing Science*, 32(1):19–35.

Grossman, G. M. and Helpman, E. (1996). Electoral Competition and Special Interest Politics. *The Review of Economic Studies*, 63(2):265–286.

Harbaugh, W. T. (1998). What do donations buy?: A model of philanthropy based on prestige and warm glow. *Journal of Public Economics*, 67(2):269–284.

Hastings, J. S. and Shapiro, J. M. (2013). Fungibility and consumer choice: Evidence from commodity price shocks. *The Quarterly Journal of Economics*, 128(4):1449–1498.

Hill, S. J., Lo, J., Vavreck, L., and Zaller, J. (2013). How quickly we forget: The duration of persuasion effects from mass communication. *Political Communication*, 30(4):521–547.

Jenni, K. and Loewenstein, G. (1997). Explaining the identifiable victim effect. *Journal of Risk and Uncertainty*, 14(3):235–257.

Karlan, D., Morten, M., and Zinman, J. (2012). A personal touch: Text messaging for loan repayment. Technical report, National Bureau of Economic Research.

Kogut, T. and Ritov, I. (2005). The "identified victim" effect: An identified group, or just a single individual? *Journal of Behavioral Decision Making*, 18(3):157–167.

Landry, C. E., Lange, A., List, J. A., Price, M. K., and Rupp, N. G. (2006). Toward an understanding of the economics of charity: Evidence from a field experiment. *The Quarterly Journal of Economics*, 121(2):747–782.

List, J. A. and Lucking-Reiley, D. (2002). The effects of seed money and refunds on charitable giving: Experimental evidence from a university capital campaign. *Journal of Political Economy*, 110(1):215–233.

Liu, W. and Aaker, J. (2008). The happiness of giving: The time-ask effect. *Journal of Consumer Research*, 35(3):543–557.

Mian, A., Sufi, A., and Trebbi, F. (2010). The political economy of the us mortgage default crisis. *American Economic Review*, 100(5):1967–98.

Montano-Campos, F. and Perez-Truglia, R. (2019). Giving to charity to signal smarts: evidence from a lab experiment. *Journal of behavioral and experimental economics*, 78:193–199.

Ottoni-Wilhelm, M., Vesterlund, L., and Xie, H. (2017). Why do people give? testing pure and

impure altruism. *American Economic Review*, 107(11):3617–33.

Petrova, M., Simonov, A., and Jr., J. S. (2019). The effect of citizen united on u.s. state and federal elections. Technical report.

Rooney, P. (2018). American generosity after disasters: 4 questions answered. Technical report.

Shang, J. and Croson, R. (2006). The impact of social comparisons on nonprofit fund raising. In *Experiments investigating fundraising and charitable contributors*, pages 143–156. Emerald Group Publishing Limited.

Shapiro, B. T. (2018). Positive spillovers and free riding in advertising of prescription pharmaceuticals: The case of antidepressants. *Journal of Political Economy*, 126(1):381–437.

Small, D. A., Loewenstein, G., and Slovic, P. (2007). Sympathy and callousness: The impact of deliberative thought on donations to identifiable and statistical victims. *Organizational Behavior and Human Decision Processes*, 102(2):143–153.

Small, D. A. and Simonsohn, U. (2007). Friends of victims: Personal experience and prosocial behavior. *Journal of Consumer Research*, 35(3):532–542.

Snyder Jr, J. M. (1990). Campaign contributions as investments: The US House of Representatives, 1980-1986. *Journal of Political Economy*, 98(6):1195–1227.

Snyder Jr, J. M. (1992). Long-term investing in politicians; or, give early, give often. *The Journal of Law and Economics*, 35(1):15–43.

Spenkuch, J. L. and Toniatti, D. (2018). Political advertising and election results. *The Quarterly Journal of Economics*.

Thaler, R. (1985). Mental accounting and consumer choice. *Marketing science*, 4(3):199–214.

Thaler, R. H. (1999). Mental accounting matters. *Journal of Behavioral Decision Making*, 12(3):183–206.

Tullock, G. (1972). The purchase of politicians. *Western Economic Journal*, 10(3):354–55.

Urban, C. and Niebler, S. (2014). Dollars on the sidewalk: Should U.S. presidential candidates advertise in uncontested states? *American Journal of Political Science*, 58(2):322–336.

Wang, Y., Lewis, M., and Schweidel, D. A. (2018). A border strategy analysis of ad source and message tone in senatorial campaigns. *Marketing Science*, 37(3):333–355.

Yörük, B. K. (2015). Do charitable subsidies crowd out political giving? the missing link between charitable and political contributions. *The BE Journal of Economic Analysis & Policy*, 15(1):407–435.

Figure 1: *Disasters from the first week of 2000 to the last week of 2011.*
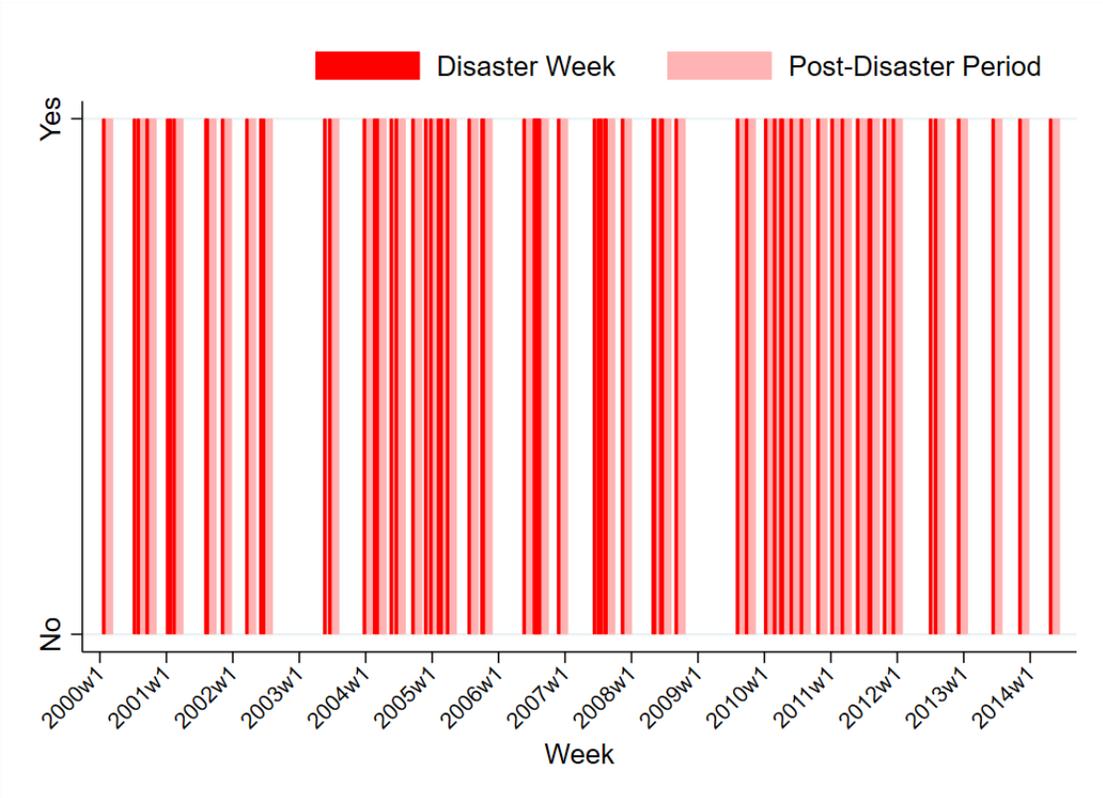
Table 1: Disaster Information Shocks and Charitable Contributions

	(1)	(2)	(3)	(4)	(5)	(6)
	Aggregate Charitable Contributions					
$I^{(+0/+6)}$	0.284***	0.271***	0.302***	0.228***	0.237***	0.246***
	(0.0868)	(0.0903)	(0.0908)	(0.0515)	(0.0535)	(0.0541)
$I^{(-2/-1)}$		-0.0985	-0.0730		0.106	0.115
		(0.125)	(0.124)		(0.0802)	(0.0798)
$I^{(+7/+8)}$			0.219*			0.0627
			(0.117)			(0.0652)
Observations	740,280	740,280	740,280	205,976	205,976	205,976
R-squared	0.474	0.474	0.475	0.432	0.433	0.433
County FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Month FE	Yes	Yes	Yes	Yes	Yes	Yes
Mailing Controls	Yes	Yes	Yes	Yes	Yes	Yes
Donations	All	All	All	Nonzero	Nonzero	Nonzero

Notes: * significant at the 10% level, ** at the 5% level, *** at the 1% level. Heteroscedasticity-robust standard errors, adjusted for clusters by state and week, in brackets. The dependent variable is aggregate Red Cross donations in a given county and week, transformed with inverse hyperbolic sine transformation ($y = log\left(x + (x^2 + 1)^{1/2}\right)$). Columns 1-3 include all observations, while columns 4-6 include only observations with non zero values of the dependent variable. Mailing controls include log of the numbers of mailings sent by Red Cross in the 3 months preceding donation. There are no observations with zero preceding mailings in the sample. The time period in 2006-2011. $I^{(+0/+6)}$ is a dummy, which equals 1 for the week of disaster and 6 weeks after that. $I^{(+7/+8)}$ is a dummy, which equals 1 for weeks 7 and 8 after the disaster, to allow for delayed effects. $I^{(-2/-1)}$ is a dummy, which equals 1 for weeks 1 and 2 preceding the disaster, to check for (placebo) anticipation effects.

Table 2: Disaster Information Shocks and Political Contributions

	(1)	(2)	(3)	(4)	(5)	(6)
			Aggregate Political Contributions			
$I^{(+0/+6)}$	-0.0375**	-0.0385**	-0.0363*	-0.0383**	-0.0396**	-0.0376**
	(0.0186)	(0.0188)	(0.0190)	(0.0183)	(0.0185)	(0.0187)
$I^{(-2/-1)}$		-0.0138	-0.0114		-0.0180	-0.0159
		(0.0226)	(0.0226)		(0.0223)	(0.0223)
$I^{(+7/+8)}$			0.0254			0.0225
			(0.0225)			(0.0223)
Observations	1,010,109	1,010,109	1,010,109	1,009,198	1,009,198	1,009,198
R-squared	0.653	0.653	0.653	0.662	0.662	0.662
County FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Month FE	Yes	Yes	Yes	Yes	Yes	Yes
Mailing Controls	Yes	Yes	Yes	Yes	Yes	Yes
Donations	All	All	All	Nonzero	Nonzero	Nonzero

Notes: * significant at the 10% level, ** at the 5% level, *** at the 1% level. Heteroscedasticity-robust standard errors, adjusted for clusters by state and week, in brackets. The dependent variable is aggregate political donations to Congressional and Presidential candidates in a given county and week from Federal Election Commission, transformed with inverse hyperbolic sine transformation ($y = log\left(x + (x^2 + 1)^{1/2}\right)$). Columns 1-3 include all observations, while columns 4-6 include only observations with non zero values of the dependent variable. The time period in 2006-2011. $I^{(+0/+6)}$ is a dummy, which equals 1 for the week of disaster and 6 weeks after that. $I^{(+7/+8)}$ is a dummy, which equals 1 for weeks 7 and 8 after the disaster, to allow for delayed effects. $I^{(-2/-1)}$ is a dummy, which equals 1 for weeks 1 and 2 preceding the disaster, to check for (placebo) anticipation effects.

Table 3: Disaster Information Shocks and Retail Expenditures

	(1)	(2)	(3)
	Log(Aggregate Retail Expenses)		
$I^{(+0/+6)}$	0.00798*	0.00838*	0.00701
	(0.00468)	(0.00473)	(0.00478)
$I^{I(-2/-1)}$		0.00332	0.00217
		(0.00580)	(0.00585)
$I^{(+7/+8)}$			-0.00966*
			(0.00526)
Observations	645,768	645,768	645,768
R-squared	0.844	0.844	0.844
County FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Month FE	Yes	Yes	Yes
Expenses	All	All	All

Notes: * significant at the 10% level, ** at the 5% level, *** at the 1% level. Heteroscedasticity-robust standard errors, adjusted for clusters by week, in brackets. The dependent variable is aggregate retail expenses in a given county and week from Nielsen, transformed with inverse hyperbolic sine transformation. $I^{(+0/+6)}$ is a dummy, which equals 1 for the week of disaster and 6 weeks after that. $I^{(+7/+8)}$ is a dummy, which equals 1 for weeks 7 and 8 after the disaster, to allow for delayed effects. $I^{(-2/-1)}$ is a dummy, which equals 1 for weeks 1 and 2 preceding the disaster, to check for (placebo) anticipation effects. $(y = log\left(x + (x^2 + 1)^{1/2}\right))$.

Table 4: Political Ads, Donations, and Nielsen Retail Expenditures

	(1) Political	(2) Political	(3) Charitable	(4) Charitable	(5) Retail	(6) Retail
$\Delta(D_{pc,t}^{+0/+1})$	0.0922***	0.0907***	-0.00733**	-0.00779***	0.000581	0.000625
	(0.00961)	(0.00972)	(0.00302)	(0.00301)	(0.00139)	(0.00131)
$\Delta(D_{pc,t}^{-1})$		0.0125		0.00148		-0.000221
		(0.00745)		(0.00251)		(0.000663)
Observations	7,075	7,075	19,690	19,690	20,037	20,037
R-squared	0.876	0.876	0.589	0.589	0.448	0.448
County Pair FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Month FE	Yes	Yes	Yes	Yes	Yes	Yes
RC Mailing Controls	No	No	Yes	Yes	No	No

Notes: * significant at the 10% level, ** at the 5% level, *** at the 1% level. Heteroscedasticity-robust standard errors, adjusted for clusters by state, in brackets. The results for political donations (columns 1 and 2) are estimated for the set of counties within the same congressional district, but located on different sides of corresponding DMA border. The dependent variable is the difference in aggregate political donations from FEC, charitable donations from RC, and retail expenses from Nielsen between two counties across the border in the same week, transformed with inverse hyperbolic sine transformation ($y = log\left(x + (x^2 + 1)^{1/2}\right)$). Independent variable is the difference in aggregate political ads expenditures across the border in the same week, transformed with inverse hyperbolic sine transformation ($y = log\left(x + (x^2 + 1)^{1/2}\right)$). The exact specification run is $\Delta Y_{pc,t} = \alpha_1 \Delta(D_{pc,t}^{+0/+1}) + \alpha_2 \Delta(D_{pc,t}^{-1}) + \theta \Delta \mathbf{X}_{pc} + \epsilon_{pc,t}$ with both differences taken for variables, transformed with inverse hyperbolic sine transformation.