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## Special interest groups versus voters and the political economics of attention

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# Special Interest Groups Versus Voters and the Political Economics of Attention

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## Abstract

We investigate whether US House representatives favour special interest groups over constituents in periods of low media attention to politics. Analysing 666 roll calls from 2005 to 2018, we show that representatives are more likely to vote against their constituency's preferred position the more special interest money they receive from groups favouring the opposite position. The latter effect is significantly larger when less attention is paid to politics due to distraction by exogenous newsworthy events like natural disasters. The effect is mostly driven by short-term opportunistic behaviour than the short-term scheduling of controversial votes into periods with high news pressure.

**Keywords:** Attention, campaign finance, interest groups, legislative voting, mass media, roll call voting, US House of Representatives

**JEL classifications:** D72, L82, L86

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# 1 Introduction

In democracies, representatives who want to be re-elected have to convince their constituencies to vote for them. In such a system, electoral support depends on the extent to which voters perceive representatives to support legislative bills in line with their preferences, as well as on persuasive campaigning, which is largely funded by special interest groups rather than by constituents. These groups, in turn, contribute more if a representative votes according to their wishes. In this intuitive framework – conceptualised by [Kau et al. \(1982\)](#) – a conflict of interest can emerge. If, for a particular policy issue, special interests and the electorate’s interests are not aligned, the representative faces a trade-off between serving the electorate and following the wishes of special interests.<sup>1</sup>

In this paper, we study the fundamental role that media attention plays in this trade-off. Most importantly, voters rely on media outlets as intermediaries for political information, while wealthy special interest groups are generally well informed about the representatives’ actions in office. Accordingly, media attention to politics is expected to crucially affect whether representatives are rather aligned with their constituency’s interests or the preferences of special interest groups when the two are in conflict. The implied strategic calculus has been noted in interviews with former congressmen. For example, Representative Vin Weber (R-MN, 1995) reports that *“If nobody else cares about it very much, the special interest will get its way. [...] If the company or interest group is (a) supportive of you, (b) vitally concerned about an issue that, (c) nobody else in your district knows about or ever will know about, then the political calculus is quite simple.”* ([Schram, 1995](#), p. 4).

Following this notion, we hypothesise that a representative is more likely to support a bill that goes against his or her voters’ interests but is favoured by special interests (that financially contribute to his or her campaign) at times of low media attention to the legislative process. In addition, times of low media attention might be strategically used by majority leaders for short-term changes in the agenda in order to vote on bills with high conflict potential so as to minimise reputational damage. To approach these hypotheses empirically, we first need to measure the electorate’s *as well as* special interest groups’ preferences regarding particular issues across a broad array of policy domains. Having both of these measures is crucial, as it is far from clear that voting in line with special interests simultaneously means voting against the constituents’ interests.<sup>2</sup> For example, representatives might want to generally avoid being perceived as receptive to special interest group money (and rather support their campaign donors during periods of limited media attention). There might also be some logrolling or voting against the party line on these occasions, however, not going against their constituents’ interests. In our empirical investigation focusing on voting decisions in the US House of Representatives, we address this challenge and are able to approximate constituents’ preferences in the context of a specific vote cast by a specific representative. By combining data from individual campaign donor records and information on policy

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<sup>1</sup>We use the terms *interest groups*, *organised interests* and *special interests/special interest groups* interchangeably.

<sup>2</sup>An example of a bill where the preferences of the general public and special interest groups are overwhelmingly aligned is the *American Manufacturing Competitiveness Act of 2016*, a bill aimed at reducing tariffs on imported inputs or raw materials that are not available in the United States. The bill has been publicly supported by a wide range of manufacturing industries and has received bipartisan support. As for our measures of special interest group and constituency preferences, of the 417 representatives who voted on the final passage of the bill, the average received \$86,000 in campaign contributions from groups supporting the bill (over the last two-year election cycle) and faced 126 individual donors from his or her constituency affiliated with groups supporting the bill.

positions on particular bills, we construct a measure of *'Alignment'*. The measure captures whether a particular representative voted in line with the dominant policy preference in his or her district in a particular roll call vote.<sup>3</sup> While actively donating citizens form a rather small and comparatively wealthy fraction of the general voting age population, we document that our measure approximates well specific policy positions of the general voting age population. We show (at the level of individual bills) that our measure for voter preferences is strongly correlated with voters' policy preferences revealed in ballot measures (for the case of popular votes in California) as well as with voters' policy preferences expressed in election surveys (across the US).

Similarly, we define a representative-vote-specific measure of special interest group pressure that reflects the amount of campaign money a representative receives during the election cycle prior to a given vote from groups that oppose the position of the constituency (likewise, our empirical specification takes into account the amount of money received from groups that are in line with the constituency position). Importantly, we are neither assuming nor testing a particular model of strategic campaign donations but think of campaign contributions by interest groups primarily as reflecting long-term exchange relationships between interest groups and some individual representative, approximating special interest group pressure.<sup>4</sup> In that sense, our interpretation of campaign finance donations is in line with the one emphasising the *'influence motive'* of campaign contributions by interest groups.

Second, to test the attention hypothesis, we exploit that media outlets in a competitive market need to assess the *'newsworthiness'* of political information vis-à-vis non-political information, as resources for coverage and broadcasting time are limited. Accordingly, the extended coverage of non-political events or issues crowds out political coverage. Moreover, it induces variation in media attention to the legislative process that is independent of what is currently being debated in the legislature. The validity of exploiting exogenous variation in media attention due to newsworthy *'distracting'* events is well established in the literature (see, in particular, [Eisensee and Strömberg, 2007](#); [Garz and Sörensen, 2017](#); [Durante and Zhuravskaya, 2018](#); [Kaplan et al., 2018](#); [Djourelouva and Durante, 2022](#)).<sup>5</sup> This *'crowding out'* of news content due to distracting events points to media attention as a strategic factor that political agents bear in mind when they make their decisions. For example, the most recent contribution in this area by [Djourelouva and Durante \(2022\)](#) considers the case of unpopular executive orders by the US president, which are demonstrably more likely to be issued on days before predictable and newsworthy US events take place (that are likely to crowd out political coverage). So far only one contribution in the related literature (i.e., [Matter and Stutzer, 2019](#)) has addressed the issue of special interest group pressure in the context of low media attention.

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<sup>3</sup>More precisely, we can observe how many actively donating citizens with ties to groups that either favour or oppose specific pieces of legislation live in a representative's constituency. For example, if a bill intended to increase the production of energy from renewables comes to the vote, our measure largely reflects the share of the donating population in a representative's district that is employed in the alternative energy sector or supports environmental protection groups minus the share of donating citizens working for traditional energy producers.

<sup>4</sup>This view is consistent with the notion that donations serve as a potential channel of access that provides opportunities for further lobbying activities. Access-oriented campaign donations are analysed, for example, in [Hall and Wayman \(1990\)](#), [Austen-Smith \(1995\)](#), [Kalla and Broockman \(2016\)](#), and [Fouirnaies and Hall \(2018\)](#). [Snyder \(1992\)](#) and [Kroszner and Stratmann \(1998, 2005\)](#) emphasise the long-term motives in political giving.

<sup>5</sup>We discuss this literature in more detail below.

Taken together, for a given US representative, we know i) whether he or she voted in line or against the position of his or her constituency when deciding on a particular bill, ii) the amount of special interest money he or she received that is directed contra or pro the constituency position, and, finally, iii) whether the vote was cast under low or high attention to politics.

Overall, our unique data set includes information on the individual-level representation of voters vs. special interests for 666 roll call votes on 662 different bills between 2005 and 2018 in the US House of Representatives, providing us with a baseline sample of more than 217,000 observations.

Using this data set, we first focus on representatives' individual voting decisions in general before examining the mechanisms of short-term opportunism by representatives and short-term changes to the agenda by majority leaders. We test our main hypothesis by regressing the measure of alignment with constituents on special interest groups' pressure to decide against them, taking into account whether the roll call falls on a day with limited attention to politics. Thus, we compare representatives' responsiveness to the interests of their constituents in a situation of *exogenously low media attention on politics* with the choices made by the same representatives under the commonly experienced media attention to politics. Specifically, we exploit exogenous variation in the amount of news coverage given to the US lawmaking process that is driven by natural and technological disasters, terrorist attacks, and mass shootings. We validate this strategy by analysing coverage of these distracting events and of national politics in both local television and local newspapers across the US. As expected, reports on national politics are crowded out by distracting events, while coverage of the events in question increases.

Two main findings emerge from our core analyses. First, more special interest money directed against the position of the constituency is associated with representatives showing lower levels of alignment with their constituents' preferences. Second, given the occurrence of a shock that causes high levels of news pressure, special interest group pressure (approximated by donations) is associated with roll call votes being even less frequently aligned with the constituents' preferences. Regarding the first coefficient estimate, one standard deviation more (about \$11,000) in donations from special interests that oppose the majority position of the constituency (donated over the last two-year election cycle) is associated with an 8.3 percentage point increase in clearly misaligned votes (with a baseline percentage of aligned votes being 74.1%). As for the effect under high news pressure, i.e., in a period marked by a serious shock event (such as on a day when a serious natural disaster strikes the US), the same special interest money actually translates into a 20.8 percentage point increase in clearly misaligned votes, i.e., the effect of the exogenous variation in attention amounts to 12.5 percentage points. In line with our theoretical reasoning, we do not discern a differential correlation between representatives' voting behaviour and the money they receive from special interest groups that share the position of the constituency. Shock news pressure only mediates the effect of special interest money that is directed against constituents' preferences.

The two central findings are robust to various sensitivity checks. First, we show that alternative definitions for both the dependent alignment variable and the measure of special interest group pressure do not change our main results qualitatively, and they also remain quantitatively comparable. Second, given the binary nature of the dependent variable, we also estimate a logit model (vs. OLS used in our

baseline estimates), yielding fully consistent results. Third, we perform a placebo test in which we randomly assign legislative votes to shock treatment groups. The results suggest that our main findings are very unlikely to occur just by chance.

In order to better understand the mechanisms behind our main finding, we extend our analysis in two directions. First, based on two alternative tests, we provide evidence that part of the voting pattern is driven by systematic short-term agenda-setting by the majority party in the wake of shock events. For bills decided under high news pressure caused by a shock, we find significantly more representatives of the majority party facing a constituency that opposes the bill but special interest groups that support it. Moreover, we find that those bills scheduled for consideration by the majority party in the wake of shocks are more likely to reach their final passage vote on the same day than bills whose consideration was initiated on non-shock days. Consistent with theoretical considerations, these results hold only during periods of divided government, when the passage of conflicting bills is more likely to damage the reputation of the majority party. For votes that are likely not affected by agenda-setting considerations, attention diversion is associated with short-term opportunistic effects of similar magnitude as estimated overall.

Second, in an exploratory analysis, we perform sample splits and estimate our baseline model respectively for i) representatives running for re-election vs. those retiring, ii) representatives from competitive districts vs. those with rather safe seats, iii) roll call votes taken in election vs. non-election years, and iv) Democrats versus Republicans. The findings reveal a less pronounced negative correlation between money contra the constituency and misalignment in competitive districts, compared to districts with relatively safe seats. However, the estimated effect under news pressure does not show a statistically significant difference. Furthermore, the negative baseline association for money against the constituency position is smaller for Democrats than Republicans (while the point estimate for the effect under news pressure is much larger for Democrats than Republicans, though not statistically significantly so).

The remainder of this paper is organised as follows. In Section 2, we give a detailed account of the literature to which we contribute. Section 3 introduces the data sources, describes the coding of our main variables, and explains the choice of distracting shock events as indicators for reduced media attention to politics. In Section 4, we introduce the econometric model, including the description of the control strategy, and present the main results. Robustness checks are provided in Section 5. Sections 6 and 7 present the two extensions on agenda setting by majority leaders and incentives due to electoral and partisan constraints. Finally, we offer concluding remarks in Section 8.

## 2 Literature

Our findings contribute to the literature on the role of campaign contributions in representatives' policy decisions. Important theoretical considerations are discussed in [Kau et al. \(1982\)](#) and [Grossman and Helpman \(1994\)](#). Empirical evidence for a positive relationship between campaign donations and legislative voting in line with donor interests is provided by many studies (see, e.g., [Wilhite and Theilmann, 1987](#); [Langbein and Lotwis, 1990](#); [Stratmann, 1991, 1995, 2002](#); [Fellowes and Wolf, 2004](#); [Mian et al., 2010](#)) – but not by all (see, e.g., [Wright, 1985](#); [Grenzke, 1989](#); [Bronars and Lott, 1997](#);

Wawro, 2001).<sup>6</sup> While together, these contributions cover special interests' influence through campaign contributions on various issues, each study individually is rather selective as to what particular bills and interest groups it focuses on. This is due to the difficulty of measuring interest groups' and voters' preferences on a large number of diverse bills simultaneously. We rise to this challenge and propose a new way of measuring these preferences, allowing us to take into consideration a wide range of bills from many policy areas simultaneously.<sup>7</sup> A prominent question in this literature is whether and to what extent donations actually change the positions of representatives (based on an 'influence motive') or whether given positions attract donations (based on an 'electoral motive'). Our analysis does not aim at addressing this long-standing identification issue and at coming up with an assessment of the relative importance of the two motives (and we also abstain from interpreting the correlation between campaign contributions and voting behaviour in this respect). Instead, we assume long-term exchange relationships between politicians and interest groups, which we approximate through campaign funds, and test for a specific aspect of the influence motive in terms of short-term opportunistic behaviour in favour of campaign donors (due to exogenous variation in the attention to politics). On a more general level, our results can also be interpreted in the light of the seminal work by Gilens (2012) and Gilens and Page (2014). Their findings inter alia suggest that whenever the policy preferences of well-funded small interest groups conflict with the preferences of the public at large, the positions of the former tend to prevail in policy making. While Gilens and Page look at the implementation of policies overall (which might involve executive as well as legislative decisions), we provide evidence for a mechanism in the legislative process that can at least in part explain the larger picture they draw.

Our study importantly complements previous work that examines the interaction between interest groups' influence through campaign money and attention to politics (e.g., Schroedel, 1986; Jones and Keiser, 1987; Neustadt, 1990; Witko, 2006; Matter and Stutzer, 2019).<sup>8</sup> For specific issues, these studies provide evidence that media attention shapes the role of financial campaign support provided by special interest groups in representatives' policy decisions, conditional on high or low attention to precisely the bills under consideration. In contrast, our study covers a wide range of different policy issues and exploits exogenous variation in media attention to Congress. Hence, our results do not suffer from a potential selection bias, as our treatment, low attention to politics due to distracting newsworthy events, is independent of the bills under consideration. In concurrent independent research, Kaplan et al. (2018) investigate the influence of natural disasters on the likelihood that House representatives will vote with special interests. Their main finding is that the influence of special interest donors on post-disaster voting increases statistically significantly. Like us, they use MapLight data on the positions of interest groups regarding certain bills and campaign contributions to representatives in order to generate a measure for special interest group pressure with regard to specific legislative bills. In contrast to our approach,

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<sup>6</sup>Stratmann (2005) as well as Ansolabehere et al. (2003) provide excellent reviews of the literature, though they come to opposite overall conclusions regarding the general effectiveness of money in affecting policy outcomes. While Ansolabehere et al. (2003) emphasise that donations can, to a large extent, be understood as consumption of some expressive value, Stratmann (2005) focuses on money from special interest groups effectively affecting representatives' voting behaviour.

<sup>7</sup>In fact, our data set contains the universe of non-amended bills in the US House between 2005 and 2018 on which at least one roll call on final passage took place and for which at least one organisation publicly announced opposition or support (i.e., bills for which we can reliably construct preferences of voters and special interest donors).

<sup>8</sup>This literature does, in part, refer to different terms for what we here call 'media attention' or 'attention'. Among these, 'visibility' or 'salience' are the terms most often used.



however, they leave it open whether the special interest group position is in conflict with that of a representative's constituents. A key difference to our contribution thus arises as we explicitly model the (bill-specific) preferences of voters living in the constituency of the representatives in order to distinguish the latter from the preferences of the special interest groups providing campaign contributions to the representatives.

Further, our findings are important for the emerging literature that sheds light on the interaction between media markets and political markets. Contributions to this literature have documented how media access and news reporting influence government responsiveness and accountability, redistributive spending, and voter turnout (e.g., [Besley et al., 2002](#); [Besley and Burgess, 2002](#); [Strömberg, 2004](#); [Oberholzer-Gee and Waldfogel, 2009](#); [Snyder and Strömberg, 2010](#); [Gentzkow et al., 2011](#); [Enikolopov et al., 2011](#)). These studies therefore crucially contribute to our understanding of the media's role as the 'fourth power'. In this context, our contribution stresses a potential systemic problem of the fourth power based on free media markets, when the role of money in politics and media attention is inherently interdependent. That is, media outlets' competition for the audience's attention (with the necessary focus on newsworthy events) might give special interest groups more influence over legislative politics at the expense of voters.

More specifically, we draw on variation in attention to politics as opposed to other topics, namely exogenous news shocks. This strategy has been pioneered in the work of [Eisensee and Strömberg \(2007\)](#) on the US government's foreign aid decisions in response to natural disasters. Adopting an instrumental variable strategy based on a compiled measure of general news pressure (the measure that we use to select periods of low media attention to politics due to exogenous shocks), they show that a country is more likely to receive financial support if the disaster is covered by the US evening news. The idea for identification has been taken up in subsequent research. [Garz and Sörensen \(2017\)](#) find that politicians resign with a higher probability after their political immunity is lifted if their cases receive more exogenously determined media attention, and [Durante and Zhuravskaya \(2018\)](#) show that Israeli military attacks against Palestinians are more likely to occur one day before anticipated newsworthy US events take place. In a similar vein, [Djourelouva and Durante \(2022\)](#) show that unpopular US presidential executive orders are signed in a strategic manner at times before other newsworthy and predictable events take place. In this strategy, the behaviour is only observed for periods of divided government when negative publicity due to congressional opposition is likely.

### **3 Data and coding of main variables**

In this section, we outline how we compile our data set and how we define our main variables (alignment with voter preferences in roll call voting, special interest group pressure, and distracting shock events). Overall, our data set covers the period 2005 to 2018 (109th to 115th Congress) and consists of 217,181 individual voting decisions taken in 666 roll call votes on 662 different bills. This selection corresponds to all final passage votes on (non-amended) bills for which MapLight has collected bill positions.<sup>9</sup>

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<sup>9</sup>Four bills from our sample were voted on twice (resulting in 666 votes in total) since the bills did not receive the required majority in the first run but were then voted on again at a later point in time (without amendments in between).

## Measuring alignment with constituents' preferences

Our dependent variable, denoted as *Alignment*, indicates whether a particular representative followed the majority preference of his or her constituency when voting on a particular bill (based on roll call data).<sup>10</sup> We approximate the preferences of constituents as follows.

In a first step, we approximate the fraction of citizens in an electoral district who are either negatively or positively affected by a particular bill by linking individual donor records provided by OpenSecrets to information on the bill positions of industries and associations provided by MapLight. The related Sections A.1/A.2 in the Online Appendix provide detailed information on data access and specifics about the data compilation, Section A.3 offers a detailed account of the measure construction. Building on the raw Federal Election Commission (FEC) records, OpenSecrets assigns an interest group code to each single transaction (industry, union, or ideological/single-issue group), identifying the donor's interest with which the donation was made. Group assignment is based on the donor's employer or the Political Action Committee (PAC) (union / ideological / single-issue group) to which he or she donates. If the contribution is to a party or to a PAC that his or her employer is associated with (usually corporations and trade associations), group assignment is based on the donor's employer. Similarly, in the case of a contribution to a super PAC, the employer's group code is assigned to the donor. If an individual contributes to a union PAC or to an ideological and/or single-issue PAC (e.g., environmental protection, human rights, or gun control), OpenSecrets assigns their corresponding group code. If a citizen contributes to a political candidate, either the employer's group code or, if the donation is identified as ideologically motivated, the corresponding ideological group code is assigned. OpenSecrets codes a single transaction to a candidate as ideological if the donor also donates to an ideological PAC, and the candidate also receives funds from the same or similar ideological groups. If, for example, a citizen employed in the alternative energy sector donates to his or her employer's PAC, OpenSecrets assigns the industry/group code E1500 (*Alternative Energy Production & Services*).<sup>11</sup> Based on OpenSecrets, we assume that individual donors and assigned interest groups share the same political interests. Since MapLight uses the same group categorization for their bill position data, we can directly link individual donors in a constituency to their preferences for specific bills (either support or oppose). If the above-mentioned producer of alternative energy adopts a clear position in favour of a particular bill (and this is considered by MapLight to be representative of the interest group *Alternative Energy Production & Services*), we code individual donors assigned to that interest group by OpenSecrets as having preferences for the corresponding bill.<sup>12</sup> For each representative  $i$  deciding on a particular bill in vote  $j$ , we count the number of individual donors in the representative's constituency who are (according to the measure

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<sup>10</sup>The data on roll call voting decisions originates from Congress.gov and was sourced from GovTrack (2023a).

<sup>11</sup>For further details on OpenSecrets methodology, see <https://www.opensecrets.org/industries/methodology.php>. Regarding OpenSecrets' interest group categorisation scheme, see [https://www.opensecrets.org/downloads/crp/crp\\_Categories.txt](https://www.opensecrets.org/downloads/crp/crp_Categories.txt).

<sup>12</sup>For some bills, we observe contrasting positions taken by organisations associated with the same group. If this is the case, we calculate the share of supporting organisations among the total number of organisations supporting or opposing the bill (i.e., a bill support index), and distribute the individual donors according to this weight. As the industry codes in our data set are rather highly granular (the financial sector alone is split into 36 distinct groups/sub-sectors), this potential caveat concerns only a very small fraction of our observations. In more than 98% of the interest group-bill combinations, the organisations within an interest group share the same position. Figure A1(b) in the Online Appendix shows how different sectors are represented in our constituent interests measure.

outlined above) in favour of (or, respectively, against) the bill.<sup>13</sup> We then divide the number of donors in favour of a bill by the total number of donors for or against the bill. This way, we arrive at the percentages of (actively donating) citizens in representative  $i$ 's constituency who support (oppose) the bill presented in vote  $j$ . In each case, we take into account all donations made in the election cycle before the bill came up for a vote.<sup>14</sup> Finally, we code a representative's vote as one where his or her vote is politically aligned (misaligned) with that of the constituency if more than 62.5% (less than 37.5%) of his or her voters hold the same position regarding the bill. In the main analysis, we exclude all other cases from the analysis, i.e., when the difference in the share of donors for and against the bill is less than 25 percentage points (62.5% – 37.5%).<sup>15</sup> We thus code those cases where we can presumably say that a representative's decision was either aligned or misaligned with the majority preference in the constituency.<sup>16</sup> If representatives decide aligned with their constituents' preferences,  $Alignment_{ij}$  from our model equation (1) introduced below takes the value 100 (and 0 for misaligned decisions). The coefficients estimated with OLS can thus be interpreted as percentage point changes in the probability of voting aligned with the constituency. Following this approach, we document that 74.1% of all individual roll call votes in our sample were taken with the majority preference of the electorate, and 25.9% were taken against the majority. Overall, these cases are restricted to the subset of final passage votes on (non-amended) bills for which MapLight provides interest group positions (excluding votes on amendments, committee reports, and procedural issues related to these bills).<sup>17</sup> Regarding our selection of 666 votes in the House of Representatives, we cover 13,952 documented positions taken by 4,633 organisations assigned to 389 different interest group codes. On average, for a single bill in our sample,

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<sup>13</sup>Importantly, we consider *all* individual donors donating to *any* campaign committee, not only those donating to the local House representative. The large majority of donations by individual donors, overall, is not addressed to the corresponding local House Representative or House candidate but to candidates/officials in other offices (particularly presidential candidates) or to (super) PACs. See Appendix A.3 for a detailed summary.

<sup>14</sup>Regarding multiple donations from the same donor in a given election cycle, we count each donor only once. An exception is situations where donors donate to different groups that have positions on different bills. In the latter cases, we consider the donor's preference regarding any bills on which groups he or she is assigned to take positions. One might also argue that donors who donate more should be given a higher weight in the resulting preference measure. We, therefore, considered a specification where we weigh each donor by the amount donated. The resulting estimates are shown in column (3) in robustness Table 4.

<sup>15</sup>In Figure 2 in Section 5, we show the estimation results when applying other possible thresholds in the share of donors for and against a bill to define the alignment indicator. In preview of the results, we document that the moderating effect of shock news pressure is more pronounced the more homogeneous constituents' preferences are. Indeed, if voters have heterogeneous preferences, we cannot reject the hypothesis that the partial correlation for special interest money directed against the constituency's position is the same under shock news pressure as it is under regular levels of attention.

<sup>16</sup>For a threshold of 25 percentage points in voters' homogeneity in bill positions, the indicator for alignment is defined for 78.8% of all available roll call votes.

<sup>17</sup>MapLight generally selects bills "that move forward in Congress or that are mentioned in the news or blogs. [MapLight does] not research support/opposition for ceremonial bills (such as naming post offices)." (see <https://web.archive.org/web/20190329105358/http://classic.maplight.org/us-congress/guide/data/support-opposition>). MapLight collects organisations' policy positions on bills and does not assess their preferences with regard to single amendments to these bills. Note, however, that previous studies on special interest politics in the US House have pointed to the importance of bill amendments for special interests in passing their favourite policies (see, e.g., Stratmann, 1992). Our theoretical framework does not distinguish between votes on amendments and final passage votes and would suggest the same rationale for representatives in a conflict of interest in either situation. If it is indeed the case that long-term exchange relationships with special interest groups have the most influence on representatives' voting on amendments, our findings based on final passage votes will underestimate the magnitude of the phenomenon.

we observe about 21 organisations that take a stand, belonging to ten different interest groups. About 79% of the interest group positions were recorded by MapLight at least one day before the corresponding bills were voted on, with a median position quoted three days before the vote.<sup>18</sup>

The advantages of our approach and the resulting measure of citizens' preferences lie in the general applicability across policy issues. With the same approach, we can gather information on individual donors linked to different kinds of groups such as corporations, business associations, unions, non-profits, single-issue or ideological groups. Moreover, the measure approximates the degree to which citizens are affected with regard to specific legislative proposals, reflecting preference intensities. People who care about politics (and who are not close to being indifferent) are the likely donors. Importantly, political giving is positively correlated not only with turnout but also with volunteer campaign activities (Buchanan and Bird, 1966). Accordingly, our variable for constituent interests captures the subset of citizens who potentially generate a large proportion of the electoral pressure representatives face.

Bearing in mind that our approach to approximate bill-specific voter preferences is a new one, we check its validity in various ways. We use i) California ballot proposition votes, ii) survey data from the Cooperative Congressional Election Study (CCES), as well as iii) official employment figures at the county/industry level to contrast the preference measures obtained therein with those from our approach. All three analyses show the same picture: our measure of voter preferences based on individual campaign contribution data shows a high correlation with citizens' policy preference measures commonly used in the literature (see, in particular, Tables B1 and B2 in the Online Appendix B).

### Measuring special interest group pressure

Our main explanatory variable measures the extent to which single representatives face pressure from special interest donors to vote against the preferred position of their constituency. In order to code this representative-vote-specific variable of special interest group pressure, we again rely on OpenSecrets and MapLight data. Drawing on MapLight's bill position data, we interpret special interest groups' campaign contributions directed to individual representatives as pressure to vote for their preferred position. Specifically, we aggregate campaign contributions from their PACs.<sup>19</sup> OpenSecrets assigns an interest group code to each PAC (as they do for individual donors).<sup>20</sup> Formally, the variable *SIG Money Contra-Constituency<sub>ij</sub>* measures for each representative *i* deciding on a particular bill (presented in vote *j*) the amount of campaign money the representative received prior to the vote from special interests that are at odds with the preferred constituency position. Similarly, we include in a separate variable any money received by the representative from groups that share the constituency position

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<sup>18</sup>A potential issue might be that the shock events that we use for identification have an impact on interest groups' bill positions. This would be particularly relevant for bills that are related to shocks in terms of content. However, we exclude such bills from the analysis (as explained below).

<sup>19</sup>See Section A.1 in the Online Appendix for the definition of PACs and why special interests need to establish PACs.

<sup>20</sup>In the case of conflicting bill positions of organisations associated with the same interest group, we allocate their funds according to what percent of the organisations within the group are for or against the bill in question (analogous to the approach used for measuring constituency preferences). Among the 6,466 interest group-bill combinations in our sample, the organisations within an interest group agree in 98.3% of the cases.

(referred to as *SIG Money Pro-Constituency*<sub>*i,j*</sub>). In our baseline model, we consider all the donations that were made within the last election cycle before the vote (i.e., the money donated during the last two-year term which helped with re-election).<sup>21</sup>

### Coding of distracting shock events

We finally link the political variables to information on exogenous shocks occurring in the US, thereby drawing on databases on natural and technological disasters, terrorist attacks, and mass shootings.

In previous research on attention and legislative politics (e.g., Jones and Keiser, 1987 and Neustadt, 1990), attention is measured by the media coverage of the bills under consideration. For example, the impact of union campaign spending on representatives' voting decisions is examined by comparing how they voted when a labour-related bill received a lot of media attention and how they voted when another labour-related bill received little media attention. There are substantial endogeneity concerns with such an approach, as there might well be factors, like the content of a bill, that influence media attention to the bill, voters' and special interests' positions on the bill, as well as representatives' decisions when voting on it. Instead of measuring actual media coverage of certain bills, we, therefore, adopt a different *indirect* approach, building on the idea of *news pressure* pioneered by Eisensee and Strömberg (2007). The focus here is on competing newsworthy information that crowds out reporting on the legislative process but is otherwise not related to it. Our identification strategy draws on disastrous events (mass shootings, natural and technological disasters, as well as terrorist attacks), which reduce attention to politics but are arguably exogenous to the representatives and the bills they are voting on around the time of the event.<sup>22</sup> For example, on June 17, 2015, a mass shooting occurred at a church in Charleston, South Carolina. Nine people were killed.<sup>23</sup> The next day, June 18, 2015, the House of Representatives voted on the final passage of the *Protect Medical Innovation Act*, a bill that would repeal the excise tax on medical devices. Plausibly exogenous to the incident in California, we consider this vote to have taken place with comparatively little media attention to politics due to the distracting event.

For the coding of our 'shock event' variable, we proceed in two steps. First, we take into account that the perceived newsworthiness of a single event strongly depends on its severity (Koopmans and Vliegenthart, 2011). As an approximation for the severity of such incidents, we rely on the reported number of incident-related deaths per day. In the case of natural disasters that usually last from several days to weeks, we consider all disasters that last ten days or less (88.5% of all incidents) and allocate the number of deaths equally across all disaster days. This method is also adopted for technological disasters, encompassing 99.4% of such incidents. For terrorist attacks and mass shootings, the number

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<sup>21</sup> See also Section A.4 in the Online Appendix for more details on the construction of the special interests measure and Online Appendix C for an analysis of the determinants of the amount of campaign money received by individual representatives from special interests in the last election cycle before a given vote.

<sup>22</sup> We focus exclusively on incidents in the US, as these arguably cause the most significant news pressure there. In Online Appendix D, we show that shocks outside the US actually have a less substantial or even a non-significant impact on news pressure in the US (see Figure D1/Table D3). The information on disasters is from EM-DAT, the International Disaster Database (Guha-Sapir et al., 2015). EM-DAT reports a disaster if one of the following criteria is satisfied: i) ten or more people dead; ii) 100 or more people affected; iii) the declaration of a state of emergency; iv) a call for international assistance. The terrorism data originates from the Global Terrorism Database (GTD), introduced by LaFree and Dugan (2007). Regarding mass shootings, we access the mass shooter database from the Violence Prevention Project (2024) (<https://www.theviolenceproject.org/mass-shooter-database>; accessed May 15, 2021).

<sup>23</sup> <https://www.nytimes.com/2015/06/18/us/church-attacked-in-charleston-south-carolina.html>.



of deaths can be attributed to exactly one day. We then define a ‘shock day’ if the number of deaths lies above the 95th percentile of its (event-specific) distribution.<sup>24</sup> This approach ensures that we only consider the most serious incidents which likely distract from the legislative process. Overall, our sample of potential shock events covers the period from 1990 to 2020 (terror incidents and mass shootings only until 2019). Second, in order to assign the congressional votes as precisely as possible to the treatment and control group, we verify i) whether we indeed observe crowding out of news stories around the days we marked as shock days and ii) how the magnitude of crowding out effects evolves around the different shock types. This is motivated by the fact that some congressional votes were potentially affected by a disaster-related drop in attention before the disaster officially took place (e.g., hurricanes intensely covered in the news before they hit the shore). To this end, we estimate models with *daily news pressure* (Eisensee and Strömberg, 2007) on different days around a particular shock day as the dependent variable.<sup>25</sup> Given the day of a shock  $t$ , we examine day  $t$  and the six days following the shock ( $t+1, t+2, \dots, t+6$ ), the subsequent time spans  $[t+7, t+10]$  and  $[t+11, t+20]$ , as well as the pre-shock interval  $[t-10, t-6]$  and the five days immediately preceding the shock ( $t-5, t-4, \dots, t-1$ ). The coefficients on the shock indicators then display the magnitude of crowding out effects at the times considered. We include month-by-year fixed effects and fixed effects for each day of the week to account for seasonal and intra-weekly fluctuations in news coverage. Figure 1 depicts for each type of shock how the respective effects evolve over time.<sup>26</sup> We find significant crowding out effects for all event types. On their peak days, terrorist attacks and mass shootings exhibit the strongest crowding out effects (about 45% of a standard deviation), followed by natural and technological disasters (30% respectively 16% of a standard deviation). The news crowding time frames vary by the type of event. In the case of US natural disasters, we already observe crowding out effects before they occur, as expected.<sup>27</sup>

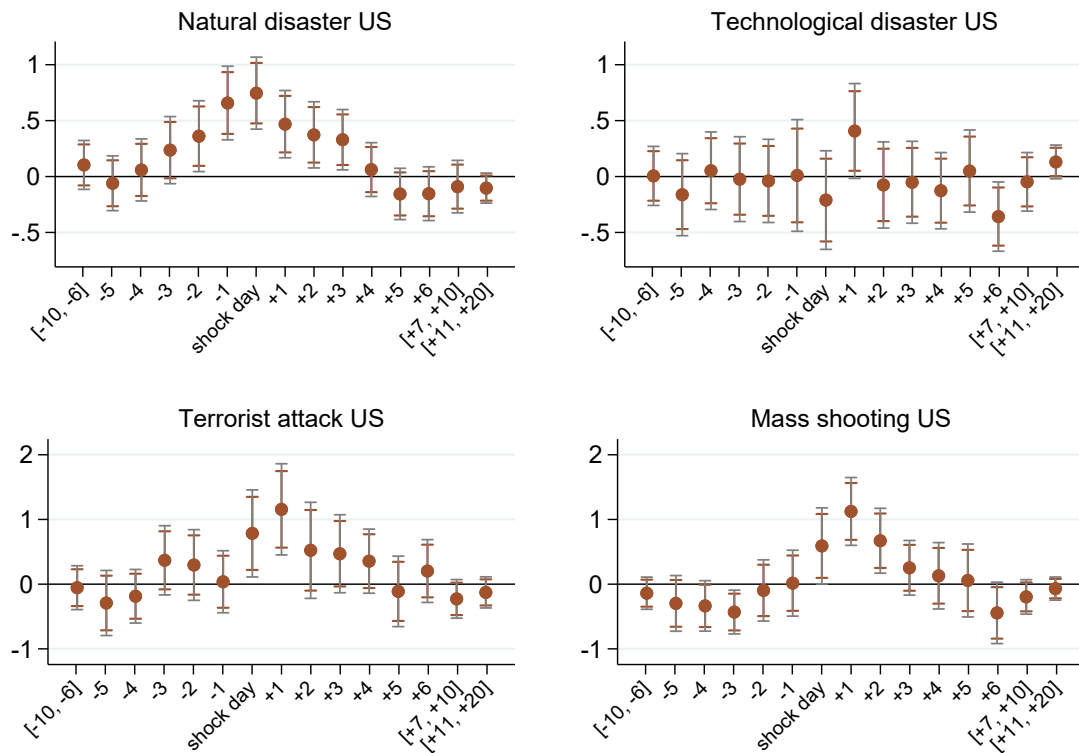
<sup>24</sup>Note that for all events except natural disasters, the number of deaths is zero on over 95% of the days in our sample period. That is why we only use days with a positive number of deaths here. The respective thresholds are 98.79% (technological disasters), 98.82% (terrorist attacks), and 98.81% (mass shootings), i.e., regarding terrorist attacks, the number of deaths caused by terror in the US is zero at 98.82% of days between 1990 and 2019. Table D2 in the Online Appendix shows descriptive statistics for each type of shock event, including the resulting 95th percentile thresholds.

<sup>25</sup>The *daily news pressure* measure (obtained from Strömberg, 2023) captures the median length of the first three stories in the US evening news (across the US television networks ABC, CBS, CNN, and NBC). The idea behind *daily news pressure* is that if a major media event occurs, the news stories usually become longer, and the events are placed at the beginning of a bulletin. As total airtime is limited to 30 minutes, the length of the first three segments is a good measure of how much newsworthy material is available on a particular day. Depending on editors’ evaluations regarding the newsworthiness of competing news stories, some events and topics will receive less attention just because something else happened by chance.

<sup>26</sup>The corresponding figures for events outside the US (along with the related estimation results regarding their impact on news pressure in the US) can be found in Online Appendix D.

<sup>27</sup>Our analysis suggests that there is no increase in news pressure on the day of serious technological disasters. A breakdown of these events shows that 38% were flight accidents, followed by explosions (15%), railroad (12%) and road accidents (11%), fires (10%), and water accidents (8%). One possible explanation for this lack of (newsworthy) coverage on the day of an incident is that there might be no time to produce lengthy segments for the main TV evening news broadcasts, as flight, railroad, and road accidents might happen in remote areas. Thus, the media might choose to rather focus on the aftermath of the accident, including the investigation, rescue, and recovery efforts, once more details come to light and TV journalists have reached the scene of the accident. This interpretation is in line with evidence presented in Durante and Zhuravskaya (2018). The study shows that in the case of military strikes by Israeli forces on Palestine, US networks’ coverage on the day of the incident differs from that of the following day. The latter reports tend to be longer and contain more personal stories about civilian casualties rather than just factual information.

Figure 1: News pressure in the US following shock events, 1990-2018



Notes: The graphs show the effects of US shock events on news pressure in the US around the day of the shock. The estimates are based on OLS regressions controlling for month-by-year and day-of-the-week fixed effects (with robust standard errors clustered at the month-by-year level). The dependent variable of *daily news pressure* on different days or intervals around the shock is from Eisensee and Strömberg (2007). Table D1 (Online Appendix D) shows the full OLS regression results. 95% and 90% confidence intervals are included.

Based on the actual crowding out effects following big shock events, we define time intervals, defining which roll calls fall into the treatment (distraction due to shock event) and control group. For each shock type, we further distinguish between days when news pressure is at its peak (denoted *Shock Peak*) – such as on the day of a serious natural disaster or just the day after a terrorist attack – and days when there is medium news pressure, such as two days before a natural disaster hits US soil, or two days after a terrorist attack (denoted *Shock Medium*). Considering a separate category *Shock Medium* allows separating between clearly treated votes (under *Shock Peak*) and clear control votes (i.e., votes taken under rather regular attention to politics).

To ensure that there is no contextual link between the bills voted on during a (peak or medium) shock period and the shock events themselves, we systematically review the content of the bills that fall into the shock periods. We both qualitatively and quantitatively analyse the respective bill's content. Based on the Policy Agendas Project's bill classification scheme (<https://www.comparativeagendas.net/us>), we check for each of the possible shock treatment votes whether the bill in question is assigned to one or more categories that indicate a possible connection with the preceding shock.<sup>28</sup> Table F1 in the Online Appendix shows the corresponding bill topics that we consider relevant for each type of

<sup>28</sup>We used the congressional roll call voting dataset (Comparative Agendas Project, 2023) to source information on bill topic codes.

shock. For example, any bill voted on after a terrorist attack that addresses immigration, defence, or civil rights issues is included in our selection. This way we can identify 21 votes (bills) with a coincidental connection between shock and bill (four such votes fall into a *Shock Peak* and 18 into a *Shock Medium* period, with one vote falling both into a period of peak and medium shock). For those bills, we have reason to believe that the exogeneity assumption is violated and exclude them from our analysis. The shock intervals defined for each type of shock as well as the corresponding final number of votes on the passage of (non-shock related) bills are summarized in Table 1. We observe a total of 63 votes held during *Shock Peak* and 95 votes that fall in a *Shock Medium* period (out of a total of 666 votes).<sup>29</sup>

Table 1: The relevant reporting periods around shock events in the US

Type of shock event	High news pressure ( <i>Shock Peak</i> )	#Votes	Medium news pressure ( <i>Shock Medium</i> )	#Votes
Natural disaster	[t - 1, t]	38	[t - 3, t - 2], [t + 1, t + 3]	51
Technolog. disaster	t + 1	4	not def.	0
Terrorist attack	t + 1	13	[t + 2, t + 4]	29
Mass shooting	t + 1	13	[t + 2, t + 3]	19

*Notes:* We assign a vote to one of the shock treatment groups (*Shock Peak* and *Shock Medium*) if it lies in the relevant period with increased (peak or medium) *daily news pressure* around a shock at time t (see Figure 1). Five votes fall into two periods of peak news pressure and four votes fall into two periods of medium news pressure.

Finally, we critically assess our choice of shock events and the chosen time periods with increased news pressure by investigating to what extent they are actually related to less political news reporting and simultaneously more reporting on the respective shock events. In this, we study local television as well as newspapers. The related analyses, including a description of the data used as well as their compilation, can be found in Online Appendix E. In short, we find evidence for crowding out of national political news in local television and newspaper on all days we classified as shock days (*Shock Peak* or *Shock Medium*). The pattern is thus clearly consistent with the idea that ‘newsworthy’ tragedies crowd out political news across media types and media outlets and thus distract attention from the political process.

## 4 Empirical model and main results

On the basis of the data compiled, we have available three basic pieces of information, i.e., i) whether representatives take into account the majority preference of their constituents in their voting decisions, ii) how much money they receive from special interest groups that oppose the majority preference of their constituents (as well as the money from groups that share their constituents’ majority preference), and

<sup>29</sup>If due to multiple events there is both *Shock Peak* and *Shock Medium* news pressure on a given day with a vote, we assign the shock peak treatment.



iii) whether the vote took place in a period of shock news pressure. Directly building on our theoretical framework, this allows us to test our main hypothesis by estimation of model equation (1).

$$\begin{aligned}
Alignment_{ij} = & \beta_0 + \beta_1 SIG\ Money\ Contra-Constituency_{ij} & (1) \\
& + \beta_2 SIG\ Money\ Pro-Constituency_{ij} \\
& + \beta_3 SIG\ Money\ Contra-Constituency_{ij} \times Shock_j \\
& + \beta_4 SIG\ Money\ Pro-Constituency_{ij} \times Shock_j \\
& + Representative-by-Year_i\ FE \\
& + Vote_j\ FE + \varepsilon_{ij}.
\end{aligned}$$

The dependent variable  $Alignment_{ij}$  subsumes representatives' voting behaviour on legislative proposals. It takes a value of 100 if representative  $i$  votes in alignment with the majority preference in his or her constituency in roll call vote  $j$  (deciding on the passage of a particular bill), and 0 if he or she clearly votes against the majority preference. The (continuous) explanatory variables  $SIG\ Money\ Contra-Constituency_{ij}$  and  $SIG\ Money\ Pro-Constituency_{ij}$  measure special interest groups' pressure that single representatives  $i$  face with regard to specific legislative votes  $j$  (i.e., the amount of special interest money that goes against or toward what voters prefer). The interaction of  $SIG\ Money\ Contra-Constituency$  with  $Shock$  tests our main hypothesis (specifically, we use the two refined shock treatment indicators  $Shock\ Peak$  and  $Shock\ Medium$ ). Based on the estimated coefficients, we can calculate and compare the marginal effect of campaign funds directed against the constituency preference on representatives' likelihood of deviating from it. That is, we can once calculate the effect of special interest pressure on alignment under the regular level of attention, and once under low attention to politics, as a result of exogenous shocks crowding out news on politics. The representative-by-year fixed effects control for all politician-specific characteristics that influence alignment, such as their preferences, or more general media monitoring in the constituency. The vote-specific effects take into account that there may be content-related factors which, independently of single representatives, lead to a higher or lower alignment with voter preferences in a particular vote  $j$ .

Table 2 shows descriptive statistics for all the variables used in our main empirical analysis. On average, representatives receive more money from special interest groups that share the position of the electorate than from groups that oppose what the electorate prefers. This implies that a conflict of interest does not exist per se when representatives receive funds from special interest groups. Still, in 7.5% of cases, individual representatives receive more funds from groups that oppose the constituency's position than they receive from groups that share that position.<sup>30</sup>

Table 3 presents the OLS regression results for different specifications of the fixed effects structure. Model (1) does not account for fixed effects, model (2) accounts for month as well as day-of-week effects, thus controlling for seasonal and intra-weekly fluctuations in alignment. In model (3), we add fixed effects for each representative (by year), and the most restrictive model (4) accounts for representative-by-year fixed effects as well as vote fixed effects (which also control for month and

<sup>30</sup>This underscores the importance of considering the preferences of special interest donors and constituents at the same time if we want to learn about the distorting effects of special interest money on the representation of constituents' interests.

Table 2: Descriptive statistics for the main variables

Variable	Mean	Std. dev.	Min.	Max.	Q1	Median	Q3	N
Alignment	74.13	43.79	0	100	0	100	100	217,181
SIG Money Contra-Constituency	0.254	1.117	0	41.04	0	0	0	217,181
SIG Money Pro-Constituency	1.859	4.383	0	149.6	0	0.3	1.7	217,181
Shock Peak	0.094	0.291	0	1	0	0	0	217,181
Shock Medium	0.140	0.347	0	1	0	0	0	217,181

Notes: The unit of observation is representative-vote; *SIG Money Contra/Pro-Constituency* is expressed in \$10,000 units. For *SIG Money Contra-Constituency* the values are zero in 81.2% of cases. The corresponding distribution is presented in Figure F1 in the Online Appendix.

day-of-the-week effects). In this last model, the main effects of our shock indicators (*Shock Peak* and *Shock Medium*) are absorbed by the vote fixed effects, and the interaction effects are identified based on within-representative variation in special interest group pressure across votes, conditional on the presence or absence of shocks.

Across all four specifications, our findings demonstrate that alignment tends to be lower when representatives receive more money from special interest groups that hold positions contrary to those of the electorate. With respect to model (4), one standard deviation more money from groups directed against the position of the electorate (about \$11,000) is associated with an 8.3 percentage points lower probability of deciding aligned with voters (corresponding to 11% of the mean alignment rate in our sample). Regarding the interaction between special interest money and news pressure around shock events, we find evidence consistent with our main hypothesis. Given that the roll call vote is held at times of distracting events, representatives are observed to be more responsive to the funds of special interests that prefer the opposite of what voters want (weakening the representation of their constituents' preferences). On days coded with *Shock Peak*, i.e., days around shocks when news pressure is most pronounced (and most likely distracts attention from the political process), the interaction effect is sizeably negative and statistically significant for all the model specifications. When representatives decide on legislation on such days, the same approximately \$11,000 in money (one standard deviation) directed against the constituency's majority preference is associated with a 12.5 percentage-point larger decrease in the probability that representatives decide aligned with their constituents' preferred position.

Regarding the money from special interest groups that share the constituency's position, we find no evidence that shock news pressure shapes its relationship with alignment. This observation is consistent with our theoretical framework, which posits that representatives strategically leverage limited attention to politics when confronted with a trade-off between catering to their constituents vs. their special interest donors, but not otherwise.

Moreover, we document that there does not appear to be a general effect of limited attention to politics on representatives' responsiveness to constituents' interests (as the small and statistically insignificant coefficients for the main effects of the shock variables indicate).<sup>31</sup>

<sup>31</sup>One might argue that political disagreements over an issue become less salient among voters and representatives in the face of tragedy, and representatives then vote differently due to the change in salience. Such a conjecture would suggest that shock events affect voting behaviour independently of whether representatives face a trade-off between representing the preferences of their constituents and their special interest donors. Our results do not support this conjecture.

Table 3: Media attention, special interest group pressure and alignment with constituent interests in roll call voting in the US House of Representatives, 2005-2018

Dependent variable: <i>Alignment</i> (100/0)	(1)	(2)	(3)	(4)
SIG Money Contra-Constituency	-8.343*** (1.023)	-7.934*** (0.970)	-7.450*** (0.955)	-7.425*** (0.874)
SIG Money Pro-Constituency	0.906*** (0.127)	1.077*** (0.150)	1.114*** (0.170)	1.574*** (0.282)
Shock Peak	0.040 (4.050)	-2.233 (3.604)	-1.723 (3.534)	
Shock Medium	-1.593 (3.243)	-1.718 (3.069)	-0.799 (3.086)	
SIG Money Contra-Constituency x Shock Peak	-11.73** (4.617)	-10.19** (4.744)	-11.55** (5.101)	-11.23*** (3.208)
SIG Money Pro-Constituency x Shock Peak	0.651 (0.567)	0.217 (0.531)	0.210 (0.534)	0.679 (0.812)
SIG Money Contra-Constituency x Shock Medium	2.221 (1.658)	2.124 (1.587)	2.255 (1.493)	0.412 (1.473)
SIG Money Pro-Constituency x Shock Medium	0.220 (0.339)	0.150 (0.322)	0.089 (0.313)	0.029 (0.338)
Month FE		X	X	
Day-of-the-Week FE		X	X	
Vote FE				X
Representative-by-Year FE			X	X
Observations	217,181	217,181	217,181	217,181
Adjusted $R^2$	0.051	0.087	0.113	0.368

*Notes:* OLS regressions with robust standard errors two-way clustered by representative and vote in parentheses. The unit of observation is representative-vote. The dependent variable *Alignment* measures whether representatives vote in alignment with the majority preference of their constituents. *SIG Money Contra/Pro-Constituency* aggregate the campaign money that representatives received in the last election cycle from special interests that are against respectively in favour of the constituents' preferred position. *Shock Peak* and *Shock Medium* indicate periods of increased news pressure around serious (non-political) shock events. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

## 5 Robustness

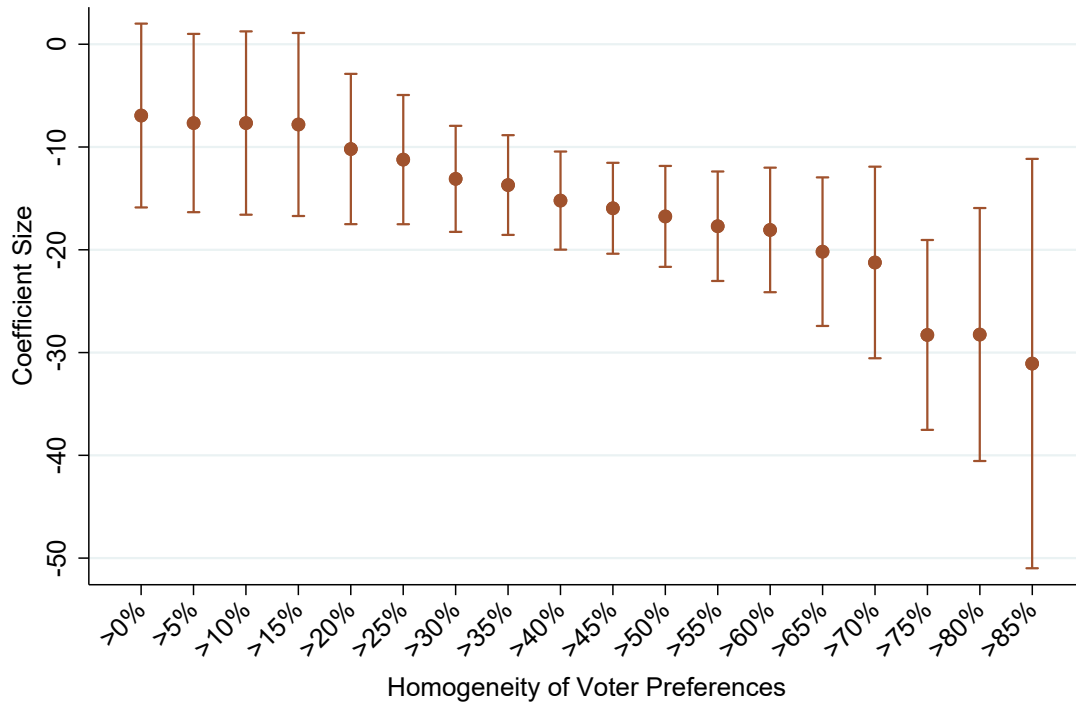
We test the robustness of our main results in several ways. First, we propose alternative codings for the dependent variable of alignment. To this end, we apply different thresholds to determine whether a representative's decision aligns or misaligns with the preferred position of the constituency. Additionally, we present results for two further variants of our alignment indicator: restricting the analysis to cases with a significant number of constituent positions on bills, and weighting individual donors based on their donation amounts. Second, we address two potential issues with our measure of special interest group pressure by relating their campaign funds to a representative's total budget and addressing potential distortions from outliers. Third, we estimate a logistic regression model to exclude the possibility that our results are driven by standard OLS assumptions. Fourth, we perform a placebo test in which we randomly assign legislative votes to the shock treatment group, instead of assigning them according to the occurrence of major distracting events.

### Alternative codings for political alignment

In our baseline specification, we code a representative's decision as aligned (misaligned) only if more than 62.5% (less than 37.5%) of individual donors with positions regarding the bill hold the same position (i.e., when the difference in the share of voters in favour of and against is larger than 25 percentage points). We relax this assumption and estimate our model equation (1) for all possible thresholds from above 50% to 92.5% (i.e., in the latter case, we code, for example, only those decisions as aligned when more than 92.5% hold the same position). Note that the larger the threshold becomes, the more homogeneous voters' preferences are. Figure 2 shows the related estimation results for the interaction term *SIG Money Contra-Constituency x Shock Peak* (with the baseline coefficient at >25%). For the specifications that include cases where voters' preferences are highly heterogeneous, we cannot reject the hypothesis that money directed against the constituency position has the same effect on shock as on non-shock days. This seems plausible given that in cases where voter preferences are split 50-50, representatives can follow their special interest donors without cost (and therefore without having to consider media exposure of their decision). In the reverse case, a misaligned decision is more likely to have negative consequences in the form of a loss of voter support, the clearer the preferences of the electorate toward the bill, making it all the more attractive to exploit distracting shock events. Our data support this reasoning.

As an additional robustness check, we impose a further restriction to our coding of alignment, considering only cases where a sufficient number of citizens in the constituency care about the bill in question (and representatives face some electoral pressure). To address this point, we divide the number of donations from citizens with preferences regarding the respective bill by the total number of donations from the constituency (regardless of whether they come from citizens with preferences). We then only code those cases as aligned or misaligned with constituency preferences if the resulting percentage for a particular representative when voting on a particular bill lies above the 25th percentile of the representative-congress-specific distribution. The corresponding results can be found in column (2) of Table 4. We observe estimates that are quantitatively very close to the ones in the baseline.

Figure 2: Reduction in alignment due to special interest group pressure under low attention to politics for different levels of homogeneity of voter preferences



*Notes:* The graph shows the coefficients on the interaction term *SIG Money Contra-Constituency*  $\times$  *Shock Peak* resulting from estimations where we use different thresholds in the percentage of constituents in favour of and against a particular bill to code whether or not representatives' decisions were aligned or misaligned with the majority preference of the constituency. On the x-axis, the percentage point differences are indicated, i.e. >0% means that the regression takes into account all cases where the difference in the share of constituents in favour and against particular bills is larger than 0 percentage points (i.e., also cases where voters' preferences are split around 50-50). Accordingly, the specification >85% only takes into account those cases where more than 92.5% of the electorate is in favour (and less than 7.5% is against). 95% confidence intervals included.

Finally, we use a weighted version of coding voter preferences in our alignment measure, aggregating the donation amount from individual donors with preferences rather than counting their number. This choice of preference aggregation thus measures special and constituent interests in the same units. One could argue that individuals who donate more to political organisations and candidates put the most pressure on representatives as deciding non-aligned with them comes at a greater cost. For each individual voting decision made by a representative, we aggregate the amount of campaign money that comes from donors in their constituency with preferences for and against the bill in question. Similarly to our baseline version, we code a representative's decision as aligned with the constituency if more than 62.5% of the funds come from individuals who agree with their representative's decision. The corresponding estimation results are shown in column (3) of Table 4. We document results that are fully robust with our baseline model. While the partial correlation between special interest money directed against the constituency and alignment under peak shock news pressure seems slightly smaller, a direct comparison is hampered due to the alternative specification of the dependent variable.

### **Alternative codings for special interest group pressure**

In column (4) of Table 4, we use a modified version of our special interest group measure. Specifically, instead of counting the absolute dollars from special interest groups that oppose/support the electorate's position (as in the baseline version), we consider their share of the representative's total campaign budget. The newly defined *SIG Money Contra/Pro-Constituency* variables (potentially) range between 0 and 1, where 1 would mean that the representative's total campaign budget comes from special interest groups that oppose/support the position held by the constituency. We divide the resulting percentage by its standard deviation (0.96% / 3.23%) for easier interpretation. Consistent with the main analysis, we document that special interest money in conflict with the predominant voter position has a significantly higher impact on the representative's probability of voting against the voter position in the face of severe news pressure around shock events. The partial correlation for the variable measuring special interest group pressure more than doubles.

One potential issue in our empirical setting might be the influence of outliers in our measure of special interest group pressure. To alleviate doubts here, we adopt a winsorizing approach and re-estimate our model. Regarding the upper extreme values in *SIG Money Contra/Pro-Constituency*, we replace all values above the 95th percentile with the respective value of the 95th percentile (\$14,000 / \$90,000). The estimation results in column (5) show that when replacing extreme values in the upper end of the distribution of the special interest money measures, the negative relationship between money directed against the electorate and the likelihood of deciding misaligned becomes larger. One standard deviation more special interest money from groups that prefer the opposite of what the constituency prefers (about \$3,600) relates to a 13.6 percentage points lower likelihood of deciding aligned with voters (vs. the 8.3 percentage points when using our baseline sample). Regarding the differential correlation between special interest money and alignment on days of peak shock news pressure, we document a 4.5 percentage point increase for the winsorized sample (vs. the 12.5 percentage point increase observed in the baseline sample).

### **Logistic regression**

To test whether the imposed linear relationship in our baseline model presents an issue for our findings in qualitative as well as in quantitative terms, we re-estimate our main specification using a logistic regression model.<sup>32</sup> Column (6) of Table 4 shows the related results. We document robust results regarding the increased influence of special interest group money that conflicts with voters' wishes when there is less public attention to politics. If a representative receives an additional \$11,000 from special interest groups that favour the opposite of what voters want, the odds of a representative deciding in alignment with voter preferences decrease by 50%. In cases of peak shock news pressure, the same money causes a drop in alignment by as much as 89%.

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<sup>32</sup>We performed the estimation using Stata 17's 'logit' command with the 'cluster()' option.

Table 4: Robustness checks for media attention, special interest group pressure and alignment with constituent interests in roll call voting in the US House of Representatives, 2005-2018

Dependent variable: <i>Alignment</i> (100/0)	(1) Baseline model	(2) Alignment 25th pctl. criterion	(3) Alignment count \$-amount	(4) SIG money in % of total budget	(5) SIG money winsorized	(6) Logistic regression
SIG Money Contra-Constituency	-7.425*** (0.874)	-7.124*** (0.872)	-7.201*** (0.775)	-8.223*** (1.098)	-38.06*** (2.193)	-0.637*** (0.039)
SIG Money Contra-Constituency x Shock Peak	-11.23*** (3.208)	-11.15*** (3.147)	-9.546** (4.186)	-10.66*** (2.844)	-12.58*** (4.327)	-1.357*** (0.184)
SIG Money Contra-Constituency x Shock Medium	0.412 (1.473)	0.471 (1.425)	0.402 (1.181)	-0.621 (2.019)	5.432 (5.205)	0.114*** (0.042)
SIG Money Pro-Constituency	1.574*** (0.282)	1.536*** (0.279)	1.562*** (0.280)	9.160*** (1.225)	4.635*** (0.389)	0.224*** (0.016)
SIG Money Pro-Constituency x Shock Peak	0.679 (0.812)	0.795 (0.875)	0.656 (0.786)	3.099 (2.713)	-0.740 (1.088)	0.080*** (0.027)
SIG Money Pro-Constituency x Shock Medium	0.029 (0.338)	0.049 (0.326)	0.099 (0.322)	-1.104 (1.903)	-0.585 (0.606)	-0.041*** (0.010)
Vote FE	X	X	X	X	X	X
Representative-by-Year FE	X	X	X	X	X	X
Observations	217,181	178,193	219,355	215,502	217,181	182,016
Adjusted/Pseudo $R^2$	0.368	0.359	0.363	0.375	0.408	0.349

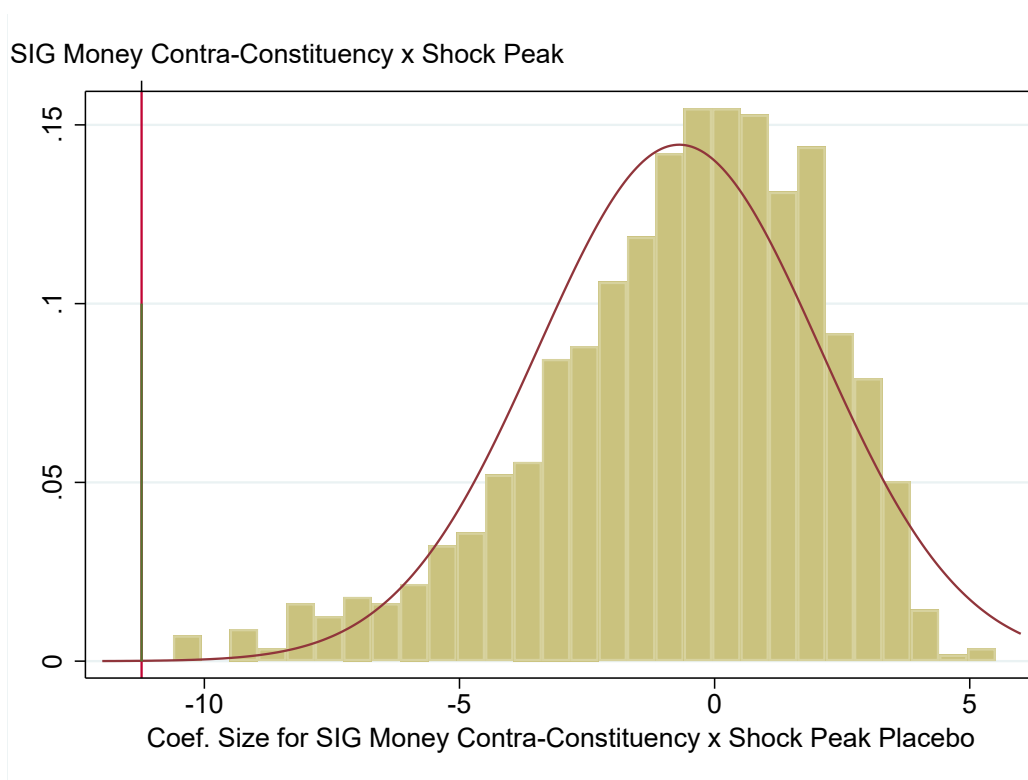
Notes: OLS (and logistic) regressions with robust standard errors two-way clustered by representative and vote in parentheses (column 6 only with standard errors clustered at the representative level). The unit of observation is representative-vote. The dependent variable *Alignment* measures whether representatives vote aligned with the majority preference of their constituents. *SIG Money Contra/Pro-Constituency* aggregates the campaign money that representatives received in the last election cycle from special interests that are against (in favour of) the constituents' preferred position. *Shock Peak* and *Shock Medium* indicate periods of increased news pressure around serious (non-political) shock events. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

### Placebo test

If the observed findings reflect a systematic effect, then the same patterns should be observed only rarely if the days considered shock days were randomly assigned. Based on this idea, we perform a placebo test and randomly distribute shock treatment days over all days with legislative votes in our sample (excluding real shock days). The number of placebo days is chosen in such a way that it matches the 10.1% and 14.3% of the original shock peak and shock medium treatment days, respectively. We perform this random assignment of placebo shock days 1,000 times and estimate our baseline model (1) for each draw.

The distribution of the estimated placebo coefficients on *SIG Money Contra-Constituency* × *Shock Peak* are shown in Figure 3. The empirical p-value is exactly zero, i.e., there are no cases where the estimated coefficient is smaller than the estimated coefficient of -11.23 from our baseline estimation. This suggests that the finding that campaign funds from special interests in conflict with constituency preferences are more influential in the days following major shock events is most likely not a mere coincidence.

Figure 3: Placebo test: reduction in alignment due to special interest group pressure under randomly assigned low attention to politics



Notes: The graph shows the distribution of the coefficients on the interaction *SIG Money Contra-Constituency* × *Shock Peak* resulting from the placebo model. The placebo days were randomly distributed over all non-shock days for a total of 1,000 runs. The number of placebo days is chosen in such a way that it matches the proportion of original shock treatment days. The vertical dashed line depicts the estimated coefficient from our baseline model that is based on the real shock treatment.



## 6 Mechanisms: individual short-term opportunism and agenda-setting

So far, we have implicitly interpreted the observed patterns in voting behaviour in terms of individual representatives' short-term opportunism. However, what if majority leaders in the House of Representatives take advantage of the limited attention caused by shock events and deliberately bring certain bills to a vote in the wake of such events? On the one hand, the majority leadership might be directly pressured by special interests to ensure the passage of certain bills. On the other hand, majority leaders might be aware of how many of their party colleagues face a conflict of interest regarding particular bills, i.e., situations where being exposed to special interest group pressure to vote Yes but having a constituency opposing the bill. Passing such legislation on days when voters are distracted from what is happening in Washington might reduce the negative electoral consequences of deciding against constituency interests.

The institutional setting in the House of Representatives allows for a short-term change of the agenda along these lines.<sup>33</sup> The body responsible for such changes is the Rules Committee, which is disproportionately comprised of members of the majority party, and thus to a substantial degree is under the control of the majority leadership. In particular, it is the Speaker of the House who exercises control over the Rules Committee.<sup>34</sup> The former Speaker Thomas P. O'Neill (1977-1987) described the role of the Rules Committee as follows: "What makes the Rules Committee so important is that it sets the agenda for the flow of legislation in the House and ensures that the place runs smoothly and doesn't get bogged down."<sup>35</sup> Issues that are highly sensitive to special interests, but likely to conflict with voters' interests, could thus be affected by strategic short-term agenda-setting through the Rules Committee.

However, the extent to which public criticism of a passed bill will cause reputational damage to the majority party depends not only on its conflicting nature but also on the general balance of political power in Washington. News media tend to base the tone and scope of their political coverage on the extent to which there is political conflict in Washington (Bennett, 1990; Althaus et al., 1996). Thus, criticism of a bill passed by the House of Representatives is likely to hurt the majority party less in times of unified government, i.e., when Senate and White House are also controlled by the party that holds the majority in the House. Following this line of reasoning, we expect agenda-setting in the House rather to take place at times of divided government, and less so at times of unified government. These considerations

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<sup>33</sup>The study of Lindstädt and Vander Wielen (2014) finds evidence consistent with the hypothesis that majority party leaders strategically schedule votes that divide the parties when elections are far off. In their theory, parties want to avoid situations in which representatives face the decision of showing party loyalty or not, due to the electoral costs of party loyalty shortly before the elections. This kind of agenda-setting, however, seems rather long-term and differs from the short-term change of the agenda after major shock events that is relevant in our context.

<sup>34</sup>After a bill is introduced in the House of Representatives, it is sent to a Committee and Subcommittee for hearings, recommendations regarding amendments, and reporting. When a bill returns from the Committee, it is usually not sent directly to the House floor. In particular, the Rules Committee schedules when a specific bill comes to the floor for consideration, and sets the rules concerning amendment limitations and the amount of debating time allocated to each bill. After a simple majority of the entire House approves the rule, the bill is ready for debate, possible voting on amendments, and final passage voting (<https://www.congress.gov/legislative-process> and <https://rules.house.gov>). It is also possible (but requires a 2/3 majority) that the final vote will be taken directly, without a ruling from the Rules Committee (i.e. 'under suspension of the rules'). In this latter case, the debate is limited to 40 minutes and no amendments are possible.

<sup>35</sup>Quoted in [https://web.archive.org/web/20201025215337/https://archives-democrats-rules.house.gov/Archives/pre20th\\_rules.htm#N\\_4\\_](https://web.archive.org/web/20201025215337/https://archives-democrats-rules.house.gov/Archives/pre20th_rules.htm#N_4_).

are consistent with the evidence presented by Djourelova and Durante (2022). The authors show that controversial executive orders by the President are associated with declining presidential approval ratings only when a majority in Congress belongs to the other party.

To approximate the conflict potential of any given bill (and thus majority leaders' incentive to engage in agenda-setting), we count for each vote the number of representatives in the majority party who face a conflict of the type *special interest groups Yes and voters No* (i.e., the representative receives substantially more special interest money from groups that support the bill and simultaneously faces a constituency that clearly opposes it).<sup>36</sup> We refer to this variable capturing the number of agenda-setting conflicts as *#AS-Conflicts*. Figure F2 in the Online Appendix shows the distribution of *#AS-Conflicts* for the 666 votes in our sample. A high number of agenda-setting conflicts can be observed for only a small number of votes, but for about 25% of them, we observe at least one representative with a conflict (with a mean value of 9.2 conflicted representatives per vote).

In columns (1) and (2) of Table 5, we examine whether the number of conflicted representatives is higher for votes being held on days with limited attention to Washington. In line with our theoretical reasoning, we find evidence that this is true, but only for periods of divided government (when the majority party is likely to experience damage from passing conflicted legislation). In this case, we document an average of 9.4 more conflicted representatives when the vote is held on a day with peak shock news pressure.

As an additional test for the proposed agenda-setting mechanism, we examine whether those bills where the corresponding rule by the Rules Committee has been issued on a shock day also move more quickly to final voting than bills whose floor debate was initiated on days with normal levels of attention. For this purpose, we use the official bill histories published on Congress.gov and code for each vote the elapsed time between issuance of the rule and final voting. The corresponding distribution for the 666 votes in our sample is shown in Figure F3 in the Online Appendix. In 53% of cases, issuance of rule and final voting take place on the same day. For 28%, the final vote is held the next day, and for 19%, it takes two or more days. The related estimation results can be found in columns (3) and (4) of Table 5. As a dependent variable, we use an indicator that takes a value of 100 if rule issuance and final voting fall on the same day, and a value of 0 otherwise. At times of divided government, we indeed find that bills introduced for debate on shock days are significantly more likely to reach their final vote the same day – with a 15.4 percentage points higher likelihood compared to bills whose rule was introduced on non-shock days. This result is thus consistent with the explanation that in the wake of shocks, the Rules Committee is more likely to provide rather restrictive rules (limiting time for debate and/or possibilities for amendments) in order to bring the related bills to a final vote as quickly as possible when attention is still limited. Importantly, we find no such relationship during periods of unified government, consistent with this kind of agenda-setting being primarily attractive to the majority party during periods of divided government.

Overall, the results of the two tests speak for the hypothesis that short-term agenda-setting by the majority leader partly mediates the effect of attention on the influence of special interests. To provide

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<sup>36</sup>We only code situations as conflicted if constituents clearly oppose the bill (i.e., a 25 percentage point higher proportion of voters opposing than favouring it).

Table 5: Two tests for a possible agenda-setting mechanism: number of agenda-setting conflicts and elapsed time between issuance of rule by the Rules Committee and final passage voting

Dependent variable:	#AS-Conflicts (Divided govt.)	#AS-Conflicts (Unified govt.)	Vote Same Day (Divided govt.)	Vote Same Day (Unified govt.)
Shock Peak (Vote)	9.392*** (3.610)	-3.351 (8.182)		
Shock Medium (Vote)	-3.323 (2.953)	5.509 (7.146)		
Shock Peak (Rule)			15.41** (7.804)	3.968 (10.78)
Shock Medium (Rule)			-4.934 (6.646)	-8.995 (10.62)
Mean DV	7.300	14.51	56.47	45.25
Observations	487	179	487	179
$R^2$	0.018	0.005	0.010	0.006

*Notes:* OLS regressions with standard errors in parentheses. *#AS-Conflicts* refers to the number of individual representatives affiliated with the majority party who face an agenda-setting conflict in any given vote. *Vote Same Day* is an indicator that takes a value of 100 if rule issuance by the Rules Committee (or the motion to suspend the rules) and final voting take place on the same day. The estimates are separately for periods of divided and unified government (divided government means that one party holds the presidency while the other party controls one or both chambers of Congress). The unit of observation is vote. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

an evaluation of the extent to which the observed overall effects are driven by representatives' reaction to limited attention in the short-term or are rather the result of agenda-setting by the majority party, we proceed as follows: based on the above argumentation and tests, we identify bills/votes that are likely to have been the subject to short-term changes in the legislative agenda in the wake of shocks (decided on days with peak shock news pressure during a period of divided government, with a positive number of representatives being conflicted, and the rule by the Rules Committee being issued on the same day). This way, we can identify seven bills/votes, which we contrast with all other shock votes in terms of special interest groups' effect on deciding misaligned with voters. The corresponding results are shown in Table 6. Column (1) includes an interaction of special interest money directed against the constituency position (*SIG Money Contra-Constituency*) with *AS-Bill* – with the latter being an indicator taking a value one if the bill is likely to be subject to short-term agenda-setting in the wake of shocks. In columns (2) and (3), we add our shock peak and medium treatment (excluding those votes in *Shock Peak* that are already included in *AS-Bill*). For the votes we identified as being scheduled in response to peak shock news pressure, we document more than a doubling in the partial correlation between special interest money that conflicts with voters' preferred position and the likelihood of voting against them – compared to votes held on days without distracting shocks. This increase is almost identical and statistically indistinguishable from the one we document on days with peak shock news pressure but without evidence of agenda-setting. In conclusion, our main result can thus be attributed to both agenda-setting by the majority party and – and for the large remainder of bills – a short-term reaction of representatives to reduced political coverage.

Table 6: Mechanisms: contrasting votes under limited attention for which agenda-setting by the majority party is either likely or unlikely

Dependent variable: <i>Alignment</i> (100/0)	(1) AS-Bills	(2) + Shock Peak	(3) + Shock Med.
SIG Money Contra-Constituency	-7.607*** (0.787)	-7.350*** (0.771)	-7.426*** (0.874)
SIG Money Pro-Constituency	1.611*** (0.250)	1.580*** (0.248)	1.574*** (0.282)
SIG Money Contra-Constituency x AS-Bill	-11.64*** (4.495)	-11.91*** (4.496)	-11.84*** (4.508)
SIG Money Pro-Constituency x AS-Bill	1.280 (1.034)	1.302 (1.037)	1.308 (1.044)
SIG Money Contra-Constituency x Shock Peak		-11.12*** (3.846)	-11.04*** (3.874)
SIG Money Pro-Constituency x Shock Peak		0.612 (0.884)	0.618 (0.892)
SIG Money Contra-Constituency x Shock Medium			0.413 (1.473)
SIG Money Pro-Constituency x Shock Medium			0.029 (0.338)
Vote FE	X	X	X
Representative-by-Year FE	X	X	X
Observations	217,181	217,181	217,181
Adjusted $R^2$	0.366	0.368	0.368

*Notes:* OLS regressions with robust standard errors two-way clustered by representative and vote in parentheses. The unit of observation is representative-vote. The dependent variable *Alignment* measures whether representatives vote in alignment with the majority preference of their constituents. *SIG Money Contra/Pro-Constituency* aggregate the campaign money that representatives received in the last election cycle from special interests that are against respectively in favour of the constituents' preferred position. *AS-Bill* is an indicator taking a value of one if the bill is likely to be subject to agenda-setting by the majority party according to the criteria defined above (passed during a period of divided government on a day with the highest shock news pressure, with the rule by the Rules Committee issued on the same day, as well as exhibiting a positive number of conflicts). *Shock Peak* and *Shock Medium* indicate periods of increased news pressure around serious (non-political) shock events. As for the indicator *Shock Peak* the specifications in this table exclude bills that are already included in the *AS-Bill* subset (this leaves us with seven *AS-Bill* bills/votes and 56 bills/votes decided under *Shock Peak*). \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

## 7 Heterogeneity analyses

In this section, we conduct additional analyses of heterogeneity, which are more exploratory in nature. First, we use sample splits to look at situations where re-election pressures or general attention might be arguably higher or lower and examine how politicians respond to conflicting special interest funds in general and in the context of peak news shocks. Second, we examine whether US representatives affiliated with the Democratic and Republican parties exhibit different statistical relationships related to alignment and the representation of constituents vs. special interest donors.

### 7.1 Retiring representatives, electoral competition, and voting behaviour in election vs. non-election year

The core aspect of our theoretical framework underlying the main hypothesis is the office-motivated incumbent maximising his or her re-election chances. Under this presumption, the attention paid to politicians' actions is predicted to influence the trade-off between serving voters vs. special interests. In this section, we explore the results when we split our baseline sample and compare representatives in three situations where re-election concerns and attention to politics are expected to be more or less pronounced.

First, we examine whether representatives who are not running for re-election (because they are retiring) react differently to campaign money from special interests in the wake of shocks.<sup>37</sup> On the one hand, given that misaligned behaviour is not directly sanctioned in an upcoming election, exploiting periods of limited attention to cater to special interests would seem no longer to be necessary. On the other hand, retiring representatives may still benefit from being perceived as serving voter preferences in their personal environment, even beyond their time in office. Furthermore, the pushing of party interests as well as the aforementioned agenda-setting by the majority party could explain why even representatives not up for re-election vote differentially during periods of limited attention to the lawmaking process. Columns (2) and (3) of Table 7 show the corresponding results for a sample split between the representatives running for re-election and those retiring. The estimated correlations between campaign support from special interest groups and voting behaviour turn out very similar for the two groups. The corresponding t-test for differences in both coefficients does not indicate a statistically significant difference (p-value 0.262). This also holds for the response during periods of shock news pressure, where we likewise document no systematic differences between retiring and non-retiring representatives.

Second, both direct support from voters (gained by voting in line with their interests) and generous financial support from special interests are increasingly valuable when re-election concerns become more pressing. Accordingly, from our basic framework, it is theoretically unclear whether representatives will cater more or less to special interests under higher levels of electoral competition. We study the empirical pattern by re-running our baseline regression for two different sub-samples. Specifically, we compare representatives in rather contested districts (approximated by a margin of victory in the last elections that lies below 5%) with their colleagues sitting on relatively 'safe seats' (margin of

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<sup>37</sup>Information on legislator retirement status is sourced from [GovTrack \(2023b\)](#).

victory in the last elections at 5% or above).<sup>38</sup> The corresponding results are shown in columns (4) and (5) of Table 7. For relatively low competition, we observe a larger partial correlation between special interest money directed against the electorate and the probability of deciding misaligned with constituent interests (p-value 0.097). In the presence of shocks, the predictive power of money directed against the constituency position does not appear to be mediated by electoral competition. Interestingly, when competition is high, even on days with medium potential for distraction from politics, the partial correlation between special interest money that conflicts with voter interests and the likelihood of voting against the electorate is statistically significantly larger.

Third, we compare the effect of limited attention to politics for votes taken in election vs. non-election years. While statistically not significant, the corresponding estimates in columns (6) and (7) of Table 7 hint at a somewhat stronger relationship between special interest money and misalignment during periods of shock peak news pressure in non-election years. A possible interpretation is that majority leaders are more inclined to push controversial bills to a final vote in non-election years. Based on our measure of conflict potential for each bill (introduced in Section 6), we indeed find that agenda-setting by the majority party in the wake of shocks seems to primarily occur in non-election years (see Table F2 in the Online Appendix). Given a period of divided government and given the vote is held in a non-election year for the remaining sample of 267 votes, the number of conflicted representatives increases by 16.8, on average, when the vote is held on a day with peak shock news pressure.

## 7.2 Democrats vs. Republicans

In another exploratory analysis, we examine differential effects with respect to partisanship. More specifically, we examine whether Democratic party representatives react differently to special interest group money conflicting with their constituents' preferences than do their Republican party counterparts. Ex-ante, the theoretical considerations do not predict so. However, given the substance of the bills voted on and the partly partisan-oriented funding by special interest groups, descriptively there might well be differential reactions. To find out, we perform a sample split and estimate our baseline specification for Democrats and Republicans separately. Table 8 shows the respective results that, however, do not allow a simple interpretation. We find that the partial correlation between special interest money and alignment is less pronounced for Democrats than for Republicans (with the p-value of the corresponding t-test being 0.042). Specifically, one standard deviation more money from groups favouring the opposite of the electorate is associated with a 2.4 percentage points lower likelihood of alignment among Democrats, while for Republicans it is 3.1 percentage points lower. Given the occurrence of a shock, we cannot reject the hypothesis that, for members of the Republican Party, special interest money directed against the electorate has the same explanatory power in the wake of shocks as it does in the presence of regular attention to politics in Washington.

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<sup>38</sup>Information on district election results is obtained from the [Federal Election Commission \(2023\)](#).

Table 7: Electoral incentives and the effects of limited attention on the representation of voters and special interests

Dependent variable: <i>Alignment</i> (100/0)	Baseline	Non-retiring vs. retiring	Competitive vs. safe districts	Election vs. non-election year			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
SIG Money Contra-Constituency	-7.425*** (0.874)	-7.357*** (0.888)	-8.752*** (0.868)	-5.599*** (0.967)	-7.794*** (0.902)	-8.463*** (1.397)	-7.044*** (1.036)
SIG Money Contra-Constituency x Shock Peak	-11.23*** (3.208)	-11.21*** (3.275)	-10.22*** (3.097)	-8.605*** (3.039)	-11.78*** (3.725)	-7.527** (3.209)	-11.76*** (3.382)
SIG Money Contra-Constituency x Shock Medium	0.412 (1.473)	0.483 (1.491)	-0.159 (1.447)	-5.144** (2.180)	0.897 (1.484)	1.884 (1.595)	-0.493 (1.993)
SIG Money Pro-Constituency	1.574*** (0.282)	1.599*** (0.292)	1.352*** (0.308)	2.046*** (0.409)	1.562*** (0.284)	1.876*** (0.443)	1.383*** (0.328)
SIG Money Pro-Constituency x Shock Peak	0.679 (0.812)	0.717 (0.811)	0.283 (0.913)	0.942 (0.572)	0.643 (0.859)	0.256 (1.795)	0.875 (0.884)
SIG Money Pro-Constituency x Shock Medium	0.029 (0.338)	0.015 (0.345)	0.244 (0.316)	-0.159 (0.657)	0.026 (0.333)	-0.854* (0.450)	0.981** (0.483)
Vote FE	X	X	X	X	X	X	X
Representative-by-Year FE	X	X	X	X	X	X	X
Observations	217,181	205,296	11,885	14,272	202,909	93,236	123,945
Adjusted $R^2$	0.368	0.367	0.403	0.440	0.365	0.340	0.389
T-Test: Diff. in SIG Money Contra-Constituency		0.262			0.097		0.415
T-Test: Diff. in SIG Money Contra-Constituency if Shock Peak= 1		0.934			0.317		0.610

Notes: OLS regressions with robust standard errors two-way clustered by representative and vote in parentheses. The unit of observation is representative-vote. Column (1) shows our baseline estimate (column 4 from Table 3). In the other specifications, we split the sample between those representatives who are facing re-election and those who are retiring, between those representatives who come from a relatively competitive district and those with a relatively safe seat (approximated by a victory margin in the last elections that lies above 5%), as well as between those votes that took place in an election (even-numbered) and non-election year. Regarding the t-tests, the p-value is reported for each pair of specifications. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table 8: Limited attention and the representation of voters and special interests: heterogeneity with respect to members of the Democratic vs. Republican party

Dependent variable: <i>Alignment</i> (100/0)	Baseline (1)	Democrats vs. Republicans (2) (3)	
SIG Money Contra-Constituency	-7.425*** (0.874)	-1.857*** (0.544)	-3.407*** (0.533)
SIG Money Contra-Constituency x Shock Peak	-11.23*** (3.208)	-9.114** (3.732)	-3.265 (2.699)
SIG Money Contra-Constituency x Shock Medium	0.412 (1.473)	-0.559 (1.328)	0.134 (0.772)
SIG Money Pro-Constituency	1.574*** (0.282)	0.567*** (0.138)	0.253*** (0.057)
SIG Money Pro-Constituency x Shock Peak	0.679 (0.812)	-0.271 (0.236)	0.192 (0.203)
SIG Money Pro-Constituency x Shock Medium	0.029 (0.338)	0.118 (0.306)	0.104 (0.131)
Vote FE	X	X	X
Representative-by-Year FE	X	X	X
Observations	217,181	102,984	114,197
Adjusted $R^2$	0.368	0.713	0.712
T-Test: Diff. in SIG Money Contra-Constituency			0.042
T-Test: Diff. in SIG Money Contra-Constituency if Shock Peak= 1			0.368

*Notes:* OLS regressions with robust standard errors two-way clustered by representative and vote in parentheses. The unit of observation is representative-vote. Column (1) shows our baseline estimate (column 4 from Table 3). In columns (2) and (3), we split the sample between representatives affiliated with the Democratic and Republican party, respectively. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .



## 8 Concluding remarks

The democratic process is fundamentally about serving citizens in decisions that lend themselves to being taken collectively. While interests of all kinds should be heard in this process, specific interests are often at an advantage, as they manage to become organised and collect money among their supporters. If then, for some policy issues, the interests of specific groups diverge from those of a large part of the population, concerns arise about interest groups having undue influence on policy making at the cost of consumers and taxpayers at large. In this, the representatives' reliance on campaign finance donations for electoral success is one prominent avenue by which special interests can influence politics. However, representatives face a trade-off when relying on financial support from special interests for running campaigns and winning elections in exchange for policy favours, as they may be sanctioned by their constituents if they support policies that run against voters' preferences.

Our study shows that media attention is a crucial factor affecting this trade-off. Representatives are systematically more likely to vote against their electorate's policy preferences but more aligned with those of special interest groups that support them over time periods when media attention is drawn away from politics due to an exogenous shock event (such as a natural disaster hitting the US). This suggests that special interests can leverage their advantage in monitoring representatives during times of limited media attention to politics, an issue that has so far not been prominently discussed in the context of special interest politics. Moreover, our results shed light on the role of party leaders in exploiting news shocks as a strategic opportunity to push their policy agenda by bringing conflicted bills to a final vote more quickly, thereby capitalising on the momentum generated by the shock.

Constituent interests already seem to lose out to special interests when attention is not diverted from politics. In fact, in such a situation, the correlational analysis shows that the more money representatives receive from special interest donors whose policy preferences conflict with those of voters, the more likely we are to observe representatives taking decisions against their constituency. It is quite likely that we still underestimate the influence of special interest groups in our setting, as our approach focuses on their visible actions (i.e., their donations to politicians). For example, we cannot account for the effect of the 'second face of power' (Bachrach and Baratz, 1962), i.e., the threat of additional actions by moneyed interests in the future (such as, for example, negative campaigning in the next election). Similarly, our approach does not take into account the potential impact of special interest groups' independent campaign support – the kind of support that has become increasingly significant since the 2010 *Citizens United vs. FEC* ruling by the US Supreme Court (allowing any group to spend unlimited sums on campaign advertising, provided it is officially uncoordinated with the benefiting candidates).

Our findings open several avenues for further research in this context. First, information asymmetries between different types of (interest) groups in the population might deserve more attention in theoretical work on special interest politics as mass-based interest groups such as unions probably rely on different information flows than well-funded but comparatively small business interest groups. Second, while we model attention as being uniformly distributed and affected by shock events across representatives, the organisational structure of media markets and its interaction with political markets might well create systematic variation in voters' exposure to political information about their representatives' behaviour.

Finally, our findings raise some interesting issues regarding the role of media markets and media control in representative democracies. If attention to politics is an obstacle for special interests to overcome in influencing the political process when their preferences conflict with the desires of large fractions of the population, the value of controlling media outlets gains an additional dimension. A large part of the new literature at the intersection of media economics and political economics focuses on how the media work as the ‘fourth power’, keeping elected officials in line with the interests of voters (see, e.g., [Prat and Strömberg, 2013](#), and [DellaVigna and Gentzkow, 2010](#), for excellent reviews of the arguments). Complementary literature suggests a different involvement of the media in democracies, i.e., the representation of corporate interests supporting their attempts to secure rents in the democratic process (see, e.g., [Herman and Chomsky, 1988](#); [Gilens and Hertzman, 2000](#); and [Corneo, 2006](#)). Taken together, the modus operandi under which media outlets work fundamentally affects their functioning as the fourth power and thus the role of special interests in politics.

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# Special Interest Groups Versus Voters and the Political Economics of Attention

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## A Data on campaign donations

### A.1 Data origin

Originally, the campaign contribution data is from the Federal Election Commission (FEC), the US agency that regulates campaign finance in federal elections. The donation recipients (candidates, parties and PACs<sup>1</sup>) are required by the US *Federal Election Campaign Act* to identify donors who give them more than \$200 in an election cycle (including their address and employer information).

### A.2 Data access

The data from OpenSecrets is accessible through its website OpenSecrets.org. We collected the campaign finance data via the Sunlight Foundation’s Influence Explorer (Sunlight Foundation, 2023). The original data set (consisting of federal campaign finance records between 1990 and 2014) is available online under <https://sunlightlabs.github.io/datacommons/#bulk-data>. We have updated the original data set by incorporating additional campaign finance data directly provided by OpenSecrets, extending coverage from 2014 through 2018 (OpenSecrets, 2023). We obtained the MapLight data on interest groups’ bill positions (MapLight, 2023) through their previously available public API (accessed on October 28, 2019). Meanwhile, a licensing through MapLight is necessary to have access to the data (<https://www.maplight.org/data-series>). The roll call voting data is from GovTrack (2023) (see <https://www.govtrack.us/about-our-data>).

### A.3 Compilation of measure for constituent interests

We calculate the percentage of net support for a given bill by subtracting the number of individual donors opposing the bill from the number of donors supporting the bill, and dividing it by the total number of donors with preferences in the constituency. Table A1 provides an overview of the transaction types and interest group codes that we exclude before aggregating the donations. It should be noted that our approach takes into account all individual donations from citizens in a representative’s constituency. These include representatives’ local donors. One issue might therefore be that the resulting preference measure rather captures pressure from the own donors, and not voters’ preferences in general. However, donations from citizens in a constituency to their own representative and to candidates running for office in that district account for only 5.0% of individuals’ total donations. The vast majority of donations go to candidates running for other/higher federal office (such as presidential candidates) (37.5%), to parties (20.9%), and to (super) PACs (36.6%) (period 2004-2018).<sup>2</sup> We take into account all donations from a representative’s constituency made in the last election cycle prior to the corresponding roll call vote (for

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<sup>1</sup> Organisations (but not individuals) that want to contribute to a candidate’s campaign cannot do so directly. They must establish a PAC that is regulated by the Federal Election Commission. Corporations, trade associations, and unions establish a connected PAC, ideological or single-issue groups a non-connected PAC. Whereas for connected PACs, the establishing organisation is allowed to provide funding for start-up and administrative costs, providing funds for the purpose of campaign contributions to a candidate is not allowed. Instead, connected PACs have to raise funds from individuals associated with the sponsoring organisation, who are usually managers and executives in the case of corporations and members in the case of unions, trade, and professional associations. Non-connected PACs, however, may accept funds from the general public, but are not sponsored by an associated organisation.

<sup>2</sup> In Appendix B, we run validation exercises and relate our preference measure to preferences as they emerge from voting on ballot propositions, surveys, and industry structure statistics.



example, if the vote takes place in May 2011, we consider all individual donations made between the November elections 2008 and 2010). This holds for all donations except those to presidential candidates. In the latter case, we consider donations made by individuals in a representative's district within the last presidential election cycle, i.e., the two years before the last presidential election (i.e., for the vote in May 2011 we take into account all donations to presidential candidates made between the 2006 elections and the 2008 presidential elections). When we observe more than one donation from a particular donor in a given cycle, we count him or her only once. However, if a donor is linked to different groups that support or oppose different bills, our approach takes into account the donor's positions on all of these bills. An individual contributes about 3.8 times per two-year cycle (2004-2018 average).

Table A1: Excluded transaction types and interest group codes in the campaign finance data

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**Constituent interests measure (*Alignment*)**

- Excluded transaction types: 10j, 11j, 15j, 18j, 19j, 30j, 31j (memo entries, i.e., the share of an individual's donation to a candidate or to another committee that was previously donated to a joint fundraising committee; such donations would be counted twice if we kept these transactions), 15c (candidate self-finance), 16c/f/g/r, 20c/r/f, 22h (loans or loan repayments to candidate itself/others), 20y, 21y, 22y, 32, 32j/f/g/k/t, 40y, 41t (refunds; for example, if the maximum limit allowed for donations has been exceeded by the individual, the surplus money is returned; we would count such cases doubly if we did not exclude these transactions)
- Excluded group codes: Y0000, Y2000, Y3000, Y4000 (unknown category, no employer listed or impossible to assign category; note that we count individuals assigned to these codes when we calculate the total number of individual donations from citizens in the constituency), Z9000, Z9100, Z9500, Z9600, Z9700, Z9800, Z9999 (non-contributing categories and candidate self-finance)

**Special interests measure (*SIG Money Contra-Constituency*)**

- Excluded transaction types: 16c, 20c, 22h (loans to candidates and loan repayments), 18g, 24g (transfers in from and out to affiliated committees), 24e, 24f (independent expenditures and communication costs), 24c (coordinated party expenditures), 29 (electioneering communications)
  - Excluded group codes: J1300, J2000, J2100, J2200, J2300, J2400, J2500, Z1000, Z1100, Z1200, Z1300, Z1400, Z4100, Z4200, Z4300, Z4400, Z4500, Z5000, Z5100, Z5200, Z5300 (candidate and party committees), Y0000, Y2000, Y3000, Y4000 (unknown category, no employer listed or impossible to assign category), Z9000, Z9100, Z9500, Z9600, Z9700, Z9800, Z9999 (non-contributing categories and candidate self-finance)
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Given the way we measure constituency preferences and special interest pressure, we also capture well the cases in which these interests are aligned. For example, as firms are prohibited from directly contributing to candidates, they often found a company PAC to which the management of the firm is allowed to contribute. In such a case, the policy preferences of the firm's PAC and the contributing managers' preferences are likely aligned. By construction, our measures assign in such a case the individual donors (the managers/employees of the firm) to the same group as the PAC itself (which then donates to the campaign of a representative), thus assigning the same policy preferences to PAC and employees. The same holds more broadly. If a representative from Connecticut, for example, votes

for insurance interests and a large share of the constituency benefits from the physical presence of the insurance industry in their state (that is, a large share of the population is employed in this industry), our measures would consider the policy preferences of the industry and the constituency as aligned and the representative would not face a conflict of interest in this situation. As we show below, the share of actively donating citizens working in a given industry in a given county/state is strongly correlated with the official employment share in this industry of the same county/state.

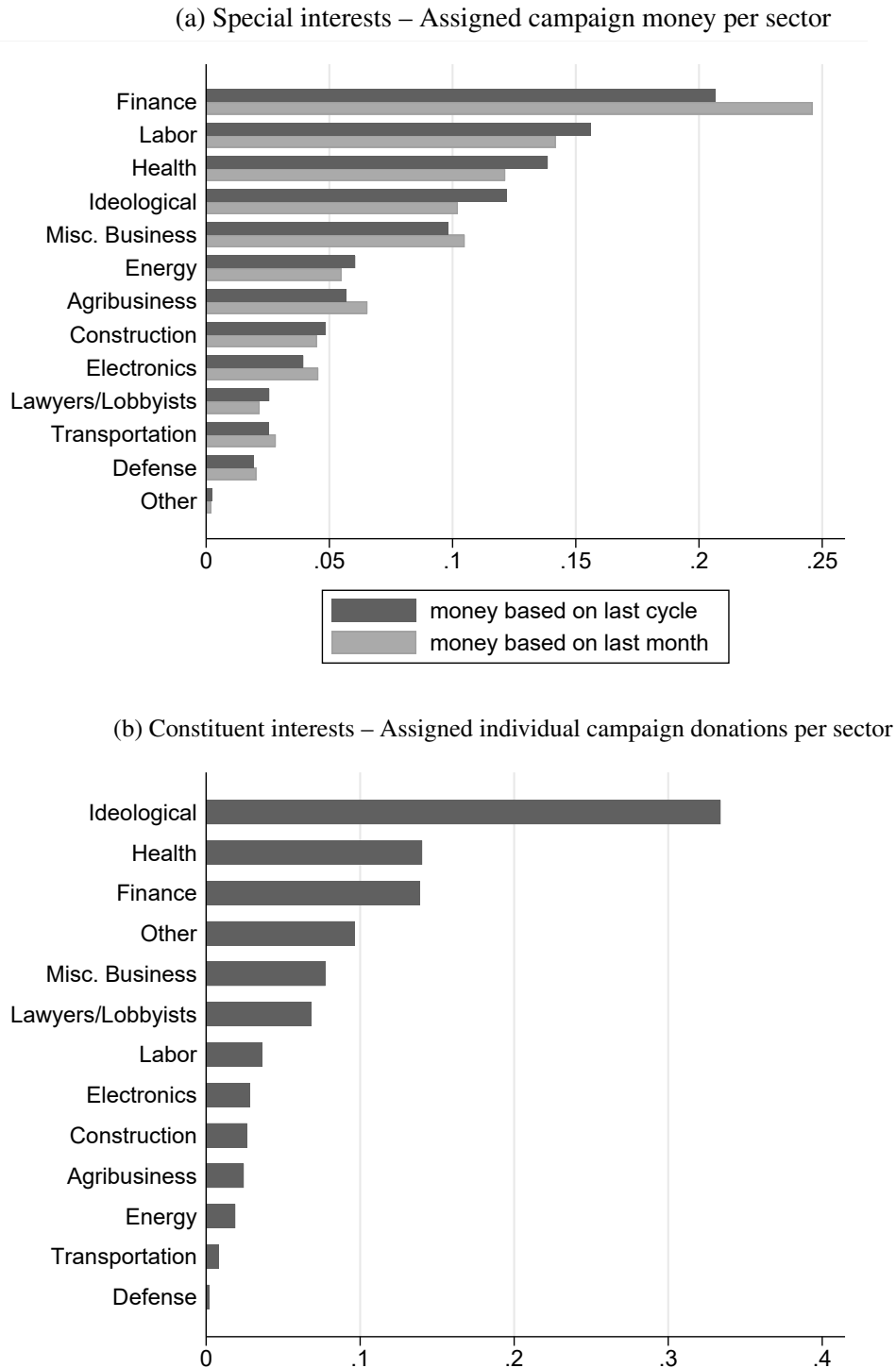
Individual donors are matched to congressional districts based on the ZIP codes in the campaign finance data (home or employer's address) and the concordance tables provided by the [US Department of Housing and Urban Development \(2023\)](https://www.huduser.gov/portal/datasets/usps_crosswalk.html) (HUD; see [https://www.huduser.gov/portal/datasets/usps\\_crosswalk.html](https://www.huduser.gov/portal/datasets/usps_crosswalk.html)). If a ZIP code falls into more than one district, we take the district where most people live.

#### **A.4 Compilation of measure for special interests**

We sum up all direct PAC donations received by a representative prior to a vote from special interest groups that support the opposite position regarding the related bill to the one favoured by the representative's constituency (*SIG Money Contra-Constituency*). Similarly, we aggregate the money coming from groups that are aligned with the preferred position of the constituency (*SIG Money Pro-Constituency*). If, for example, the constituency is (clearly) against the bill, *SIG Money Contra-Constituency* indicates the money from groups that are for the bill, and *SIG Money Pro-Constituency* contains the money from groups that oppose the bill. See Table A1 for an overview of the transaction types and interest group codes that we exclude before aggregating special interest groups' campaign donations. Note that we consider refunds when constructing the money variables, i.e., when donations are transferred from a candidate back to the donating PAC. In some cases, this results in a representative returning more money to groups than he or she received from them. In these cases, we replace the corresponding money variable with zero. Otherwise, for example, we would be looking at a situation in which a representative returns more money to groups that oppose the constituency's position than he or she receives from them as pressure to vote aligned with voters.

Figure A1(a) shows how different sectors are represented in our special interests measure (before we calculate *SIG Money Contra/Pro-Constituency* and possibly do not take into account campaign funds by some interest groups, as no clear position of the electorate is given (i.e., when *Alignment* is not defined). Each bar aggregates campaign donations that we can assign to particular votes, made by groups in the respective sector (in percentages relative to the total assignable money from all groups). A possible concern with our measure of interest group pressure might be the double counting of some money flows (e.g., if a group that supports two bills donates to a representative who votes on both issues). In order to see to what extent this issue affects our special interests measure, we change the time frame and only consider the campaign donations a representative receives in the month before the vote. This is what the corresponding second bar in Figure A1(a) shows, indicating a distribution of money flows across sectors that is rather similar to the one for the main measure. In general, there is a trade-off between capturing the theoretically relevant long-term relationship between campaign donors and representatives, and the potential double counting of money in the special interests measure. However, as the overall pattern changes only slightly, we conclude that the potential double counting of money is not a substantial concern for the interpretation of our findings.

Figure A1: The relative strength of sectors in the constituent and special interests measures



Notes: Each bar in figure (a) shows the share a particular sector makes up when aggregating all campaign donations that can be assigned to specific votes and made by groups in that sector (relative to the total assignable money by all groups). Figure (b) depicts the shares for the number of individual donors that we can assign to position-taking groups in each sector (relative to the total number of assignable individual donors). The sector *Other* includes education, civil servants, retired, and non-profits.

## B Validation of measure for constituent interests

We validate our measure for constituents' bill-specific policy preferences primarily in two ways. First, we adopt the most direct validation test possible and compare citizens' voting behaviour on particular issues with our measure based on the number of donors. Second, we compare our measure with citizens' policy positions on certain bills reported in election surveys, thereby neglecting preference intensities that affect turnout. Both analyses test whether our measure is consistent with other measures for voter preferences referring to the *exact same bills*. Moreover, we check whether our measure based on comparatively wealthy citizens actually correlates with the revealed and reported policy preferences of the overall voting age population. In addition to the two tests that focus on expressed bill-specific preferences, we contrast the latent economic interests captured in our measure with industry-level employment figures across counties. This latter test validates that the selection of actively donating citizens in a district is, in fact, approximately representative of the employed voting age population of the same district.

*Voting on propositions.* Election returns of ballot propositions are a particularly attractive way to directly measure voters' preferences regarding a specific legislative proposal. They reflect people's choices ideally after a public debate leading to a binding collective decision involving those people who felt sufficiently affected. Measuring voter preferences in this way seems intuitive and arguably very close to the definition of bill-specific voter preferences. Moreover, this approach has been proven useful in the recent literature.<sup>3</sup> Besides positions on federal bills, MapLight also documents positions on selected state legislation. This allows us to compare our measure for constituent interests with actual popular voting results for those ballot propositions that involve legislation previously passed in a state legislature and for which MapLight has collected positions from interest groups. This applies to three ballot measures in the state of California from 2014 and 2016.<sup>4</sup> For these, we calculate the percentage of people in a county who voted in favour of the proposition in question (denoted *Yes share*), as well as the percentage of individual donors who are in favour of the bill in net terms (percentage of donors in favour minus percentage of donors against), scaled by the total number of donors in the county coded for and against the bill (therefore ranging from  $-100$  to  $100$ ). We refer to the latter as *Yes donor share (net)*. Note that this is the same measure we use to construct our alignment indicator (see Section 3). In each case, we consider individual donations from the election cycle in which the proposed bill was on the ballot. In cases where no donor is assigned to groups with positions, we replace the individual donation-based Yes shares with zeros, assuming that no one is substantially affected by the proposed law. We estimate an OLS model in which we correlate the Yes shares for a particular bill based on individuals' donations, *Yes donor share (net)*, with the corresponding Yes shares based on ballot election returns (*Yes share*). Our sample for this analysis consists of 174 observations (3 ballot proposals  $\times$  58 counties). Related results are presented in columns (1) and (2) of Table B1. Both regressions account for bill fixed effects

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<sup>3</sup>For example, Matsusaka (2017) constructs a bill-specific measure for voter preferences by using referendum election returns in nine US states; Stadelmann et al. (2013) follow the same approach in the Swiss context.

<sup>4</sup>The popular votes examined include Propositions 1 and 42 of 2014, and Proposition 67 of 2016. Proposition 1 dealt with Assembly Bill 1471 of 2014 (AB 1471), a legislatively referred bond act, Proposition 42 with Senate Constitutional Amendment 3 of 2013 (SCA 3), a legislatively referred constitutional amendment, and Proposition 67 related to Senate Bill 270 of 2014 (SB 270), a veto referendum. AB 1471 authorised California to raise \$7.12 billion for water infrastructure projects; SCA 3 obliged local agencies to disclose government documents, and SB 270 banned the use of plastic bags in retail stores. All three measures were accepted. Regarding AB 1471, MapLight has documented positions of 15 different interest groups, for SCA 3 and SB 270 we observe positions of 2 and 20 different groups, respectively.

(some bills may per se affect voters more than others). We thus only exploit variation in the Yes shares for a given bill across the different counties. In column (2) we restrict the sample to those counties where the Yes shares in the popular vote are between 40 and 60%. By only considering situations where a confrontation of different interests in a county is likely, we exclude the possibility that the correlation found between the two preference measures is primarily the result of rather clear cases where most voters agree or disagree on the bill in question. Under model (1), a ten percentage-point increase in the proportion of people voting for the ballot proposal is associated with a 13 percentage-point increase in the net proportion of donors supporting the related bill. Thus even though campaign donors probably make up the tail end of the distribution in terms of preference intensity and economic potency, they seem to reflect well the broader distribution of voter preferences in an electoral district.

*Responses to survey questions.* In a second validation, we check whether our measure for voter interests also correlates with a bill-specific preference measure obtained from survey data. For this purpose, we use information from the Cooperative Congressional Election Study (CCES), a web-based survey on congressional elections that also includes questions on important legislation discussed in Congress (Ansolabehere, 2010).<sup>5</sup> Using the CCES survey waves from 2006, 2008, 2010, 2012, 2014, 2016, and 2018 we can identify 20 (non-amended) bills for which MapLight also documents positions of interest groups (and thus we can construct our measure for constituent interests).<sup>6</sup> Analogous to the analysis of the ballot proposition, we test in a regression framework whether more people in a congressional district who indicate in the survey their support for a certain bill (number of people who answer Yes divided by the number of people who say Yes or No, referred to as *Yes share*) is related to a higher share of individual donors in the district who support the bill in net terms based on the positions of the groups OpenSecrets assigned to them – corresponding to *Yes donor share (net)*. We consider all individual campaign contributions related to federal elections made during the most recent (two-year) election cycle before citizens were polled on the bill in question. The OLS regression results can be found in columns (3) to (5) of Table B1. As in the ballot proposition analysis, the dependent variable is our measure of voter interests based on individual campaign donations. Estimates with bill fixed effects reveal a statistically significant correlation between the share of CCES respondents supporting a certain bill and the percentage of campaign donors from the district who have preferences for that bill. With reference to column (3), a ten percentage-point higher Yes share in the CCES is on average related to a 3.1 percentage-point higher share of individual donors supporting the bill in net terms. In model (4) we restrict the sample to those districts where more than 92 people were asked in the CCES survey about the respective bill and where we observe more than 20 donors assigned to groups with preferences regarding the bill in question (i.e., with the number of observations above the 33rd percentile for both variables). Finally, in column (5) we apply both the latter restriction and additionally limit the sample to only those cases where the CCES Yes share is between 40 and 60%. A similar correlation is observed.

*Industry structure.* Economic interests tied to people's jobs are an important driver of policy preferences (and have often been at the centre of previous empirical applications, see, e.g., Mayda and Rodrik,

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<sup>5</sup> Ansolabehere and Jones (2010) study voters' responses in the CCES to analyse whether senators are held accountable based on voters' beliefs about their voting behaviour. This seems to be the case. In a related study, Nordin (2019) constructs a bill-specific measure for voters' preferences using the CCES. He observes that voters with better access to relevant local television are more likely to evaluate their senators based on the alignment between their preferences and their senators' actual roll call decisions.

<sup>6</sup> Table B3 lists the bills under consideration.

Table B1: Validating the constituent interests measure using election returns on ballot propositions in California and CCES survey data

Dependent variable: <i>Yes donor share (net)</i>	Ballot proposition votes		CCES survey data		
	(1)	(2)	(3)	(4)	(5)
Yes share (ballot/survey)	1.314*** (0.235)	2.083*** (0.774)	0.309*** (0.048)	0.527*** (0.048)	0.472*** (0.089)
Bill FE	X	X	X	X	X
Yes share range	[0,100]	[40,60]	[0,100]	[0,100]	[40,60]
#Respondents per district	-	-	> 0	> 92 (33rd pct.)	> 92
#Donors per district	-	-	> 0	> 20 (33rd pct.)	> 20
Observations	174	93	8,700	4,225	1,782
Adjusted $R^2$	0.175	0.088	0.740	0.916	0.949

*Notes:* OLS regressions with robust standard errors clustered by county/district in parentheses. The unit of observation is county/district-bill (county in California for the ballot proposition analysis and congressional district for the estimates based on CCES survey data). The dependent variable counts the individual donors in the county/district with links to groups that support the bill in net terms (relative to the total number of donations for and against the bill), with a range from -100 to 100. Its respective means/SDs (for the full sample) are 70.37/39.78 for the ballot analysis and 37.56/63.86 for the CCES data. The main explanatory variable in the ballot proposition analysis captures the share of people in the county who vote in favour of the respective ballot measure. In the analysis based on CCES survey data, the main explanatory variable is the share of CCES respondents in the district who say that they support the bill in question, relative to the total number of respondents who say Yes or No. Their respective means/SDs are 53.84/11.86 and 55.97/18.05. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

2005, in the context of individuals' preferences over trade policy).<sup>7</sup> In our third validation exercise, we thus assess whether the industry structure is also reflected in our broader measure of constituent interests offering some economic face validity for the construct. Based on the US Census Bureau's *County Business Patterns (CBP)* statistics and the matching of OpenSecrets industry codes to the classification used there, we find that county-level employment across industries is strongly positively correlated with individual campaign donations of people who work in these industries (see Table B2). Specifically, an increase in the employment share of a particular industry by ten percentage points is on average related to a four percentage points higher share of donors assigned to that industry.

Together, we interpret the results of the preceding validation tests as evidence that individual donors and the interest groups that OpenSecrets assigned to them can approximate the presence of different policy preferences in a particular constituency. Moreover, the assumption that donors share the same political preferences as their employers (or those of unions or ideological groups, if the donation goes to such groups) seems quite reasonable given the context of the bills that we were able to investigate.

With respect to the representativeness of the bills in our validation tests, Figure B1 shows the relative frequencies with which interests of specific sectors take positions regarding i) the 662 bills from our main analysis, ii) the 20 bills from the CCES survey, and iii) the three Californian bills from the ballot proposition analysis. High shares in all three sets of bills represent groups associated with *Ideological*

<sup>7</sup>The authors show that an individual's attitude towards trade correlates with the extent to which the sector where the individual works is exposed to trade. For example, people from sectors with a comparative disadvantage are more likely to have a protectionist attitude.

Table B2: Comparing the industry structure from employment statistics and individual donor data

	Dependent variable:					
	<i>#Donors</i>	<i>#Donors (log)</i>	<i>Donor Share</i>			
	(1)	(2)	(3)	(4)	(5)	(6)
#Employees	0.031*** (0.005)					
#Employees (log)		0.403*** (0.012)				
Employment Share			0.408*** (0.030)	0.427*** (0.028)	0.435*** (0.029)	0.461*** (0.030)
Constant						0.003*** (0.0002)
State FE	X	X	X	X	X	
Cycle FE	X	X	X	X		
Industry FE	X	X	X			
Observations	135,393	135,393	135,393	135,393	135,393	135,393
Adjusted R <sup>2</sup>	0.112	0.412	0.302	0.244	0.216	0.190

*Notes:* OLS regressions with robust standard errors clustered by county in parentheses. The unit of observation is county-industry-year. In specification (1) the dependent variable is the number of individual campaign donors associated with a specific industry per county and year according to the FEC’s individual donations records and the industry assigned by OpenSecrets. In model (2) we use the natural logarithm of the latter as the dependent variable. The dependent variable in specifications (3) to (6) is the share of donors associated with a specific industry per county and year. The explanatory variable *#Employees* measures the number of employees per industry-county-state according to the US Census Bureau County Business Patterns (CBP) statistics. The CBP figures are available at the level of 6-digit NAICS codes, and are more granular than OpenSecrets industry categories. Therefore, employment in a particular NAICS industry is evenly distributed among OpenSecrets industries where this NAICS code occurs. In all specifications, the sample is restricted to observations with more than 50 employees and more than 10 donors. The time span of our sample is 2000 to 2018. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

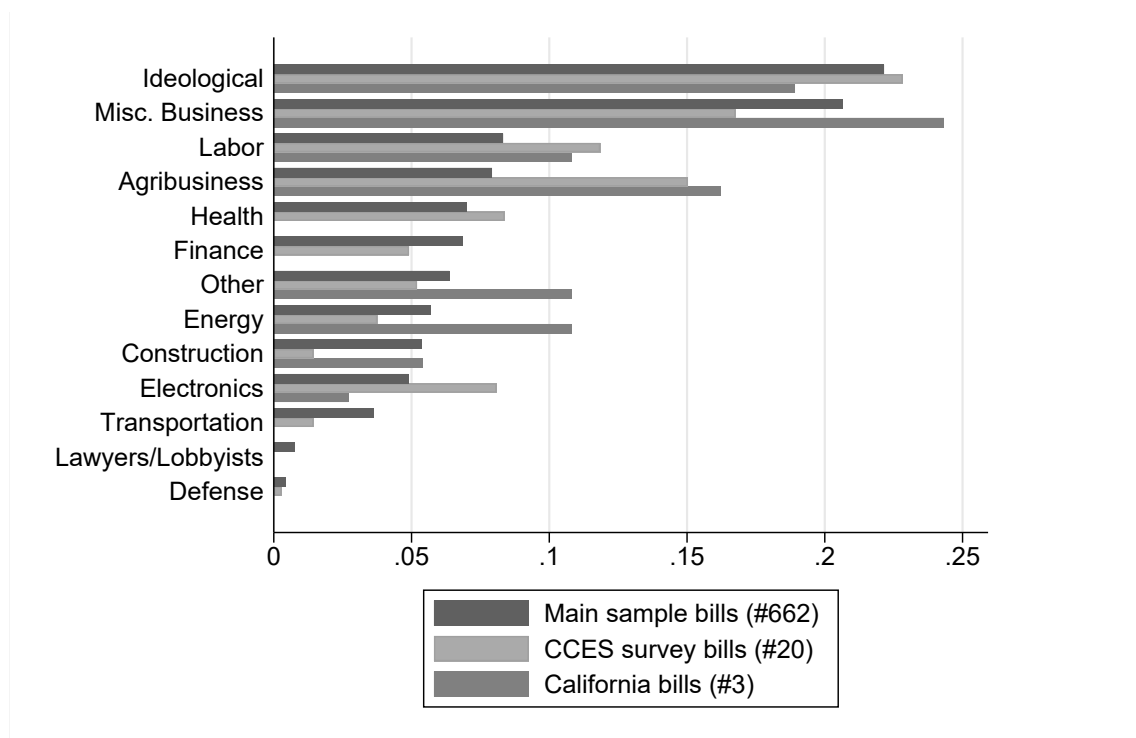
and *Misc. Business* interests. Somewhat overrepresented in both the CCES and the Californian sample of bills are interests from the *Agribusiness* sector (15/16% versus 8%). In the CCES sample, we have 8 bills (out of 20) in which we observe positions from interest groups associated with *Agribusiness*. An estimate of models (3), (4), and (5) from Table B1 excluding these bills provides point estimates of 0.233, 0.694, and 0.738 ( $p$ -values all smaller than 0.01). The fact that we have only three bills that allow us to validate our measure of voter preference by ballot proposition voting in California explains why for some sectors we do not observe any positions of interest groups associated with them.

### Supplementary information on data used and their compilation

In addition to the explanations in the main text, here we provide some specific supplementary information regarding the data used and their compilation into the final data sets that we use in the three validation approaches.

*Voting on propositions in California.* For the constructed measure of constituent preferences, we take into account all individual campaign donations in connection with federal elections that were made in the election cycle of the respective ballot vote. To assign citizens’ ZIP codes from OpenSecrets donor data to the corresponding counties in California, crosswalks were sourced from [Harvard Dataverse \(2023\)](#) and

Figure B1: Interest group presence by sector in different sets of bills



*Notes:* The graph shows the relative presence of interest group sectors in three sets of bills: the 662 bills from our main analysis, the 20 bills from the CCES survey, and the three Californian bills from the ballot proposition analysis. We use the latter two sets to validate our measure for constituent interests, which we construct for the 662 bills from our main analysis. We measure the frequency with which interest groups of a particular sector take positions regarding the bills from the respective set (i.e., the number of positions from interest groups within a sector relative to the total number of positions). The sector *Other* includes education, civil servants, retired, and non-profits.

the [US Department of Housing and Urban Development \(2023\)](#) (the 1st quarter 2014 file was used; in cases where a ZIP code spans more than one county, the county with the majority of the population within the ZIP code was assigned). County-level voting results on ballot propositions were obtained from the office of the [California Secretary of State \(2023\)](#) (see <https://www.sos.ca.gov/elections/prior-elections/statewide-election-results>).

*Responses to survey questions.* The surveys of the Cooperative Congressional Election Study for the different years can be downloaded from Harvard Dataverse (<https://cces.gov.harvard.edu>). The number of respondents is about 35,000 in the 2006 and 2008 surveys, and about 55,000 in 2010, 2012, and 2014. Table B3 lists the bills included in our analysis. Note that we can only construct preferences on policies for which a bill exists and for which MapLight has documented interest group positions; i.e., we cannot consider preferences on legislative amendments for which the CCES includes questions. Also note that the questions are always asked before the congressional elections and involve bills discussed in the current Congress, but also bills from past sessions. If the question about a particular bill is contained in several waves, we take the answers from the congressional session in which the bill appeared for the first time.



Table B3: Bills from the CCES survey that we use to validate the measure for constituent interests

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**2006 CCES (109th Congress)**

- Central America Free Trade Agreement - H.R. 3045

**2008 CCES (110th Congress)**

- Withdrawal of US troops from Iraq - H.R. 2237
- Stem Cell Research Funding - S. 5
- Extend NAFTA to Peru - H.R. 3688

**2010 CCES (111th Congress)**

- American Clean Energy and Security Act - H.R. 2454

**2012 CCES (112th Congress)**

- Ryan Budget Bill - H.Con.Res. 34
- US-Korea Free Trade Agreement - H.R. 3080
- Repeal Affordable Care Act - H.R. 6079
- Middle Class Tax Cut Act - S. 3412
- Tax Hike Prevention Act - S. 3413

**2014 CCES (113th Congress)**

- Federal Agriculture Reform and Risk Management Act - H.R. 2642
- Temporary Debt Limit Extension Act - S. 540
- USA Freedom Act - S. 2685
- A Resolution to Improve Procedures for the Consideration of Legisl. and Nominations in the Senate - S.Res. 15

**2016 CCES (114th Congress)**

- USA Freedom Act - H.R. 2048
- Highway and Transportation Funding Act - H.R. 2353
- Iran Sanctions Act - H.R. 6297
- Medicare Accountability and Cost Reform Act - H.R. 2
- Repeal Affordable Care Act - H.R. 596

**2018 CCES (115th Congress)**

- Countering America's Adversaries Through Sanctions Act - H.R. 3364
-

## C Determinants of representative-vote-specific campaign money

The amount of campaign money individual representatives receive from special interests is likely the result of some strategic considerations to effectively influence the political process. Therefore, we are reluctant to make strong interpretations of the correlation with voting behaviour and concentrate on the interaction with exogenous variation in media attention. However, we still want to provide an understanding of the covariates related to these money flows. Accordingly, we estimate models where the dependent variable is the total amount of money that a representative received in the last election cycle before a particular vote from interest groups with a position regarding the bill. As explanatory variables, we use party affiliation, majority status, seniority, a dummy indicating retirement at the end of the session, electoral security, and ideological moderateness. We also include two bill-specific measures capturing i) the potential for conflict, and ii) the extent to which the bill tends to affect economic (business groups, unions, trade associations) or ideological/partisan groups. We measure *Electoral Security* by the margin of victory in the representative's last election.<sup>8</sup> *Ideological Moderateness* is the negative of the absolute distance of the DW-NOMINATE score to zero (higher values are thus associated with more moderate representatives).<sup>9</sup> *Bill Conflict Potential* is the number of organisations taking positions regarding the bill (support/oppose/indifferent) minus the absolute difference between supporting and opposing organisations; *Bill Economic* is the number of economic interest groups with positions on the bill divided by the total number of interest groups (economic, ideological/single-issue and partisan) that have documented positions. Table C1 provides descriptive statistics for all variables that we use in our analysis.

For each vote, a representative gets about \$21,000 from special interests that support or oppose the bill, on average. The regression results in Table C2 show that Democrats receive, on average, more than \$3,000 less compared with their Republican colleagues (over one election cycle). This is consistent with the fact that business PACs tend to favour Republican candidates, just as they outspend labour and ideological interests.<sup>10</sup> When we exploit variation within representatives in column (3) we find that being a member of the majority party is associated with slightly less than \$4,000 in additional campaign funds per vote. This is in line with [Rudolph \(1999\)](#) and [Cox and Magar \(1999\)](#), who argue that the status of the majority party is an important institutional asset. The estimated coefficients on seniority and retirement emphasise the investment motive of interest groups when engaging in political spending. Our results indicate that ten more years in office are associated with around \$19,000 more for each vote (statistically not significant). Surprisingly and counterintuitively, a representative who is serving his or her last term before retiring does not receive less money than before. A likely explanation is that in our approach (which measures long-term exchange relationships) the timing of the money transfer and legislative vote may be far apart (in the most extreme case, up to almost four years, for example, when the transfer takes place at the beginning of 2007 and the vote before the elections in 2010). In such cases, at the time of donation, special interests often will not know that the supported representative is retiring after his or her next term. Beyond that, a higher vote margin in the representative's last election leads to a decrease in

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<sup>8</sup>Congressional district election result data is sourced from the [Federal Election Commission \(2023\)](#).

<sup>9</sup>The DW-NOMINATE data can be accessed at <https://voteview.com> ([Lewis et al., 2023](#)).

<sup>10</sup>More than 70% of all PAC donations in the 2015-16 election cycle came from business PACs, of which two thirds were to Republican candidates (<https://www.opensecrets.org/overview/blio.php?cycle=2016>).

vote-specific campaign funds: a 25 percentage point higher margin (one standard deviation) is associated with a loss of about \$600 (not significant). This seems plausible against the background that political investors see their chance rather in contested races where candidates rely on well-filled war chests. Snyder (1992) as well as Grier and Munger (1993) test seniority and electoral security (among other factors). Their results also indicate a positive relationship between representatives' time in office and aggregate campaign contributions they receive, and a negative correlation between electoral security and campaign funds. Likewise, ideological moderation is associated with more campaign funds (\$4,000 more for a position that is one standard deviation closer to zero in the DW-NOMINATE score). This suggests that special interest groups may have stronger incentives to fund less extreme representatives whose voters are more likely to be located at the threshold between supporting and opposing a particular bill. As we have just one representative changing party in our sample and as ideological moderateness barely changes over time for a given representative, we exclude those covariates when we exploit variation within representatives. Finally and not surprisingly, a more contested bill as well as a greater share of economic organisations interested in the bill are correlated with more campaign money.

We are aware that there are many more potential factors that determine the support of the campaign by special interests. In particular, these are factors that change over time due to changes in electoral competition, political control in Congress, or new legislation being discussed.

Table C1: Descriptive statistics for the determinants of campaign money

Variable	Mean	Std. Dev.	Min.	Max.	N
Money Total	2.116	4.700	0	149.6	215,981
Democratic Party	0.475	0.499	0	1	215,981
Majority Member	0.556	0.497	0	1	215,981
Seniority	5.703	4.464	1	30	215,981
Retiring from Office	0.054	0.227	0	1	215,981
Electoral Security	0.349	0.245	0	1	215,981
Ideological Moderateness	-0.428	0.144	-0.931	-0.011	215,981
Bill Conflict Potential	6.566	18.17	0	208	215,981
Bill Economic	0.583	0.363	0	1	215,981

Notes: *Money Total* is measured in \$10,000 units, *Seniority* is in two-year terms. The unit of observation is representative-vote.

Table C2: The determinants of representative-vote-specific campaign money

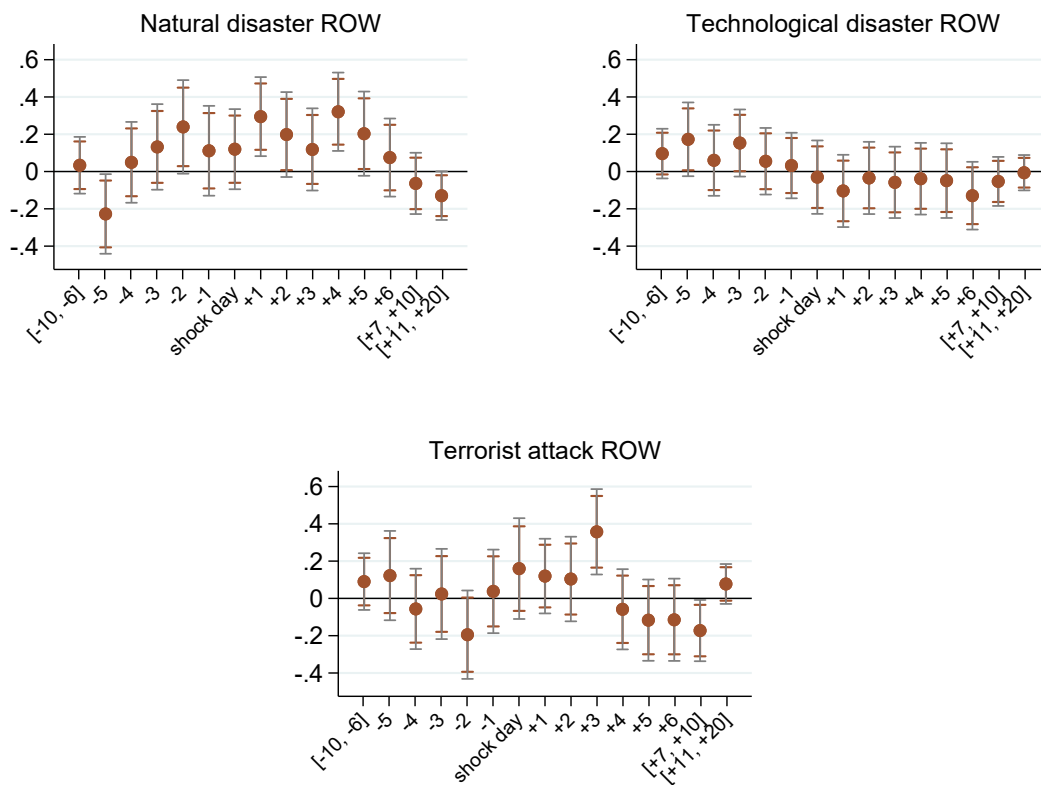
Dependent variable: <i>Money Total</i>	(1)	(2)	(3)
Democratic Party	-0.312** (0.122)	-0.341*** (0.124)	
Majority Member	0.206** (0.087)	0.216** (0.087)	0.395*** (0.120)
Seniority	0.066*** (0.018)	0.065*** (0.018)	0.384 (0.292)
Retiring from Office	0.125 (0.166)	0.119 (0.169)	0.004 (0.134)
Electoral Security	-0.220 (0.186)	-0.273 (0.187)	-0.243 (0.158)
Ideological Moderateness	2.734*** (0.414)	2.722*** (0.416)	
Bill Conflict Potential	0.077*** (0.012)		
Bill Economic	2.340*** (0.294)		
Congress FE	X		
Vote FE		X	X
Representative FE			X
Observations	215,981	215,981	215,981
Adjusted $R^2$	0.168	0.483	0.545

*Notes:* OLS regressions with robust standard errors two-way clustered by representative and vote in parentheses. The unit of observation is representative-vote. *Money Total* (in \$10,000 units) is the sum of campaign contributions a representative received from interest groups with positions on the bill in the last (two-year) election cycle before the vote. The sample consists of 666 final passage votes between 2005 and 2018. Descriptive statistics of the variables used are presented in Table C1. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

## D Identification of shock days

Table D1 and D3 presents the full set of estimation results on how the various shock events (occurring in the US and worldwide) affect the measure of *daily news pressure*. The estimated coefficients for the different time intervals regarding US shock events are presented graphically in Figure 1 in the main text. Figure D1 depicts the corresponding estimates for shocks that occur outside the US (aggregated in ROW, i.e., rest of world). The related thresholds for the definition of US and worldwide shocks (whereby for the latter, we aggregate the number of deaths per day caused by the respective shocks across all countries outside the US) can be found in Tables D2 and D4, respectively.

Figure D1: News pressure in the US following worldwide shock events, 1990-2018



*Notes:* The graphs show the effects of worldwide shocks on news pressure in the US around the day of the shock (ROW means rest of the world and aggregates all incidents outside the US). The estimates are based on OLS regressions controlling for month-by-year and day-of-the-week fixed effects (with robust standard errors clustered at the month-by-year level). The dependent variable of *daily news pressure* on different days or intervals around the shock is from [Eisensee and Strömberg \(2007\)](#). Table D3 shows the full regression output. 95% and 90% confidence intervals are included.

Table D1: US Shock events and news pressure in the US evening news

Dependent variable: <i>Daily News Pressure</i>	$[-10, -6]$	-5	-4	-3	-2	-1	$shock = t$	+1	+2	+3	+4	+5	+6	$[+7, +10]$	$[+10, +20]$
Natural disaster US	0.104 (0.111)	-0.060 (0.125)	0.059 (0.142)	0.236 (0.153)	0.361** (0.162)	0.657*** (0.168)	0.746*** (0.164)	0.468*** (0.154)	0.373** (0.151)	0.329** (0.138)	0.062 (0.123)	-0.156 (0.117)	-0.153 (0.123)	-0.090 (0.120)	-0.103 (0.068)
Techn. disaster US	0.006 (0.135)	-0.162 (0.187)	0.052 (0.177)	-0.023 (0.194)	-0.039 (0.190)	0.010 (0.255)	-0.210 (0.225)	0.407* (0.216)	-0.075 (0.197)	-0.051 (0.187)	-0.127 (0.174)	0.049 (0.187)	-0.358** (0.158)	-0.047 (0.134)	0.131* (0.077)
Terrorist attack US	-0.054 (0.173)	-0.291 (0.257)	-0.187 (0.211)	0.368 (0.273)	0.296 (0.279)	0.037 (0.245)	0.784** (0.343)	1.156*** (0.360)	0.523 (0.379)	0.470 (0.307)	0.355 (0.253)	-0.112 (0.278)	0.203 (0.247)	-0.228 (0.152)	-0.128 (0.123)
Mass shooting US	-0.140 (0.127)	-0.297 (0.220)	-0.336* (0.199)	-0.431** (0.173)	-0.097 (0.241)	0.015 (0.260)	0.591** (0.300)	1.124*** (0.267)	0.671*** (0.256)	0.253 (0.216)	0.129 (0.262)	0.057 (0.288)	-0.444* (0.242)	-0.197 (0.136)	-0.069 (0.091)
Month-by-Year FE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Day-of-the-week FE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Observations	10,568	10,429	10,429	10,429	10,429	10,429	10,429	10,428	10,427	10,426	10,425	10,424	10,423	10,560	10,562
Adjusted $R^2$	0.458	0.253	0.251	0.251	0.251	0.254	0.258	0.259	0.255	0.255	0.254	0.256	0.260	0.450	0.607

Notes: OLS regressions with standard errors clustered at the month-by-year level in parentheses. The dependent variable is *daily news pressure* (Eisensee and Strömberg, 2007) on different days around the shock event (or averaged over days if we consider time spans). The explanatory variables are indicators that take a value of one if, on day  $t$ , the number of deaths caused by the respective event lies above the 95th percentile of the (event-specific) distribution. The mean value of *daily news pressure* (in minutes) is 8.44 (with a standard deviation of 2.53). The sample period is 1990-2018. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table D2: US shock events: The number of deaths per day (by type of event), 1990-2020

Type of event	Region	Mean	Min.	Max.	95th pctl.	#shock days (#incidents)
Natural disaster	USA	0.621	0	670	2.75	563 (632)
Technolog. disaster	USA	0.293	0	265	0	137 (175)
Terrorist attack	USA	0.333	0	3,004	0	129 (999)
Mass shooting	USA	0.088	0	58	0	130 (130)

Notes: Overview of the no. of days coded as potentially distracting from the legislative process (i.e., a shock day) based on whether the number of event-related deaths per day lies above the 95th percentile of its (event-specific) distribution. In the case of natural and technological disasters, we restrict the sample to incidents lasting at most ten days. The 632 natural disasters in the US consist mainly of storms and floods (69% and 18%, respectively) and wildfires (8%). The remaining 5% are shared by earthquakes, extreme temperatures, landslides, and an epidemic. The shock sample period is 1990-2020 (terror and mass shooting incidents until 2019).

Table D3: Worldwide shock events and news pressure in the US evening news

Dependent variable: <i>Daily News Pressure</i>	$[-10, -6]$	-5	-4	-3	-2	-1	$shock = t$	+1	+2	+3	+4	+5	+6	$[-7, +10]$	$[+10, +20]$
Natural disaster ROW	0.034 (0.078)	-0.227** (0.109)	0.049 (0.111)	0.132 (0.117)	0.240* (0.128)	0.111 (0.123)	0.120 (0.110)	0.295*** (0.108)	0.198* (0.116)	0.119 (0.112)	0.321*** (0.107)	0.203* (0.115)	0.075 (0.107)	-0.064 (0.084)	-0.129* (0.067)
Techn. disaster ROW	0.096 (0.068)	0.173* (0.101)	0.060 (0.097)	0.153* (0.092)	0.055 (0.091)	0.032 (0.090)	-0.030 (0.100)	-0.104 (0.099)	-0.034 (0.099)	-0.058 (0.098)	-0.038 (0.098)	-0.049 (0.102)	-0.130 (0.093)	-0.053 (0.067)	-0.006 (0.048)
Terrorist attack ROW	0.090 (0.078)	0.122 (0.122)	-0.056 (0.110)	0.024 (0.123)	-0.195 (0.121)	0.038 (0.114)	0.160 (0.138)	0.120 (0.102)	0.104 (0.116)	0.357*** (0.117)	-0.058 (0.110)	-0.117 (0.111)	-0.115 (0.113)	-0.173** (0.084)	0.077 (0.055)
Month-by-Year FE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Day-of-the-week FE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Observations	10,568	10,429	10,429	10,429	10,429	10,429	10,429	10,428	10,427	10,426	10,425	10,424	10,423	10,560	10,562
Adjusted $R^2$	0.458	0.253	0.250	0.250	0.250	0.251	0.253	0.253	0.253	0.255	0.255	0.256	0.260	0.450	0.607

Notes: OLS regressions with standard errors clustered at the month-by-year level in parentheses. The dependent variable is *daily news pressure* (Eisensee and Strömberg, 2007) on different days around the shock event (or averaged over days if we consider time spans). The explanatory variables are indicators that take a value of one if, on day  $t$ , the number of deaths caused by the respective event lies above the 95th percentile of the (event-specific) distribution. ROW refers to the rest of the world and aggregates all countries except the US. The mean value of *daily news pressure* (in minutes) is 8.44 (with a standard deviation of 2.53). The sample period is 1990-2018. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table D4: Worldwide shock events: The number of deaths per day (by type of event), 1990-2020

Type of event	Region	Mean	Min.	Max.	95th pctl.	#shock days (#incidents)
Natural disaster	ROW	109.3	0	226,408	76.2	566 (7,064)
Technolog. disaster	ROW	21.35	0	2,236	90	554 (7,017)
Terrorist attack	ROW	33.53	0	1,612	117	539 (158,754)

Notes: The shock sample period is 1990-2020 (terror and mass shooting incidents until 2019). ROW refers to the rest of the world and aggregates all countries outside the US.

## E News reporting on politics and shock events

To check whether the news pressure caused by our shock events is actually related to reduced media attention to national politics, we estimate models in which we use the shock events to explain political news coverage. We particularly focus on local news outlets, as these are only partly covered by the general measure of news pressure (Eisensee and Strömberg, 2007) (capturing news pressure in the news shows of the major television networks). This critical assessment is motivated primarily by two potential concerns regarding our general measure of news pressure. First, it might be the case that voters consume news on Congress and, in particular, news on their representatives primarily through local news outlets. In our main analyses, we assume that the pattern captured by our general measure of news pressure is reflected similarly in local news outlets (television, print, and online) (or at least the response in national outlets is not counteracted). That is, if there is a crowding out effect in major national television news shows due to a shock event, a similar crowding out effect is assumed in more local news outlets. With the additional analysis in this section, we can validate whether that assumption is actually supported by the data. Second, and in a similar vein, our general measure of news pressure captures the idea of the broadcast time constraint with which television news editors are confronted. The pressure due to limited resources (here particularly time) is thus especially pronounced in the television context but arguably less so in the context of (online) newspapers. Thus, if voters were to obtain news on Congress primarily from online news sites, it would be questionable whether they would be affected at all by a reduced supply captured by our general measure of news pressure (while they might still shift their priorities in the content they consume). Developing the argument further, if it were the case that there is no measurable crowding out of political news in (online) newspapers and a large share of the voters consumed news from such outlets, there might even be a potential extensive margin effect of shocks leading not to fewer but to more voters being informed about politics (more people following the news due to the shock event and thereby also learning about legislative politics).<sup>11</sup> In order to address these two concerns, we construct a data set on the coverage of national politics as well as shock events in local television and newspapers. The underlying data come from the TV News Archive and Media Cloud. The following describes (for television and newspapers respectively) the data used and presents the results of the estimates.

### E.1 Television

We collect data from the TV News Archive (a tool of the Internet Archive).<sup>12</sup> We use the Television Explorer (a service provided by the Global Database of Events, Language, and Tone, short GDELT) to systematically access this data via an API.<sup>13</sup> From a selection of more than 150 stations (local, national, and international), transcripts of the spoken texts in news broadcasts (so-called closed captions) have

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<sup>11</sup> While a valid argument, we see it as a second order concern given that television is still the most important source of information for a majority of people in the US. In 2018, 49% of US adults surveyed said that they often receive news from television (compared to 33% from news websites, which rank second) (see <https://www.pewresearch.org/fact-tank/2018/12/10/social-media-outpaces-print-newspapers-in-the-u-s-as-a-news-source>). This argument holds even more for the period before 2018 (our observation period was 2005 to 2018).

<sup>12</sup> See <https://archive.org/details/tv>.

<sup>13</sup> GDELT 2.0 Television API: <https://blog.gdeltproject.org/gdelt-2-0-television-api-debuts> (Global Database of Events, Language, and Tone, 2023).



been archived here since 2009. Our analysis focuses on 2009-2020, the period for which we have both information on shock incidents and television stations' newscasts.<sup>14</sup> This selection leaves us with 140 local channels from 29 distinct market areas, of which we have recorded news broadcasts (note that not all channels have been monitored over the entire period). We look for news segments that contain either 'Congress', 'White House', or 'Federal Government', serving as our measure for political news. In case of a shock period, we clean these news clips of those that contain both one of the three terms as well as at least one keyword related to the respective shock.<sup>15</sup> The reason for adjusting the measure is that shocks can obviously trigger a political response and we do not expect fewer news reports about, for example, the US government's response to terrorism after a terrorist attack or the US government's financial aid promises following a devastating natural disaster abroad.

The recorded news segments are divided by GDELT's Television Explorer into 15-second clips. Thus, the search result of each request is the number of 15-second clips that contain our keywords. The total number of recorded 15 second clips per channel and day is also provided. This makes an interpretation in terms of percentage airtime possible, allowing comparisons between stations as well as for a given station over time. We estimate specifications where the percentage of airtime devoted to national political issues by a given station on a given day (net of shock-related political news in case of a shock) is the dependent variable. The explanatory variables are our shock treatment indicators, split up by event type. We use one indicator for each event type (merging natural and technological disasters), taking a value of one when there is either peak or medium news pressure (i.e., the days around a shock when news pressure is significantly higher, as given by Table 1 / Section 3). To rule out the possibility that the effects found are not driven by individual stations or (seasonal or intra-weekly) fluctuations in political coverage, we include fixed effects for each television station, month-by-year, and day-of-the-week throughout all estimations. We estimate the different specifications using OLS. The coefficient estimates then indicate how much political news is crowded out in the specified periods of shock news pressure. In a second set of models, we validate our choice of shock days and use the airtime devoted to shock-related news as dependent variables, here aggregating news stories that contain at least one of the relevant shock keywords (compare footnote 15). Descriptive statistics for the constructed variables are shown below (Table E3).

The mean value for the political news proxy is slightly below 0.9%, i.e., a local station allocates less than one percent of its news reports to national politics on average. This corresponds to about 3 minutes per day, taking the 5.6 hours that a local station uses on average for local news in its programme as a basis.<sup>16</sup> However, the recorded news segments are in the form of 15-second clips and we get a hit each time one of our keywords is found in such a 15-second segment. Therefore, we are likely to primarily

<sup>14</sup>For terror and mass shooting incidents only until 2019. However, this does not reduce the number of different stations we observe in the sample.

<sup>15</sup>The relevant keywords for shock-related news are as follows:

- Disasters: 'Disaster', 'Catastrophe', 'Flood', 'Tsunami', 'Flooding', 'Earthquake', 'Tornado', 'Storm', 'Hurricane', 'Volcano', 'Volcanic', 'Landslide', 'Epidemic', 'Wildfire', 'Fire', 'Evacuation', 'Accident', 'Crash', 'Casualty'.
- Terrorist attacks: 'Terror', 'Terrorist', 'Terrorism', 'Attack', 'Bomb', 'Bombing', 'Detonation', 'Explosion', 'Firebomb', 'Killing'.
- Mass shootings: 'Shooting', 'Rampage', 'Killing Spree', 'Shooter', 'Gunman', 'Gunfire', 'Shootout', 'Suicide'.

<sup>16</sup>This figure comes from a 2017 survey conducted by the Radio Television Digital News Association (RTDNA) in collaboration with Hofstra University; see [https://web.archive.org/web/20200810090905/https://rtdna.org/article/research\\_2018\\_local\\_news\\_by\\_the\\_numbers#televisionH](https://web.archive.org/web/20200810090905/https://rtdna.org/article/research_2018_local_news_by_the_numbers#televisionH).

capture the extensive margin of reporting, given that we do not know the actual length of the reports. Assuming that television stations produce not only fewer but also shorter news reports in the face of a shock, the crowding out effects reported here are, therefore, likely to be lower bound estimates.

As the regression results in Table E1 show, the shock periods we have chosen are all associated with increased news reporting about the corresponding shock on local television. For example, disaster-related coverage increases by 0.93 percentage points on average when there is shock news pressure due to a natural or technological disaster (see Table 1 for the relevant time frames). This effect is quite large, given that the average news share for disasters is only about 3.5%. The increased coverage of shock events seems to crowd out political news. On days with shock news pressure, political coverage decreases by an average of 0.02 to 0.09 percentage points, depending on the type of shock.<sup>17</sup> Evaluated at the mean share used by broadcasters for political news (roughly 0.9%), this corresponds to a 2% to 10% decline.

Table E1: News coverage of national politics on local television after shock events, 2009-2020

	<i>Disaster News</i> (1)	<i>Political News</i> (2)	<i>Terror News</i> (3)	<i>Political News</i> (4)	<i>Shooting News</i> (5)	<i>Political News</i> (6)
Disaster US	0.930*** (0.082)	-0.088*** (0.010)				
Terrorist attack US			0.559*** (0.058)	-0.083*** (0.016)		
Mass shooting US					1.101*** (0.139)	-0.022 (0.013)
Mean DV	3.544	0.874	1.243	0.864	0.851	0.865
Station FE	X	X	X	X	X	X
Month-by-Year FE	X	X	X	X	X	X
Day-of-the-Week FE	X	X	X	X	X	X
Observations	112,482	112,482	109,188	109,188	109,188	109,188
Adjusted $R^2$	0.444	0.334	0.297	0.326	0.313	0.326

*Notes:* OLS regressions with robust standard errors clustered by local television station in parentheses. The unit of observation is station-day. The dependent variables indicate the percentage of news airtime dedicated to shock-related or national political news (hits for ‘Congress’, ‘White House’, or ‘Federal Government’), (potentially) ranging from 0 to 100. Those news segments that address political news related to the respective shock type were subtracted from *Political news* in case of a shock period. The explanatory variables indicate the relevant period with increased news pressure around each shock according to Table 1 (combining *Shock Peak* and *Shock Medium*, i.e., periods of peak and medium news pressure). Descriptive statistics for all the variables used in the regressions can be found in Table E3. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01.

## E.2 Newspapers

In Table E2 we present results of estimates in which we examine the extent to which our shock events displace newspaper articles about national politics in local newspapers. The underlying data are from Media Cloud, an open-source project of the Berkman Klein Center for Internet & Society at Harvard University and the Center for Civic Media at MIT (<https://mediacloud.org>) (Media Cloud, 2023). Media Cloud tracks newspapers, websites, and blogs and makes their content available in searchable form. Through their public API, we systematically queried when which newspapers mention our keywords

<sup>17</sup>The p-value of the coefficient on the mass shooting indicator is 0.100.

in articles.<sup>18</sup> Our queries are based on more than 900 US newspapers (state and local), both print and online, published in English, and covering the period from 2008 to 2020 (not all newspapers were tracked throughout the entire period). For many newspapers, Media Cloud documents only very few articles per day in total, which is why we focus on those where at least 10 articles were recorded on an observed day. This restriction leaves us with 404 newspapers in the sample (regarding the estimates involving terrorist attacks and mass shootings, where we only have the data up to 2019, the sample comprises 347 newspapers).

As in the preceding analysis of local television news broadcasts, we code an article as one about national politics if it contains either ‘Congress’, ‘White House’, or ‘Federal Government’. Similarly, we code newspaper articles about shocks to examine whether shocks are actually associated with more coverage of them in newspapers.<sup>19</sup> Note that in case of a shock, we subtract from the number of political articles those mentioning both one of the political keywords and one of the corresponding shock keywords (to exclude articles that address politics related to the shock, of which we do not expect less). For all newspaper articles that we assign to a particular news category, we calculate the respective percentage of the total number of articles recorded per newspaper and day. We, therefore, obtain the news share that the observed newspaper devotes to national politics respectively to the corresponding shock category on a given day. Descriptive statistics for all variables are presented below in Table E3. The average proportion of articles related to national politics based on our keyword approach is approximately 5%. In particular, this share is substantially higher than the corresponding share that we get for local television (0.9% of news airtime).<sup>20</sup>

Finally, we regress the news shares of the different news categories on our shock treatment indicators (indicating whether the day falls in a period with peak or medium news pressure around a shock; see Table 1 for the relevant periods). All estimates are with fixed effects for each newspaper, each month of each year, and each day of the week. The related OLS regression results are presented in Table E2. Across all shock periods, we document an increase in newspaper coverage of the corresponding shock category, as well as crowding out of national political news (hits for ‘Congress,’ ‘White House,’ or ‘Federal Government’). The observed crowding out effects range from roughly 15 to 25% (evaluated at the means), i.e., on days with shock news pressure in the major national television networks, a newspaper reduces its political coverage by this amount on average.

In summary, given the documented pattern of the preceding analyses on local television and newspapers, we think that extensive margin effects are not a first-order concern for our approach. With the documented crowding out effects it seems rather unlikely that shocks can lead to more rather than fewer citizens being informed about legislative politics. The results further validate our choice of the general news pressure measure (Eisensee and Strömberg, 2007) for constructing periods of low media attention to politics. The latter seems to capture very well the news reporting patterns as they prevail in local media outlets.

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<sup>18</sup>A guide to using the API can be found here: [https://github.com/berkmancenter/mediacloud/blob/master/doc/api\\_2\\_0\\_spec/api\\_2\\_0\\_spec.md](https://github.com/berkmancenter/mediacloud/blob/master/doc/api_2_0_spec/api_2_0_spec.md).

<sup>19</sup>See footnote 15 for the shock keyword list.

<sup>20</sup>However, we have to keep in mind that our television estimates are more of a lower bound, as the underlying news segments that we search are divided into 15-second clips (see discussion in Section E.1).

Table E2: News coverage of national politics in local newspapers after shock events, 2008-2020

	<i>Disaster News</i>	<i>Political News</i>	<i>Terror News</i>	<i>Political News</i>	<i>Shooting News</i>	<i>Political News</i>
	(1)	(2)	(3)	(4)	(5)	(6)
Disaster US	0.997*** (0.063)	-1.324*** (0.055)				
Terrorist attack US			0.291*** (0.065)	-1.387*** (0.073)		
Mass shooting US					2.303*** (0.106)	-0.802*** (0.053)
Mean DV	13.12	5.562	1.916	5.378	6.458	5.449
Newspaper FE	X	X	X	X	X	X
Month-by-Year FE	X	X	X	X	X	X
Day-of-the-Week FE	X	X	X	X	X	X
Observations	328,641	328,641	292,735	292,735	292,735	292,735
Adjusted R <sup>2</sup>	0.195	0.234	0.625	0.229	0.231	0.231

*Notes:* OLS regressions with robust standard errors clustered by newspaper in parentheses. The unit of observation is newspaper-day. The dependent variables indicate the percentage of newspaper articles with hits for the respective shock keywords (see footnote 15), and the percentage of articles that address national politics, approximated by articles containing ‘Congress’, ‘White House’ or ‘Federal Government’ (excluding articles that contain both one of the latter keywords and a shock keyword in case of a shock). All news variables (potentially) range from 0 to 100. The explanatory variables indicate the relevant period with increased news pressure around each shock according to Table 1 (combining *Shock Peak* and *Shock Medium*, i.e., periods of peak and medium news pressure). Descriptive statistics for the variables can be found in Table E3. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01.

Table E3: Descriptive statistics for the local television and newspaper estimates

Variable	Mean	Std. Dev.	Min.	Max.	N
<b>Television (Table E1)</b>					
Disaster US	0.156	0.363	0	1	112,482
Terrorist attack US	0.070	0.255	0	1	109,188
Mass shooting US	0.046	0.209	0	1	109,188
Disaster News	3.544	4.012	0	51.49	112,482
Terror News	1.243	1.557	0	22.79	109,188
Shooting News	0.851	1.318	0	24.57	109,188
Political News (excl. Disaster-Politics News)	0.874	1.189	0	16.27	112,482
Political News (excl. Terror-Politics News)	0.864	1.183	0	16.27	109,188
Political News (excl. Shooting-Politics News)	0.865	1.183	0	16.27	109,188
<b>Newspapers (Table E2)</b>					
Disaster US	0.150	0.357	0	1	328,641
Terrorist attack US	0.082	0.275	0	1	292,735
Mass shooting US	0.045	0.208	0	1	292,735
Disaster News	13.12	8.744	0	100	328,641
Terror News	1.916	4.717	0	76.92	292,735
Shooting News	6.458	6.19	0	100	292,735
Political News (excl. Disaster-Politics News)	5.562	5.786	0	96.15	328,641
Political News (excl. Terror-Politics News)	5.378	5.599	0	96.15	292,735
Political News (excl. Shooting-Politics News)	5.449	5.647	0	96.15	292,735

*Notes:* The unit of observation is station/newspaper-day. The news variables approximate the percentage of news airtime/news articles dedicated to shock-related or national political news (excluding news on politics related to the respective shock in case of a shock period).

## F Additional information

Table F1: Legislative topics related to the shocks in terms of content

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### Issues and related topic codes (Policy Agendas Project):

#### *Natural disasters:*

- Subsidies to Farmers (402): Includes issues related to government subsidies to farmers and ranchers, including agricultural disaster insurance.
- Nuclear (801): Includes issues related to nuclear energy, safety and security, and disposal of nuclear waste.
- Disaster Relief (1523): Includes issues related to domestic natural disaster relief, disaster or flood insurance, and natural disaster preparedness.
- Foreign Aid (1901): Includes issues related to foreign aid not directly targeting at increasing international development.
- Public Lands (2103): Includes issues related to natural resources, public lands, and forest management, including forest fires, livestock grazing.

#### *Technological disasters:*

- Transportation (10). Includes all topics listed under this major topic code.
- Worker Safety: (501): Includes issues related to worker safety and protection and compensation for work-related injury and disease.
- Nuclear: (801): Includes issues related to nuclear energy, safety and security, and disposal of nuclear waste.

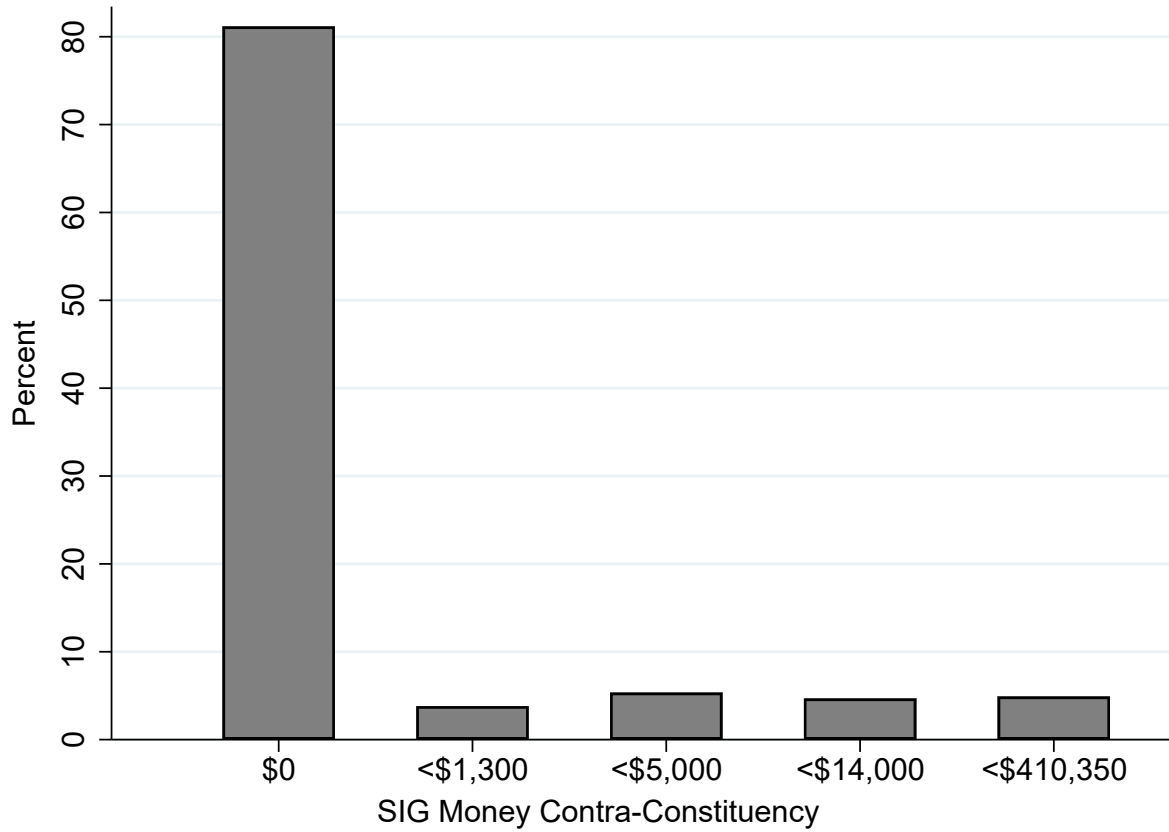
#### *Terrorist attacks:*

- Civil Rights (2). Includes all topics listed under this major topic code.
- Immigration (9). Includes all topics listed under this major topic code.
- Defense (16). Includes all topics listed under this major topic code.
- Agencies (1201): Includes issues related to all law enforcement agencies, including border, customs, and other specialised enforcement agencies and their appropriations.
- Criminal Civil Code (1210): Includes issues related to domestic criminal and civil codes, including crimes not mentioned in other subtopics.
- Crime Control (1211): Includes issues related to the control, prevention, and impact of crime.
- Police (1227): Includes issues related to Police and other general domestic security responses to terrorism, such as special police.
- Terrorism (1927): Includes issues related to international terrorism, hijacking, and acts of piracy in other countries, efforts to fight international terrorism, international legal mechanisms to combat terrorism.

#### *Mass shootings:*

- Civil Rights (2). Includes all topics listed under this major topic code.
  - Agencies (1201): Includes issues related to all law enforcement agencies, including border, customs, and other specialised enforcement agencies and their appropriations.
  - Criminal Civil Code (1210): Includes issues related to domestic criminal and civil codes, including crimes not mentioned in other subtopics.
  - Crime Control (1211): Includes issues related to the control, prevention, and impact of crime.
  - Police (1227): Includes issues related to Police and other general domestic security responses to terrorism, such as special police.
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Figure F1: Distribution plot for *SIG Money Contra-Constituency*



*Notes:* The figures show the distribution of *SIG Money Contra-Constituency* from our model specification (1), i.e., the campaign funds received by representatives from special interests groups that hold the opposite position to that favoured by the constituency with respect to the bill in question. In particular, the graph shows the percentage of observations belonging to each interval, with thresholds representing the values of the 85th, 90th, and 95th percentiles in the distribution.

Table F2: Shock events and the number of agenda-setting conflicts during periods of divided government: election vs. non-election years

Dependent variable:	#AS-Conflicts (Election Year)	#AS-Conflicts (Non-Elect. Year)
Shock Peak	-6.672 (6.410)	16.76*** (4.364)
Shock Medium	-6.228 (4.437)	-0.997 (3.914)
Mean DV	6.877	7.648
Observations	220	267
$R^2$	0.013	0.055

*Notes:* OLS regressions with standard errors in parentheses. #AS-Conflicts refers to the number of individual representatives affiliated with the majority party who face an agenda-setting conflict in any given vote. The estimates are for periods of divided government, separated into election years and non-election years (divided government means that one party holds the presidency while the other party controls one or both chambers of Congress). The unit of observation is vote. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Figure F2: The number of conflicted representatives per vote (*#AS-Conflicts*)

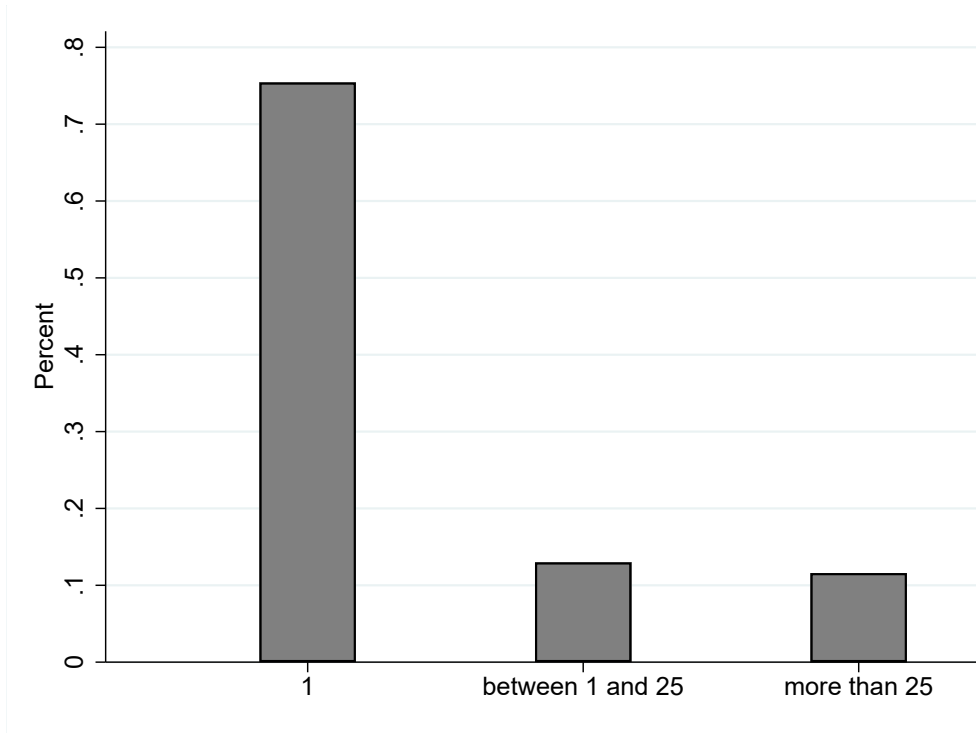
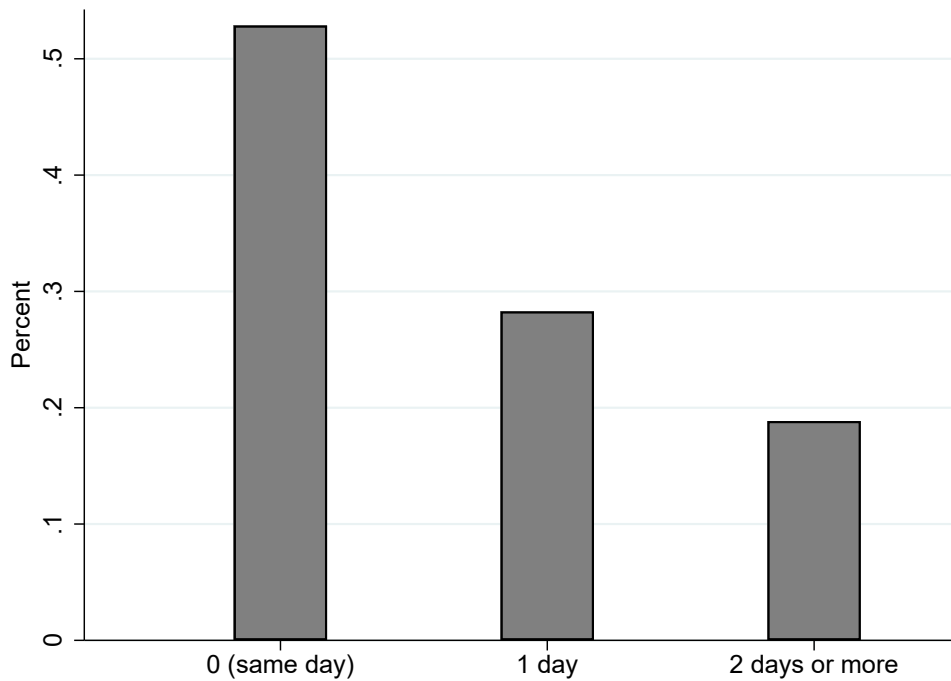


Figure F3: The number of days elapsed between adoption of rule by the Rules Committee and final passage voting



*Notes:* The figures show the distribution of the vote-specific characteristic *#AS-Conflicts* as well as the number of days that elapsed between the Rules Committee's adoption of the rule and the vote on final passage by the full House. The former captures the number of representatives affiliated with the majority party and facing a conflict of type *special interests Yes and voters No*. The sample involves 666 votes.

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