

Political Cleavages and Exposure to the Global Financial Crisis*

Ryan M. Weldzius[†] James Raymond Vreeland[‡] James H. Bisbee[§]

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Abstract

Can a financial crisis tip the domestic balance of power between the status quo winners and the anti-establishment challengers? In this paper, we consider the differential impact of the 2008 global financial crisis on the political voice of firms with varying levels of exposure to the global economic shock. Seeking to understand how financial shocks can translate into political capital, we focus on a particular case, the United States, and a particular mechanism that influences electoral outcomes: political expenditures. We examine firms' corporate campaign contributions and lobbying expenditures before and after the financial crisis, finding that firms more insulated from the crisis experience a relative increase in their political expenditure profiles. We then identify the recipients of these expenditures, tracing the inversion of political capital to the proliferation of less mainstream candidates in federal elections. Our findings provide the first rigorous empirical support for an important and long-held view in international political economy: exposure to financial crises can shift political capital from the winners to the losers of the status quo.

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[†]Villanova University, email: ryan.weldzius@villanova.edu.

[‡]Princeton University, email: jrv@princeton.edu.

[§]New York University, email: james.bisbee@nyu.edu.

1 Introduction

Can a financial crisis tip the domestic balance of power between the status quo winners and the anti-establishment challengers? Scholars have long speculated that an economic shock can reverse the political fortunes of political interest groups and parties. 35 years ago, [Rogowski \(1987\)](#) argued that adverse shocks to globalization negatively impacted the status quo winners from globalization more so than the losers. This largely explained the political shifts experienced in the U.S., Germany, and Latin America in response to the protectionism of the 1930s. Similarly, [Gourevitch \(1986\)](#) argued that a country’s policy response to an economic shock can lead to significant political changes. For example, government responses to the 1970’s oil shocks in France, Sweden, the U.K., the U.S., and West Germany paved the way for historical, domestic political shifts in each country in the years that followed.

More recent scholarship in international political economy has analyzed the successes of anti-establishment challengers by focusing on anti-globalization attitudes in the United States and Europe (see, e.g., [Broz, Frieden, and Weymouth, 2021](#); [Naoi, 2020](#); [Mansfield, Milner, and Rudra, 2021](#); [Walter, 2021](#)). While one strand of this literature uses the “China shock” or local import competition to identify the cause of this anti-globalization shift after the 2008 global financial crisis ([Colantone and Stanig, 2018](#); [Dorn et al., 2020](#); [Bisbee et al., 2020](#)), [Walter \(2021\)](#) finds that this “backlash” against globalization is not actually associated with a major shift in public opinion, but rather is driven by elites’ politicization of international integration.

In this paper, we bring together these two strands of literature, considering the causes, and importantly, the transmission mechanisms, for elite polarization after the global financial crisis (GFC). Motivated by the importance of the theoretical contributions of [Gourevitch \(1986\)](#) and [Rogowski \(1987\)](#), we suggest that a data-driven approach to testing the impact of financial crises on political outcomes can provide researchers with a powerful tool for examining political shifts following a financial shock. We focus on the case of the United States, adding to the growing scholarship on elite polarization in US politics ([Hare and Poole,](#)

2014; Sides and Hopkins, 2015; Diermeier and Li, 2019). We consider a particular mechanism that influences electoral outcomes: political expenditures (Ansolabehere, De Figueiredo, and Snyder, 2003; Kim, 2017; Fournaies and Hall, 2018; Bertrand et al., 2020).

Using firm-level data, we compare how those firms most and least exposed to the GFC changed their campaign contributions and lobbying expenditures after 2008. We argue that the fallout from the GFC amplified the voices, in relative terms, of firms that were less exposed to the perils of the global economy. Firms that were more exposed to the GFC, by contrast, reduced their political spending due to their dramatically decreased financial capital.

Our data cover more than 14 million firms per year over the 1990-2018 period. To measure a firm’s exposure to the GFC, we utilize firm-level data on employment and sales from Reference USA¹ and Compustat (Standard and Poor’s, 2017). We then use expansive observational data on firm-level campaign contributions from the Center for Responsive Politics (<http://www.opensecrets.org/>) and the Database on Ideology, Money in Politics, and Elections (DIME) (Bonica, 2019), as well as firm-level lobbying data from LobbyView (Kim, 2018) to draw causal inferences about the effects of exposure to the GFC on elite polarization.

We find that firms that lost most from the GFC reduced their financial involvement in politics more so than those firms that were relatively unaffected. Specifically, when looking at campaign contributions by political party, we find evidence of a negative effect for Democrats and incumbents and a positive effect for third party and Republican candidates. This negative effect on incumbents and Democrats is surprising given prior research on the incumbency advantage in political expenditures (Fournaies and Hall, 2014). However, our theory suggests that the firms most exposed to the GFC gave overwhelmingly to the status quo incumbents before, during, and after the crisis. The Democrats were the incumbent

¹The company that supplied the data is now known as Data Axle and can be purchased on their webpage: <https://www.data-axle.com/what-we-do/reference-solutions/>.

party during our immediate pre- and post-treatment periods (2006–2010), and Democrats tend to receive more than Republicans in terms of contributions from financial services firms (a highly exposed sector) when they are the incumbent party (McCarty, Poole, and Rosenthal, 2013). Evidence of an effect of the GFC on lobbying expenditures is even stronger: compared to firms insulated from the crisis, more exposed firms experienced a relative decline in their lobbying expenditures, an effect that persists for several subsequent campaign cycles.

We also consider the sensitivity of our findings to the presence of highly influential industries. For example, one of the largest exposed industries—automobile manufacturing—was also subject to strict spending limits after the partial nationalization of GM and Chrysler in 2009.² In contrast, one of the largest insulated industries—healthcare—was also one of the most vocal after the election of Barack Obama in 2008 and influential in the drafting of the Affordable Care Act. We check the sensitivity of our results by excluding firms in the automobile and healthcare industries and find that the results hold; in the case of our firm-level analysis, the magnitude and significance are strengthened. Taken together, our evidence suggests that the relative impact of the crisis (Rogowski, 1987) and not the policy response to it (Gourevitch, 1986), best explains the observed shift in political expenditures. The financial crisis appears to have tipped the balance of political capital away from the status quo winners, suggesting that an overlooked fallout from the financial crisis is the amplification of the political voice of the relative losers from the existing, global economic system.

In the following section, we explore a simple theory of exposure to financial crises and how this translates into shifts in political power. We then explain our empirical approach

²Another exposed industry—banking—actually *increased* its political spending in the pre-treatment period in order to tap into bailout funds later (Igan, Mishra, and Tressel, 2012; Vukovic, 2021). If anything, the inclusion of this sector in our analyses biases our results in the opposite direction and thus we keep the sector in all empirical models.

in Section 3 and present our results in Section 4. Section 5 discusses the implications of our results and concludes with suggestions for continuing research.

2 Economic Shocks and Shifting Political Power

We examine political expenditure as one mechanism through which the global financial crisis (GFC) translated into a realignment in US politics. We are certainly not the first to explore this political shift. [Funke, Schularick, and Trebesch \(2016\)](#) find that policy uncertainty after financial crises can lead to polarization and increased support for far-right parties. Evidence from the “China shock” literature further suggests that the realignment in the US can be attributed to rising import competition from China ([Jensen, Quinn, and Weymouth, 2017](#); [Dorn et al., 2020](#); [Bisbee et al., 2020](#); [Kuk, Seligsohn, and Zhang, 2022](#)). Along similar lines, the globalization backlash literature finds rising support for anti-establishment populist parties in areas that experienced a decline in manufacturing employment ([Broz, Frieden, and Weymouth, 2021](#)), increased automation ([Milner, 2021](#)), or decreased financial support for economically vulnerable voters ([Baccini and Sattler, 2020](#)). Together, this literature provides evidence for a gradual erosion of support for the status quo or, as in [Funke, Schularick, and Trebesch \(2016\)](#), a shift away from the status quo after a financial crisis. Our work seeks to identify the transmission mechanism for the political shift in the US following the GFC.

Theoretically, we are motivated by a core argument of [Rogowski \(1987\)](#): during an economic crisis, globalization’s winners lose, and its losers win, at least in relative terms. As [Rogowski \(1987, 1123\)](#) puts it in a key assumption driving his approach, “those who enjoy a sudden increase in (actual or potential) wealth and income will thereby be enabled to expand their political influence.” During a crisis, everyone may lose, but some lose more than others, allowing some groups to gain ground in relative terms. Indeed, by definition, those who are less exposed to the global economy should lose less when the global economy shrinks compared to those who are more exposed. This suggests that when relative financial

gains translate into political gains, a fundamental realignment in political power can occur.

We are not alone in making the claim that the financial fates of the status quo winners and losers convert into their relative political power. [Richardson \(1993\)](#) and [Bohara, Gawande, and Sanguinetti \(2004\)](#) similarly assert that positive exposure to the global economy generates political capital. And even before the “New” New Trade Theory literature developed in the early 2000s, [Salamon and Siegfried \(1977\)](#) found strong support that larger firms wielded more political capital due to their economic power.

So, the idea that economic gains (or losses) from the status quo system translates into political power is not new. Our study, however, is the first to specify and empirically evaluate a precise mechanism by which these relative changes in financial fortunes become political power. We focus on changes in political campaign contributions and lobbying expenditures by firms that experienced higher or lower levels of exposure to the GFC.

2.1 Exposure to the 2008 Global Financial Crisis

Who was exposed to the GFC and how did this impact their financial fortunes? What started in 2007 as a subprime mortgage crisis in the U.S., quickly spread to global financial markets on September 15, 2008, the day after Lehman Brothers collapsed. By the end of 2008, US gross domestic product had dropped by 8.4% from the year earlier, at the time the largest economic contraction since the Great Depression.³ The preliminary prognosis for the cause of the GFC was exposure to the mortgage-backed securities market. This was not, however, a main predictor of financial contagion; rather, it was a trigger that revealed myriad structural issues in the global financial system ([Kamin and DeMarco, 2012](#)).

The GFC impacted the real economy due to a sharp drop in global demand not seen

³U.S. Bureau of Economic Analysis, Percent Change of Gross Domestic Product [CPGDPAI], retrieved from FRED, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/series/CPGDPAI>, July 24, 2020.

since the 1930s.⁴ [Claessens, Tong, and Wei \(2012\)](#) found that firms with greater sensitivity to global demand—including global trade—suffered more during the crisis than those more insulated from the global economy. The upshot of these features of the GFC is that former winners from the status quo system may have taken a sudden loss relative to the losers.

We expect that firms exposed to the global economy supported politicians who favored the status quo and lobbied the government to enact policies that maintained this system. Try though they might have during the financial crisis, we hypothesize that they were not able to marshal the financial resources that they would have had under better circumstances. The opponents of the status quo similarly faced financial constraints during the crisis, but, on the margins, we expect that their lower exposure to the crisis enabled them to better weather the storm. We hypothesize that, compared to the more exposed firms, less exposed firms were able to expend relatively more on campaign contributions and lobbying following the GFC.

2.2 Money as Political Power

Campaign contributions represent one conduit for money to become political power under democracy. Such a conduit is not without controversy in the American Politics literature. [Ansolabehere, De Figueiredo, and Snyder \(2003\)](#) conclude that there is surprisingly little money in US politics when measured by campaign contributions, leading them to suggest that this tool of influence buys access, not influence. Yet access is, if not sufficient for influence, at least necessary, as argued by [Bertrand et al. \(2020\)](#), who show that political access is paramount, often using corporate philanthropy as a tool for political influence. We

⁴Trade volumes dropped by 15% in the first year of the crisis. In the first quarter of 2009, nominal trade contracted by 30% on average from the year earlier ([Freund, 2009](#)). By 2010, global trade witnessed a record-breaking surge in trade volumes, which grew by approximately 14% over the year, although not enough to return to the pre-crisis trend ([World Trade Report, 2011](#)). Moreover, nearly one-third of all job losses between 2007 and 2009 occurred in sectors tied to consumer demand ([Hugie Barelllo, 2014](#)).

hypothesize that more exposed firms donated less after the GFC and that more insulated firms donated more to anti-establishment (and, by definition, anti status quo) candidates—typically challengers and, starting in 2010, Republican (Tea Party) candidates.

But we do acknowledge the limitations of campaign contributions. If campaign contributions buy access, as [Ansolabehere, De Figueiredo, and Snyder \(2003\)](#) suggest, then lobbying, a more direct form of access, should be an even more important conduit for money to become power.⁵

Lobbying expenditures are orders of magnitude larger than the campaign contributions because they are not subject to the same federal and state limits. Now, the received wisdom of a substantial body of work on lobbying concludes that, on average, these expenditures are more policy-focused than campaign contributions are ([Fourniaies and Hall, 2018](#); [Kim, 2017](#)). This is not to suggest that they are always earmarked for specific bills or particular regulatory clauses. Lobbying expenditures can occur anywhere in the policy-making process, from informing politicians on the broad strokes of a firm’s financial position to helping craft the specific language of a regulation. Still, lobbying expenditures are harder to connect to specific politicians, but they are an important form of political expenditure worthy of examination.

While campaign contributions and lobbying expenditures may differ as tools of political influence in terms of their magnitude, scope, and strategic context, they also share two important qualities for our research. First, they are both relatively liquid tools of influence, meaning that firms have a fair degree of latitude over how much, where, and when to allocate these funds. As such, they are arguably highly responsive to broad economic fluctuations that might influence a firm’s bottom line.

Second, these tools are important to the centers of political power. Campaign contributions flow into specific congressional committees ([Fourniaies and Hall, 2018](#)), creating a

⁵This view is consistent with Clifford Smith, Jr.’s claim that “cash rules everything around me” (Wu-Tang Clan, 1994).

powerful incentive for incumbents to seek particularly plumb assignments. Lobbying efforts ebb and flow according to the legislative calendar, pumping in millions of dollars that filter down disproportionately among politicians (Kim, 2017). Put bluntly, these two sources of money in politics create a field in which politicians, lobbyists, interest groups, and voters themselves contribute to produce political outcomes.

We suspect that the sheer magnitude of the GFC may have impacted firms’ financial ability to make campaign contributions and lobbying expenditures, and that the GFC may have had differential impacts on firms that were more or less exposed to the global dimension of the crisis. Moreover, the downstream electoral effects of this shift in firms’ political spending helps to explain a pivotal step in the post-GFC realignment in US politics.

3 Empirical Context and Strategy

We test our theoretical intuition with rich data on two well-known measures of political influence: campaign contributions and lobbying. We are fundamentally interested in the degree to which firms most exposed to the GFC withdrew from the political arena—relative to more insulated firms—and how this withdrawal reshaped US politics. To proceed, we need to define an empirical measure for “exposure” to the GFC as well as measures of “political influence”—here, campaign expenditures and lobbying expenditures.

For our empirical work on campaign expenditures, our unit of analysis is at the level of Political Action Committee (PAC) and two-year congressional cycle. For the lobbying expenditure data, the unit of analysis is the firm (client) and year. Our lobbying data are obtained from LobbyView.org (Kim, 2018) which allow us to link lobbying expenditures to specific legislators based on sponsorship of referenced bills. Furthermore, the lobbying data include a firm-level identifier which we can link to Compustat data on firm financials. While this subset of firms is smaller than the population of lobbying firms, it allows us to calculate a firm-level measure of exposure to the GFC, instead of the industry-level measure we describe

below.

3.1 Independent Variable: Measuring Exposure to the GFC

To measure the degree to which our firms are “exposed” to the GFC, we follow the highly empirical approach used in “New” New Trade Theory, allowing the actual fallout from the GFC to code our “treatment” and “control” observations. This approach is consistent with much of the recent literature in international political economy, which has abandoned the elegant but simplistic theoretical assumptions used to identify “winners” and “losers” from globalization. We acknowledge that our empirically-driven approach to measuring exposure to the GFC is noisy. To an extent, it groups together heterogeneous firms as “exposed” even though some of them may have been impacted by the GFC via the US mortgage and loan crisis, instead of exposure to the global economy. This heterogeneity biases against our hypothesis. We explain in more detail this choice below.

Our approach calculates the industry-level change in employment for the universe of firms in the United States. We base this choice of measurement on the microfoundation that more financially exposed firms tend to have more procyclical employment policies (Sharpe, 1994). In the now classic treatise on financial crises, Kindleberger and Aliber (2011) write that almost every financial crisis in history followed a credit-fueled asset bubble; the GFC was no different. In the decade prior to the GFC, financial markets were flush with credit on account of loose monetary policy, the end to the Glass-Steagall Act, and new financial tools for securitization. While the housing market deserves most of the blame for this speculative mania, firms also utilized this excess credit—as did consumers and governments (Blyth, 2013)—putting strains on their balance sheets.

According to data from Kamin and DeMarco (2012), firms that were more dependent on short-term funding due to an over-leveraged balance sheet were more exposed to the GFC than more risk-averse firms with lower debt-to-equity ratios. In a survey of over 1,050 Chief Financial Officers across the United States, Europe, and Asia, Campello, Graham, and

Harvey (2010) find that these over-leveraged firms planned deeper cuts to employment than those less constrained by credit markets.

Unable to observe the balance sheets of all firms, we rely on the change in employment as the next-best measure of exposure to the GFC. Thus, we appeal to the empirical reality of the GFC to measure exposure (for similar approaches see, e.g., Mosley and Singer, 2009; Oatley et al., 2013; Ahlquist, Copelovitch, and Walter, 2020; Peritz et al., 2020, among many others), which releases our analysis from mapping out-of-date theory about the winners and losers from the status quo to our data. Weldzius (2021) shows, for example, that preferences of exporting firms do not always fit the predictions of old-school economic models, but are rather conditional on their supply chain reliance.

We obtain the firm-level employment data from Reference USA, which has year-end estimates of employees and sales for every parent firm, subsidiary, and plant in the United States, numbering approximately 14 million observations per year.⁶ Importantly, these data include the 8-digit industry code, assigned according to the North American Industry Classification System (NAICS), which we aggregate to a 6-digit industry code in order to map to our political expenditure variables.

We restrict our attention to the firms, subsidiaries, and plants that were open between 2007 and the end of 2009, calculating the percentage change in employment over this period. The Great Recession officially ended in mid-2009, with the unemployment rate reaching its peak by the end of this year and turning the corner by early 2010. Thus, we believe the percentage change in employment between 2007, the year before the GFC, and the end of 2009, the very end of the GFC, will best proxy for exposure to the crisis.

We define as “treated” those industries in the top 0.20 percentile of all 6-digit NAICS industries whose share of all establishments (i.e., plants, offices, etc.) terminated more than

⁶By relying on establishment-level data, we sidestep potential endogeneity concerns associated with more politically active parent companies being better equipped to ride-out the crisis, thus spending the same on political influence.

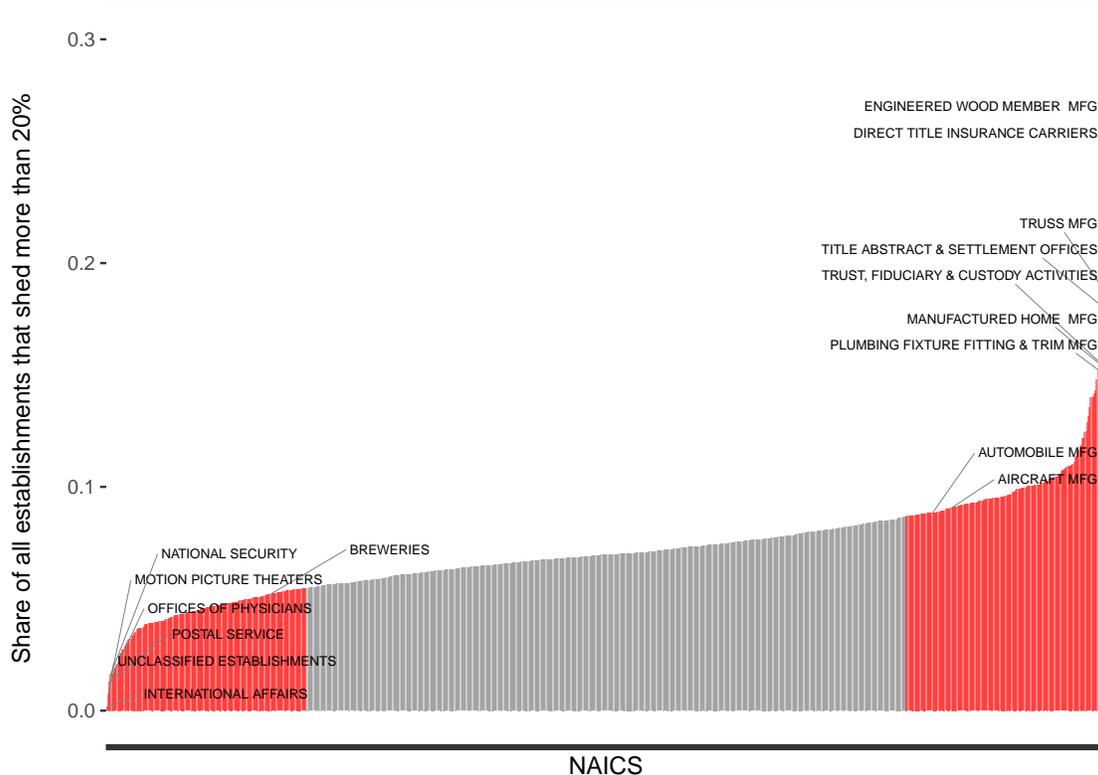
20% of their workforce during the GFC. This threshold is both theoretically and empirically reasonable. Obviously, if we had too low of a threshold, then our treated sample could include all industries; likewise, too high of a threshold would limit our analysis to a few outlier industries. The 0.20 threshold includes as treated the most globally-exposed firms, even if it also includes some less globally-exposed industries that were struck by the GFC because of their connections to the housing industry in the United States (which should bias against our hypothesis). Having conducted several robustness checks to test the bounds of our main results, we find that they hold with thresholds within five percentage points of the 0.20 cut-off. So, while we acknowledge that the precise cut-point is arbitrary, our conclusions do not depend on it.

The “highly exposed” industries are indicated in red at the right tail of the distribution in Figure 1. The industries most exposed to the GFC include home-related manufacturing (engineered wood manufacturing, truss manufacturing, plumbing fixture manufacturing), title insurance (direct title insurance carriers, title abstract and settlement offices), and financial services (trust, fiduciary, and custody activities), each of which experienced 15-30% of their plants terminating more than 20% of their employees. Other, more globally exposed, industries included in the treatment group are aircraft manufacturing, automobile manufacturing, and machine tool manufacturing, together accounting for approximately 15% of US exports in 2007.

The control industries are those that were more insulated from the GFC. They include industries in the bottom 0.20 percentile of all 6-digit NAICS industries whose establishments terminated more than 20% of their employees during the GFC, e.g., physician offices, mental health practitioners, meat processing, and your local brewery (see the left tail in red in Figure 1), each of which had fewer than 5% of their establishments terminate more than 20% of their workforce.

We also consider that firms may choose to layoff employees irrespective of the GFC,

Figure 1: Share of Plants with $> 20\%$ Employee Termination Rate, 2007-2009



for example, to reduce input costs through offshoring ([Grossman and Helpman, 2005](#)) or automation ([Acemoglu and Restrepo, 2019](#)). We do not, however, find that layoff decisions during the GFC are driven by longer-term production decisions, but rather by demand changes outside of the firm’s control: the correlation between change in employment and change in sales during the GFC is 0.98 and statistically significant at the 0.01% level.

Our measure of exposure is noisy, which may bias against our hypotheses. Essentially, we pool firms within one sector and there could be intra-sector winners and losers. While noisy, our choice in measure allows us to take a rather fine-grained approach with the caveat that we are restricted to only looking at the sectoral level. Analyses at the sectoral level were a workhorse in international political economy for generations ([Frieden, 1991, 2002](#); [Hiscox, 2001](#); [Madeira, 2016](#); [Baccini, Osgood, and Weymouth, 2019](#)). Insights from “New” New Trade Theory ([Kim, 2017](#); [Osgood, 2016](#); [Osgood et al., 2017](#)) suggest that a firm-level approach may produce stronger findings than we are able to find using our sectoral approach.

Still, we use the sectoral approach in order to map our measure of exposure to our dependent variables of campaign contributions and lobbying.

The sectoral-level approach sacrifices precision of our measure of “exposure” for the universe of firms found in the campaign contributions and lobbying datasets. In addition, we also rely on a subset of manufacturing firms which we obtained from the Compustat dataset (Standard and Poor’s, 2017). These firms include the gvkey ID which we use to link these firms with the lobbying data. By directly linking firms’ financial performance with lobbying, we can more carefully identify those most exposed to the GFC by using a local linear smoother to forecast post-2008 sales as a function of pre-2008 trends. The firms whose 2008, 2009, and 2010 sales are more than 10% below the forecast values are identified as “exposed”. We recognize that this measure of exposure is both less theoretically grounded but highlight its superior construct validity. Instead of relying on the heroic assumption that all firms within the same sector suffer equally, the Compustat sample allows us to precisely identify the individual firms whose sales declined unexpectedly during the GFC. By combining the coarser measure of sectoral exposure with the firm-specific measure of financial loss, we confirm our findings are not the result of spurious sectoral patterns unrelated to the unexpected shock to firm financials associated with the GFC.

3.2 Dependent Variables: Measuring Political Influence

There are, in theory, many ways to measure influence in a political system. We focus on campaign contributions and lobbying expenditures because of their practical significance in US politics (Gilens, 2012), their importance in the contemporary literature (e.g., on campaign contributions: Powell and Grimmer 2016; Kalla and Broockman 2016; Barber, Canes-Wrone, and Thrower 2017; Fourinaies and Hall 2018; Fowler, Garro, and Spenkuch 2020; on lobbying efforts: Schnakenberg 2017; McCrain 2018; Lorenz 2020; Bertrand et al. 2020), and their measurability. Our data on these outcome measures come from the Center for Responsive

Politics⁷—a not-for-profit and nonpartisan research group that tracks money in US politics—, the Database on Ideology, Money in Politics, and Elections (DIME) (Bonica, 2019), and LobbyView (Kim, 2018). These data contain the full schedule of political engagements by firms, interest groups, and political action committees (PACs).

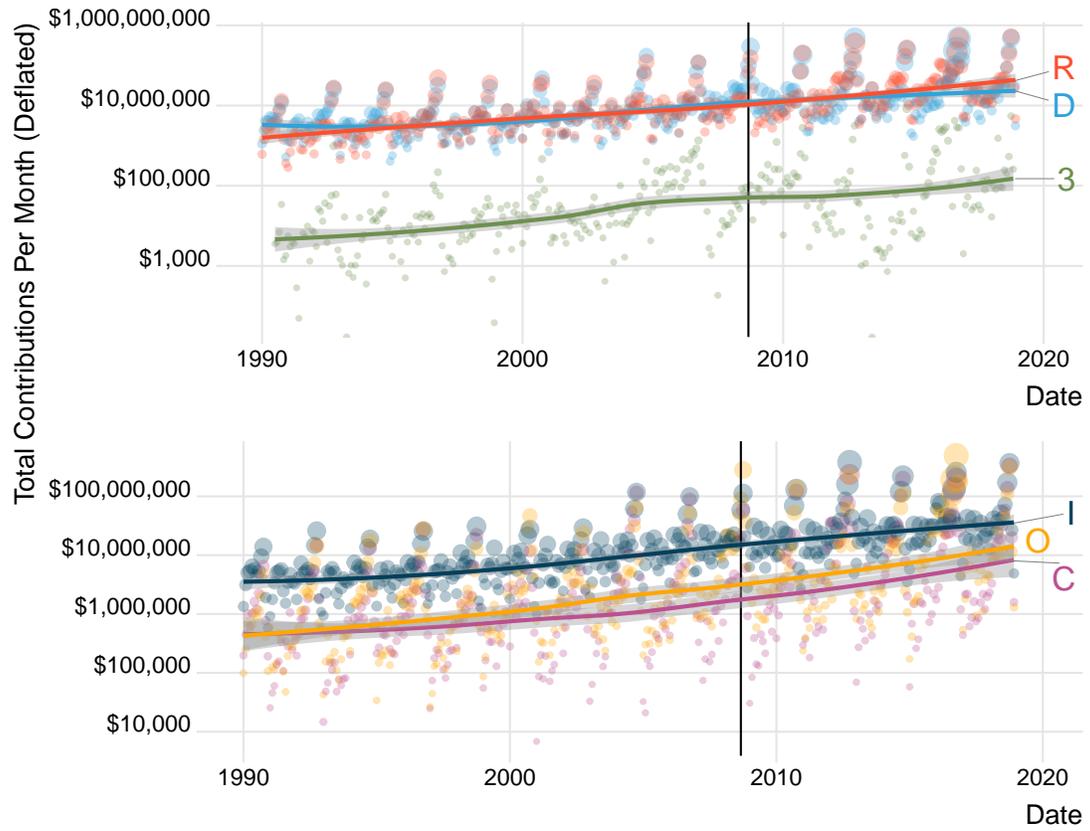
We restrict our attention to firms and their associated political action committees (PACs) because of the clear impact of the GFC on their spending power. Interest groups, while clearly an important facet in the US political system, have broader donor bases than firms and thus we assume are more uniformly impacted by the GFC. Moreover, we are unconcerned with any bias to our results by restricting our sample to firms and their associated PACs. Crosson, Furnas, and Lorenz (2020) reveal a conservative bias of interest groups’ influence on policy outcomes; thus, if included in our analysis, should only serve to strengthen our results.

The richness in detail of the data availability for these measures allow us to delve deeply into patterns of change in political influence following the GFC. Our data not only allow us to measure the degree to which different firms engage in these tools of political influence, but also to identify the beneficiaries of these efforts. Specifically, we can measure the party affiliation, incumbency status, electoral outcome, committee assignment, and ideology of each politician who received money from our firms. Furthermore, we can attribute lobbying spending to specific bills, their sponsors and co-sponsors, and the committees in which they are considered.

The top panel of Figure 2 plots the total campaign contributions by month received by the party affiliation of the recipient (Democrats, Republicans, and 3rd party); the bottom panel plots the same by the seat status of the recipient (Incumbents, Challengers, and Open seats). Points are sized by the number of unique contributions received in each month, and the y-axis is placed on a log scale for visual clarity.

⁷See <http://www.opensecrets.org/>.

Figure 2: Total Campaign Contributions, by recipient affiliation and seat status



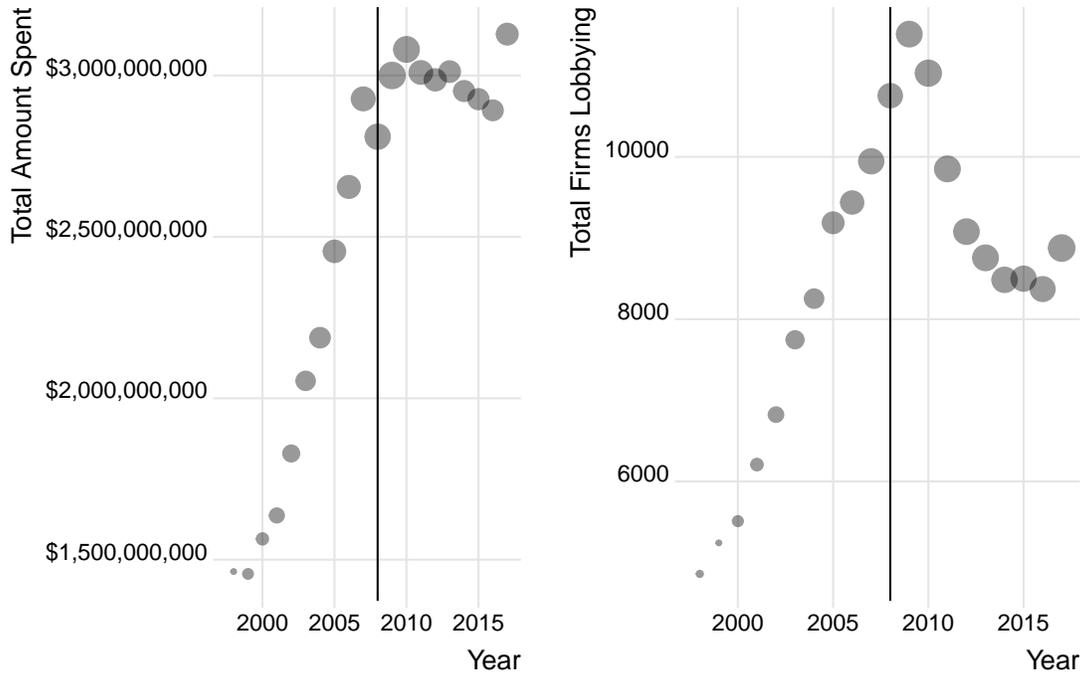
Note: The top panel illustrates total campaign contributions per month to Republican (R), Democrat (D), and third-party candidates (3). The bottom panel illustrates the total campaign contributions per month to incumbents (I), challengers (C), and open seats (O). Points are sized by the number of unique contributions received in each month. The y-axis is placed on a log scale.

As illustrated, third party candidates (top panel) and challengers (bottom panel) receive substantially fewer contributions, totaling less aggregate funds. In addition, Democrats and Republicans receive roughly equal amounts, although there is suggestive evidence that Democrats were the main beneficiaries in the early 1990s while Republicans start to gain the lead in 2016. However, these patterns interact with each other, since Democrats held majority control of Congress in the early 1990s, meaning that incumbents were more likely Democrats. There is little descriptive evidence to suggest that the GFC had any notable impact on campaign contributions writ large, nor on the electoral fortunes of a particular party or candidate type.

A different story emerges when we shift attention to the lobbying behavior of firms, summarized in Figure 3. Here we are not able to determine as precisely the recipients of these expenditures due to the nature of how these reports are filed. Nevertheless, we highlight the much clearer evidence of a response to the GFC, whether measured as total spending (left panel, points sized by number of firms), or the total number of firms lobbying (right panel, points sized by total spent). In both plots, we note that the GFC corresponded to a spike in lobbying spending and in the number of participants. The spike died off in the ensuing years.

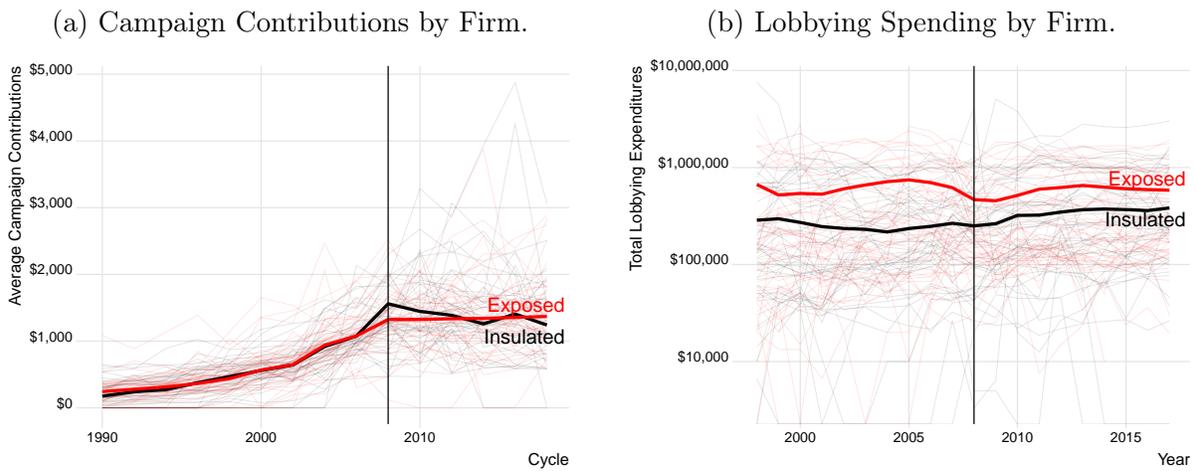
Descriptive snapshots of campaign contributions and lobbying by firm exposure to the GFC are presented in Figures 4a and 4b, respectively. As illustrated, there is suggestive evidence of firms exposed to the crisis adjusting their political strategies during and after the GFC. In the case of campaign contributions, the exposed and insulated firms were similar pre-2008, and the change in their behavior after the GFC was small, although exposed firms fell behind insulated firms for two cycles. In the case of lobbying, exposed firms were more active overall, and reduced their influence following the GFC, but remained the more prominent players.

Figure 3: Firm Lobbying Expenditures, total spending (left) and no. of firms (right)



Note: points sized by the number of firms spending on lobbying efforts (left) or total amount spent on lobbying efforts (right).

Figure 4: Firm-Level Political Expenditures, by exposed vs. insulated



Note: Red lines reflect exposed firms, while black lines indicate insulated firms. Thicker, darker lines represent the averages by exposure type.

3.3 Estimating the Effect of the GFC on Different Types of Firms

Turning from descriptive data to more rigorous analysis, we estimate a series of generalized difference-in-differences regressions. Specifically, we define a firm i as belonging to either the treated or control group $G \in [0, 1]$ where treatment is not activated until the intervention t_0 , which we set to the outset of the 2008 GFC.

This set-up provides an intuitive counterfactual setting in which we can compare how exposed (treated) and insulated (control) donors changed their respective behaviors before and after the GFC. The most simple diff-in-diff specification can be formalized as:

$$y_{igt} = \beta_1 GFC_t + \beta_2 Exposure_g + \beta_3 (GFC_t \times Exposure_g) + \alpha_i + \delta_t + \varepsilon_{igt} \quad (1)$$

where y_{igt} represents the campaign contributions of donor i , belonging to treatment group g , in period t . GFC_t is an indicator variable taking the value 1 for all periods after 2008 and zero otherwise and $Exposure_g$ is an indicator taking on the value 1 for all donors who are categorized as “exposed” according to our definition above. The coefficient of interest is β_3 which captures the effect of the GFC on exposed firm donations.

The benefit of a clean diff-in-diff specification is that one can simply plot the outcome over time by treatment group in order to capture the visual intuition behind the identifying logic. In our context, the claim is that any changes in the difference between the behaviors of treated and control donors prior to and following the GFC are attributable to the recession. This claim rests on the assumption that the difference between the treated and control groups observed in the pre-intervention period (prior to 2008) would have persisted in the post-intervention period were it not for the intervention itself — the parallel trends assumption.

To assess the strength of this assumption, we implement a matching strategy to identify the insulated donors who, in the pre-intervention period, look as similar as possible to the exposed donors. Specifically, we use the `tjbal` package for R which matches treated and control units on both their pre-treated covariates *as well as* their pre-intervention outcomes

themselves. Other approaches match observations only on covariates, but our preferred approach of matching on the dependent variable as well as covariates enables us to consider both observed factors (captured by the covariates) and unobserved factors (captured by remaining variance in the dependent variable) that influence donations. See [Hazlett and Xu \(2018\)](#) for a detailed presentation of this approach.

The `tjbal` package further augments estimation by matching treated and control units on both the means and higher-order moments of their pre-treatment distributions, using kernel expansion of the pre-intervention vectors of outcomes. In theory, this kernel-expansion means that we are matching our treated and control units not only on their period-by-period averages, but also on distributional features of the outcome variable, such as variance, skewness, and kurtosis. Substantively, this rich matching strategy matches treated units with control units with a similar “trajectory,” providing more confidence in our claim that the parallel trends assumption is satisfied.

4 Results

In this section, we first estimate the effect of the GFC on the campaign and lobbying expenditures of firms by exposure to the crisis. We then turn to an examination of which party benefited from any such effect, and also consider whether ideologically extreme candidates benefited.

To anticipate our campaign contribution findings, we estimate a short-lived—i.e., one campaign cycle—negative impact of the GFC on the campaign contributions of exposed firms. When we consider the GFC effect on campaign contributions by political party, however, we find suggestive evidence that the war chests of Democratic and incumbent recipients of campaign contributions took a negative hit. Third party and Republican candidates appear to have benefited, by comparison.

Turning to our findings on lobbying expenditures, we find an unambiguous picture. The

GFC substantially impacted the lobbying expenditures of exposed firms. When comparing these expenditures to those of firms insulated from the crisis, we find that the negative effect of the GFC on lobbying persisted over time. Moreover, there is suggestive evidence that Democrats lost out on lobbying after the GFC, with Republicans experiencing no change in attention from lobbyists.

In short, the GFC indeed appears to have tipped the balance of political capital away from those firms most exposed to the crisis.

4.1 Campaign Contributions and Lobbying Expenditures

We begin by estimating the effect of exposure to the GFC on our two main measures of political influence — campaign contributions and lobbying. These results are summarized in Figures 5 and 6, which plot the average treatment effect on the treated (ATT) and counterfactuals, respectively. As illustrated, there is evidence in the left column (Figures 5a and 6a) to suggest that the GFC had a meaningful impact on the contributions of firms writ large. The ATT plot in the top-left (5a) reveals a modest but statistically significant decline in average campaign contributions in the two cycles immediately following the GFC. The counter-factual plot in the bottom-left (6a) indicates that this ATT is driven predominantly by exposed firms halting their secular and steady increase in campaign contributions since 1990, while the insulated firms continued on their upward trajectory, albeit one that was also attenuated from the pre-crisis trend. However, the statistical significance of this divergence abated by the 2014 cycle, and had all but disappeared by 2018.

A similar story emerges when we turn our attention to lobbying behavior. As illustrated in Figure 5b, the total amount spent also declined among exposed firms following the GFC. In contrast with the campaign contributions results, this divergence did not merely disappear by 2014, but in fact flipped back to favor the exposed firms by 2018.

Insofar as political influence is a zero-sum game, these results tell a compelling story of shifting electoral fortunes. But does this divergence reflect a relative or absolute decline in

lobbying? A relative decline would obtain if both insulated and exposed firms continued to increase their lobbying expenditures in the ensuing years, with the ATT generated by insulated firms increasing by a greater amount. Conversely, an absolute decline would mean that the exposed firms' lobbying fell off after the crisis. Figure 6b suggests that the answer lies somewhere in the middle of these stories. As illustrated, exposed firms did indeed see a drop-off in their lobbying. And this reduction in influence coincided with increased spending by the relatively insulated firms, at least up until 2012. More recent years suggest that the insulated firms have also seen a decline in lobbying expenditures.

Figure 5: Average Treatment Effects on the Treated

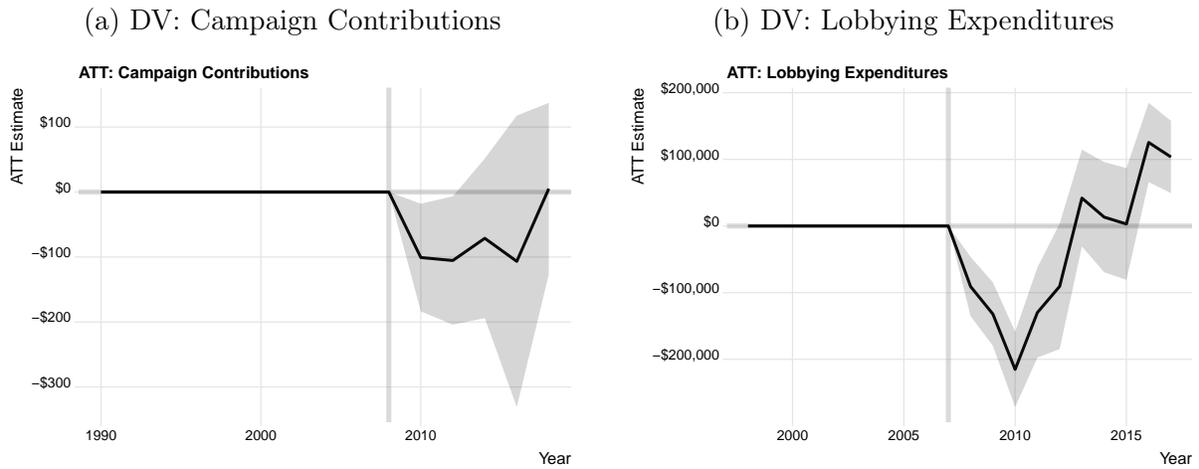
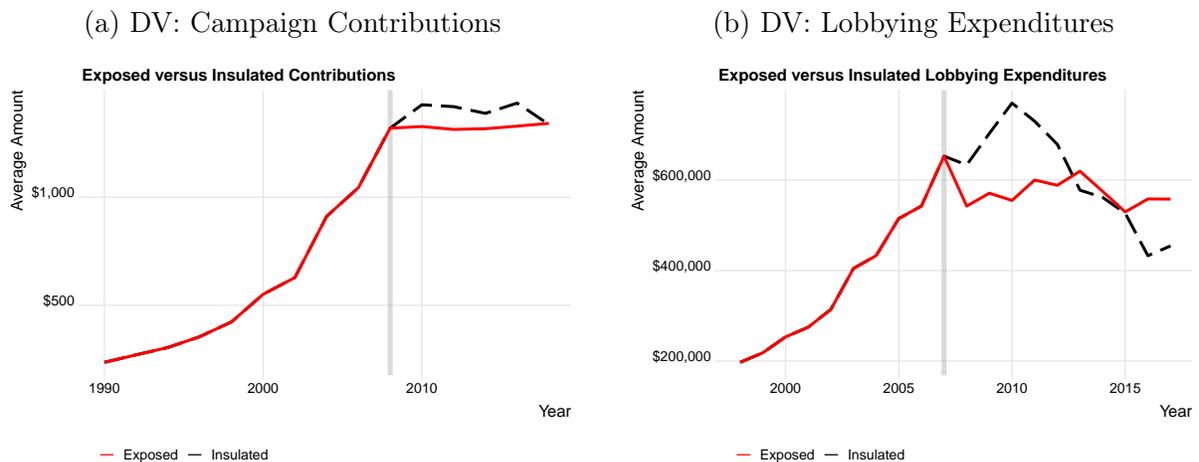


Figure 6: Average Spent by firms per year, Exposed vs. Insulated



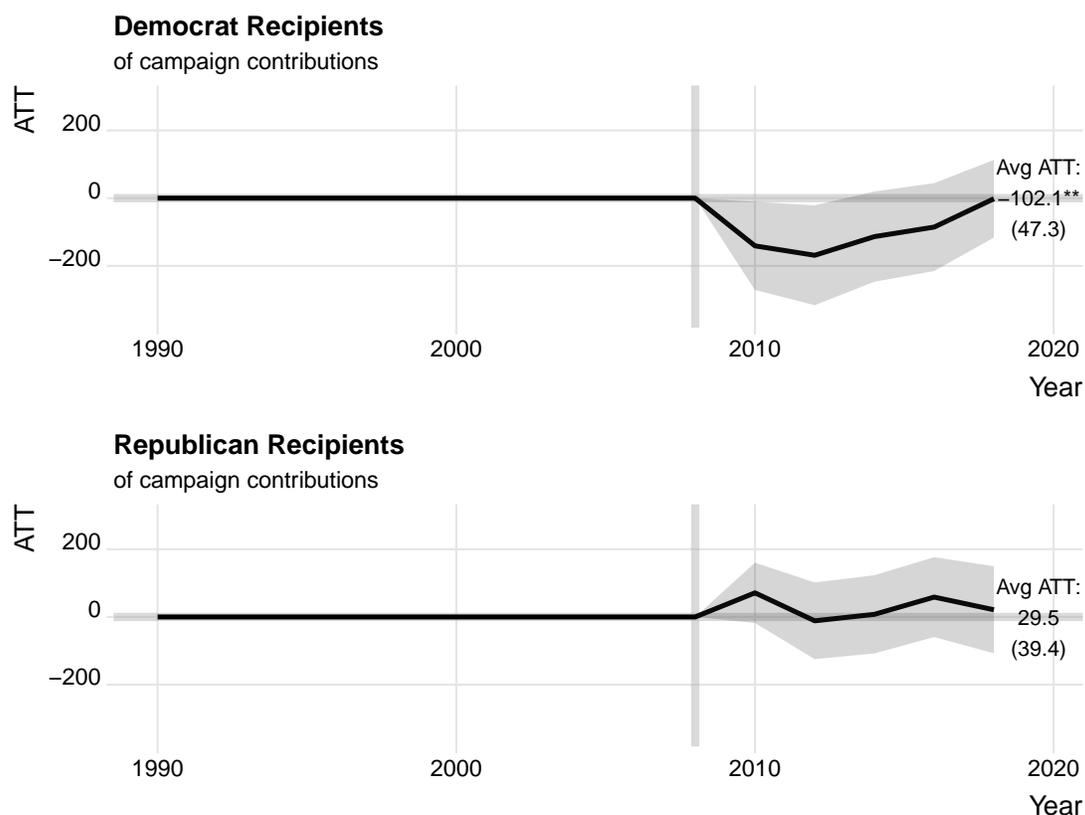
4.2 Did the terrain of money in politics change?

Having estimated the impact of the GFC on the campaign and lobbying expenditures of firms by exposure, we now turn to examining downstream political outcomes. What is the relationship between this shift in political influence and the electoral fortunes of politicians and parties? We explore this question in two ways. First, we estimate the campaign contributions to Democrats and Republicans, a straightforward investigation of whether one party or another benefited disproportionately as a function of the GFC. Second, we estimate the campaign contributions to candidates weighted by their ideology, which captures the degree to which more ideologically extreme candidates benefited as a function of the GFC. To construct this donation-weighted measure, we treat the recipient politician's ideology as the outcome of interest, and calculate a weighted average of this measure for each donor in each cycle, with weights given by the share of total contributions that went to a given politician. To accommodate challengers, we rely on [Bonica's \(2019\)](#) DIME database which estimates ideology for any politician who has received campaign contributions.

4.2.1 Contributions to Democrats and Republicans

We begin by examining the partisan split along the dimensions of campaign contributions in Figure 7. The top panel displays the ATT estimates subsetting to Democrat recipients of the contributions, while the bottom panel does the same subsetting to Republican recipients. As illustrated, the global financial crisis yielded a reduction in campaign contributions to Democrats of approximately \$100 per firm in the ensuing cycle, while the estimated gap for Republican recipients was small, positive, and marginally statistically significant. These plots suggest that, while the overall effect of the crisis did not yield striking divergence in the overall contributing behavior of insulated versus exposed firms, it did affect the war chests of Democratic candidates.

Figure 7: Average Treatment Effects on the Treated, by campaign contribution recipient



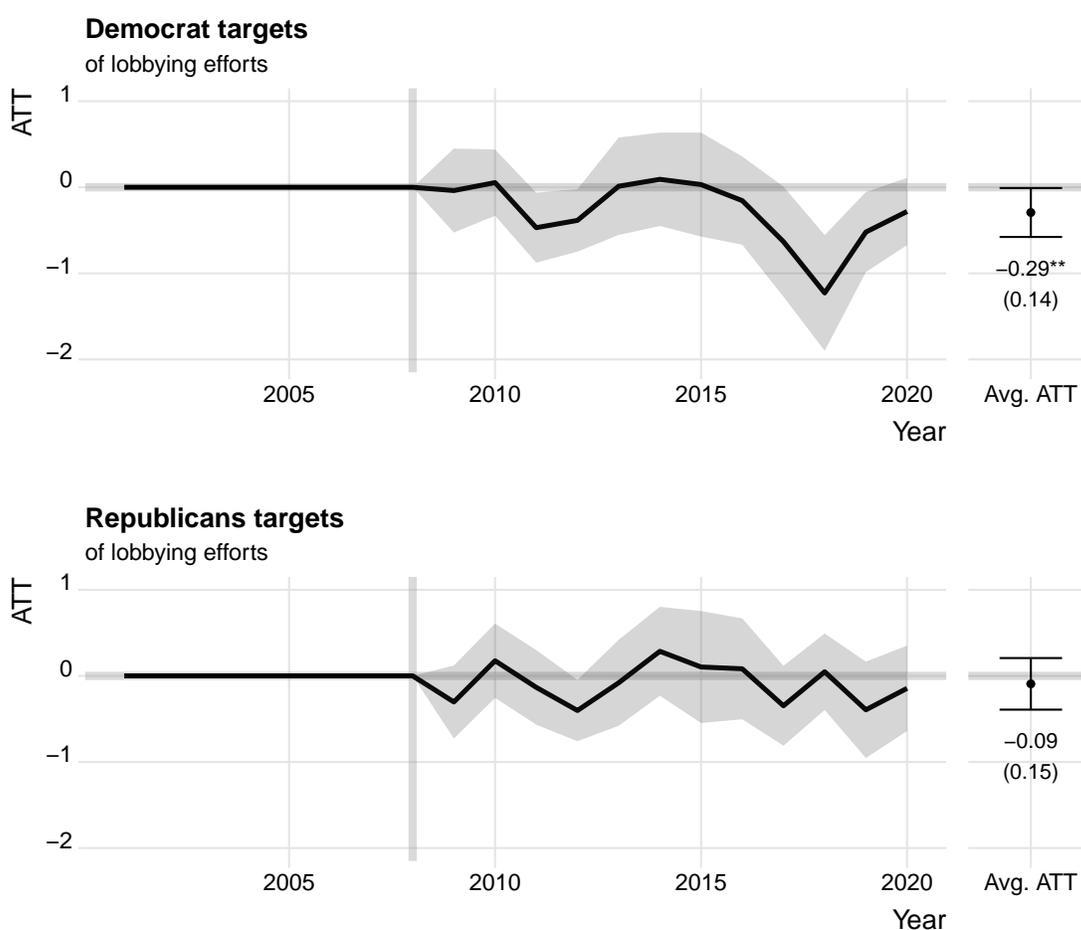
While less precise, we can also calculate the heterogeneities in lobbying by linking firms with politicians via sponsorships of the bills listed in lobbying reports. We rely on the LobbyView dataset for this analysis, which pre-processes the raw lobbying reports to create a firm-politician network (Kim, 2018). We choose not to attempt to assign dollar amounts to the links between firms and politicians due to the imprecision of how the total amounts listed should be divided up over what are often multiple bills listed on the reports.⁸ Instead, we treat the total number of lobbying reports between a firm and a politician as the outcome

⁸Linking specific dollar amounts with individual legislators is complicated by the fact that a lobbying report can list multiple legislators / issues / bills for a single dollar amount. While one solution would be to divide these total amounts equally among n potential recipients, we worry that this may introduce additional measurement error if the reality is that one legislator received 90% of the spend while another only received 10%. As such, we rely on the count of reports linking a firm with a legislator, as per how the data provided by LobbyView are organized.

of interest, and again use trajectory balancing to match exposed and insulated firms.

Figure 8 summarizes the findings, subsetting the data to Democrat and Republican recipients of lobbying attention. As illustrated, there is suggestive evidence that Democrats lost out, receiving an average of 1/3 fewer lobbying reports targeting bills they sponsored relative to what would have occurred in the absence of the GFC. Conversely, Republicans exhibit no systematic change in lobbyist attention.

Figure 8: Average Treatment Effects on the Treated, by lobbying target



These subset results, however, are suggestive at best. While the ATT estimates for the Democrat reduction are roughly double those observed for Republicans, the estimates are noisy enough to preclude stronger claims about a partisan penalty. Furthermore, the trajectory balancing method does not allow for interaction effects to be tested. An alternative

test of the partisan fortunes that were affected by the GFC is to reorient the data to make the party affiliation of the recipient the identifying group, and then compare how Democrats fared against otherwise identical Republicans prior to, and following, the global financial crisis.

Re-orienting the data in this fashion, however, prevents us from using the trajectory balancing method used above, since very few of the recipients are consistently observed over the full period of interest. Instead, we fall back on a more conventional differences-in-differences analysis of the following form:

$$y_{i,t} = \alpha_i + \delta_t + \beta_1 D_i + \beta_2 Post + \beta_3 D_i \times Post + \varepsilon_{i,t} \quad (2)$$

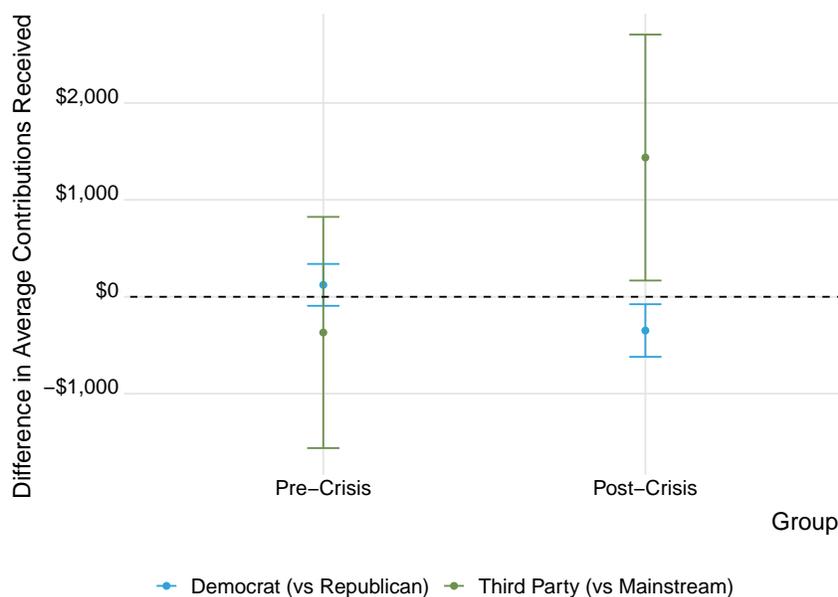
where $y_{i,t}$ is the average amount of contributions received by candidate i in cycle t , D_i is an indicator that takes the value 1 if the candidate is a Democrat (alternatively, a third party candidate) and zero otherwise, and $Post$ is an indicator that takes on the value 1 after 2008. α_i and δ_t are random effects for candidate and cycle, respectively. We are interested in the β_3 coefficient, which captures the growth in the difference between Democrats and Republicans (or third party versus mainstream candidates) following the GFC.⁹ Figure 9 plots these results as marginal effects.

As illustrated, there is statistically significant divergence between the support for Democrats and Republicans following the GFC. Specifically, while the average candidate in each party received roughly the same average contributions in the pre-crisis period, in the post-crisis period Democrats started to fall behind Republicans to the tune of approximately \$400 per cycle in the average contribution. The reverse pattern obtains for third-party candidates, indicated by the green bars in Figure 9. In the pre-crisis period, 3rd party candidates earned roughly the same per contribution as Democrats and Republicans (labeled “mainstream” in

⁹“Third party” candidates are those not affiliated with either the Democrat or Republican parties. In the raw contribution data, these comprise just 20,000 observations out of 4.85m observations in total.

the figure). Following the crisis, these outsiders began enjoying approximately \$1,400 more per contribution.

Figure 9: Difference in Average Contribution Received, pre- and post-crisis



By themselves, these trends are only weak evidence of a shift in the center of gravity in US political power. Many other things were happening over this period, and by orienting our data to make the recipient politicians the unit of analysis, we are unable to rely on the exposure mapping described above. But in conjunction with the widening gaps between exposed and insulated firms described above, this is at least smoking gun evidence suggesting that (1) third-party candidates benefited following the GFC, and (2) Republicans also benefited, at least in relative terms.

4.2.2 Contributions to ideologically extreme candidates

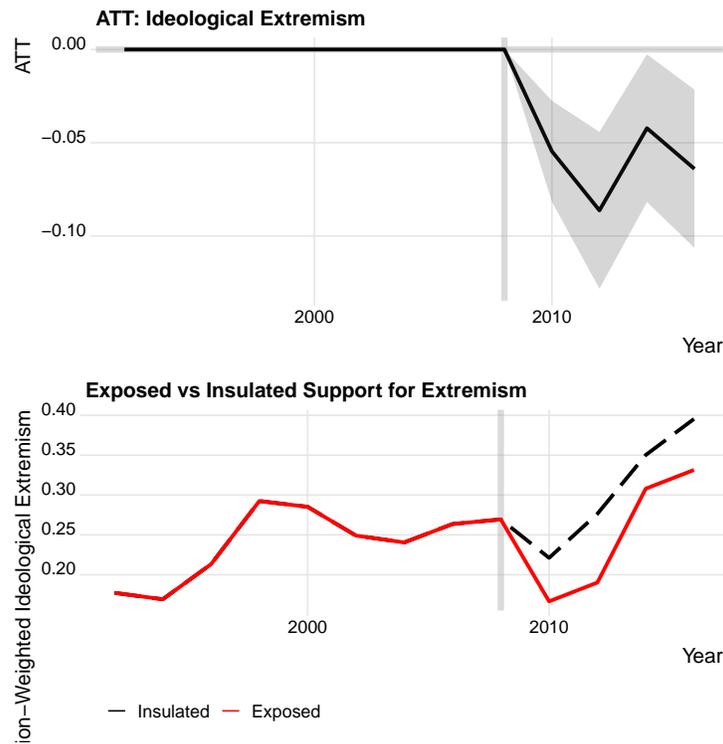
To more directly link these dynamics with the firm-level measure of exposure, we return to the trajectory balancing approach and replace the nominal value of campaign contributions with a donation-weighted average of the ideological extremism of the receiving candidates. Specifically, for each firm, we take the weighted average of the recipient politicians' ideology,

where the weights are the amount contributed in each transaction. Formally, firm f in cycle t has an ideology-weighted donation profile of:

$$Ideo_{f,t} = \sum_i Ideo_i * \frac{Cont_{i,f,t}}{\sum_{j \neq i} Cont_{j,f,t}}$$

To capture the degree to which firms started contributing to more ideologically extreme candidates, we square this weighted ideology measure. We then apply the same trajectory balancing method described above. The results are summarized in Figure 10. In the top panel of Figure 10, we see that in the years following the GFC, exposed firms are giving less to ideologically extreme candidates than insulated firms. Indeed, as illustrated in the bottom panel, exposed firms are giving much less to ideologically extreme candidates in the ensuing cycles, leaving space for the otherwise insulated firms to support non-moderate candidates. We explore this link between the GFC and the rise of more ideologically-extreme candidates in the next section.

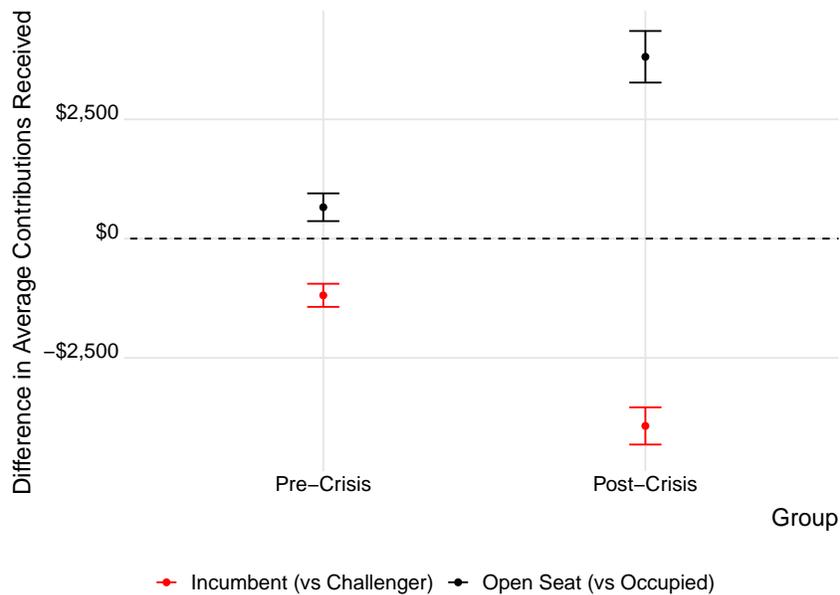
Figure 10: Weighting Recipients by Ideological Extremism



4.3 Anti-Establishment Politicians

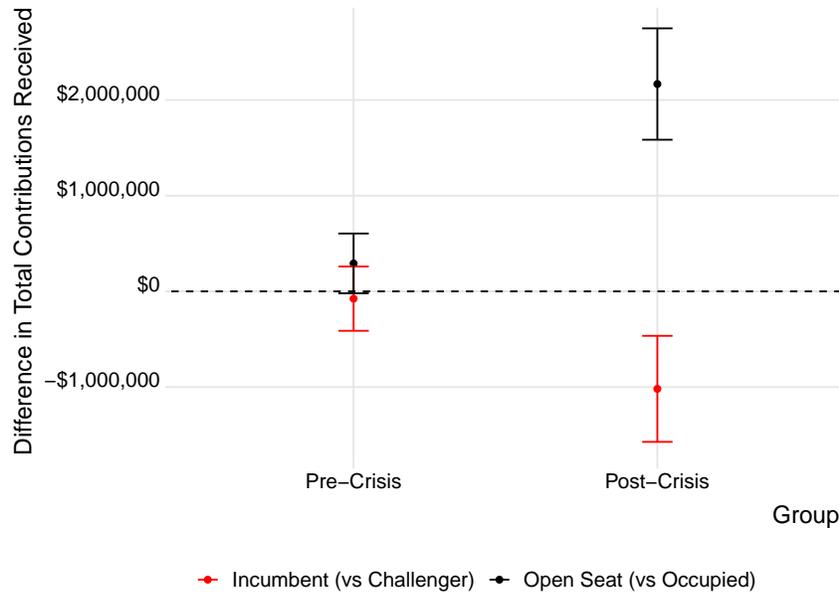
Finally, we drill further into political outcomes by examining how contributions specifically to anti-establishment candidates changed with the GFC. To test this, we again organize the data by recipient politician, and rely on the diff-in-diff specification described above. Figure 11 plots the results of the analysis, comparing the average contributions received by incumbents to those received by challengers (red), and the average receipts of open seats to occupied (black). As illustrated, there is striking evidence that incumbents suffered a large penalty following the GFC, and that much more was spent on open seats than occupied. The magnitude of these estimates is substantial, amounting to over \$2,500 per contribution in both cases.

Figure 11: Difference in Average Contribution Received, pre- and post-crisis



But do these average receipts translate into substantial losses when aggregated up per cycle? Figure 12 suggests that they do, with only negligible differences in the pre-2008 period giving way to large disparities in excess of \$1m per cycle favoring challengers, and over \$2m more spent on open seats.

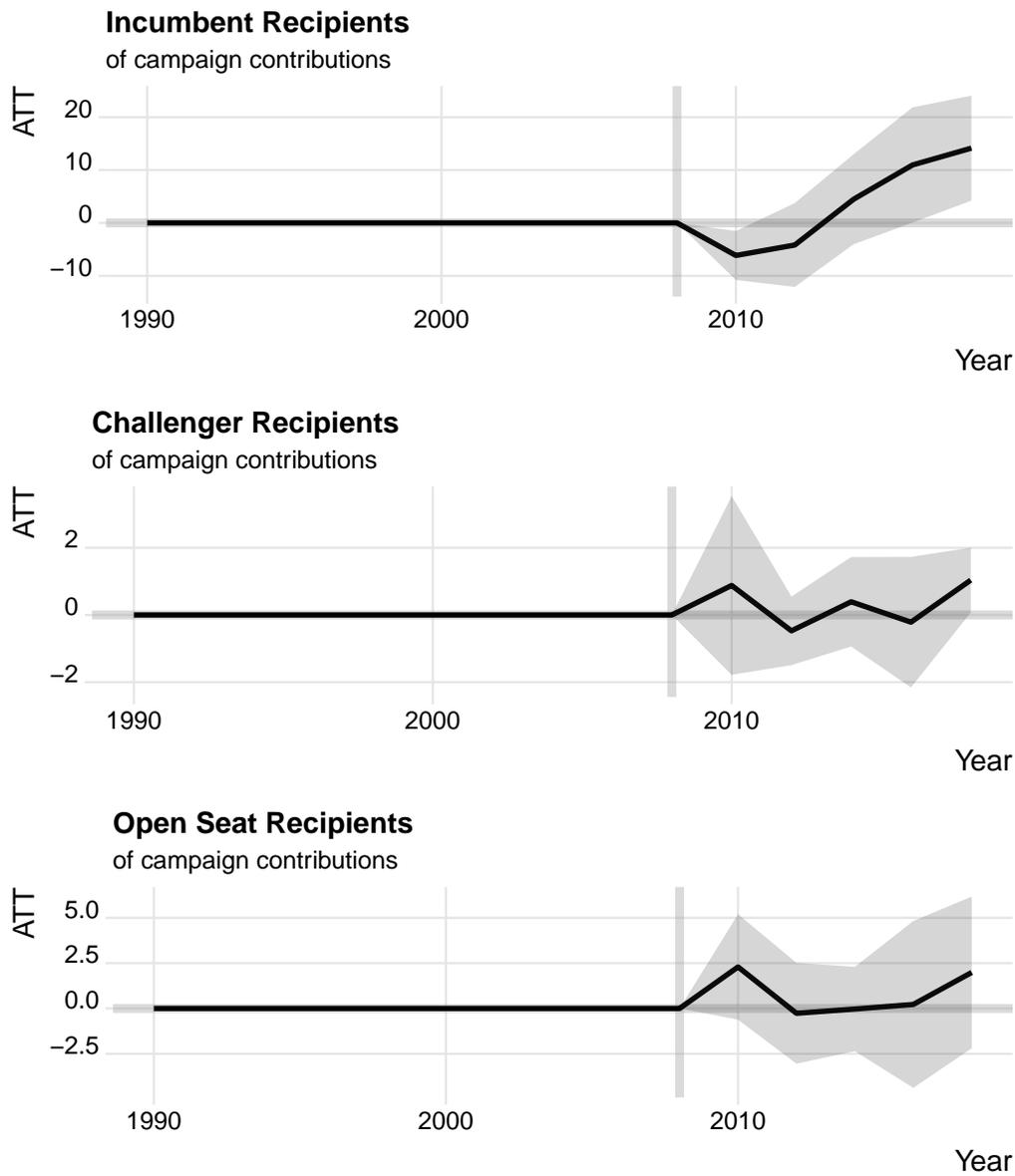
Figure 12: Total Contributions Received, pre- and post-crisis



However, by focusing on the recipient politician as the unit of aggregation, these results again suffer from a lack of convincing identification. Is this divergence due to the financial hardship experienced unequally across firms in the United States? Or does part of the story involve the well-known pattern of punishing an incumbent for bad economic times?

As a final test, we subset the trajectory balancing estimates by recipient status, plotted in Figure 13. Given the differences in contribution strategies by incumbents, challengers, and open seats, we estimate the change in total number of contributions by recipient status instead of the average dollar amount per contribution. As Figure 13 illustrates, the total number of contributions to incumbents experienced a statistically significant decline in the cycle following the GFC, while the contributions to challengers and to open seats increased, although not at conventional levels of statistical significance.

Figure 13: Average Treatment Effects on the Treated, Incumbent and Open Seat Recipients

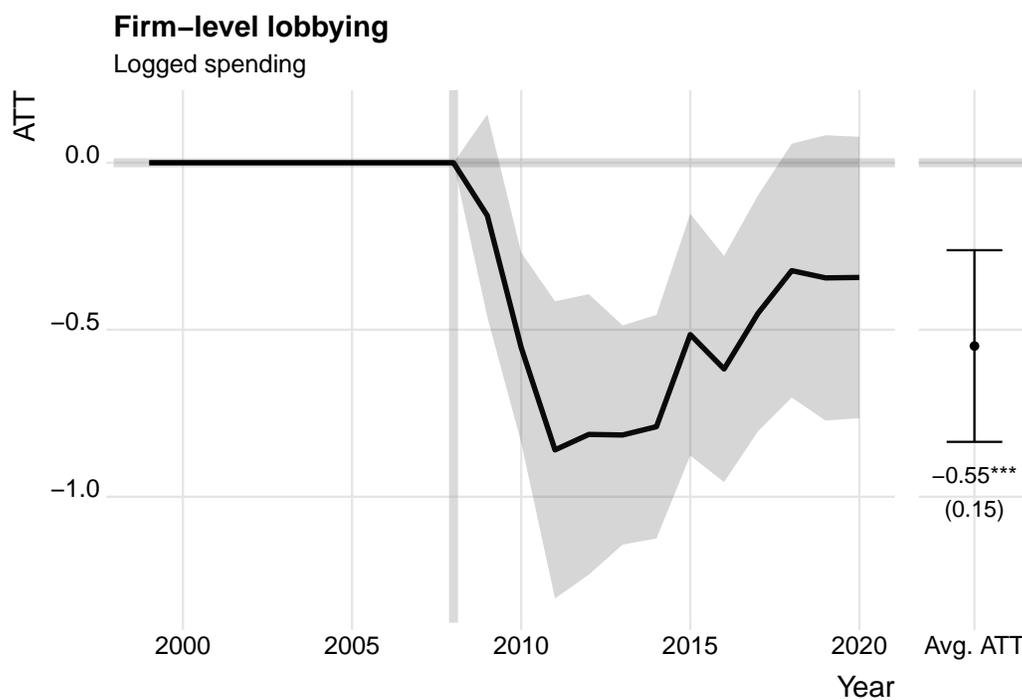


Importantly, the trajectory balancing approach allows us to visualize the full post-GFC dynamics, revealing that the penalty to incumbents quickly recovered, returning to parity between insulated and exposed donors by 2014, and indeed reversing the pattern by 2018. We posit that these patterns reflect the return on investment captured in the 2010 cycle — a shift in political power away from incumbents and towards challengers and open seats installed freshmen politicians who were then the incumbent recipient in the ensuing cycles.

4.4 Firm-Level Exposure

The preceding analyses determine whether a firm is “exposed” to the unexpected shock of the GFC as a function of the sector in which they operate. Below, we examine the robustness of the lobbying results among a subset of firms for which we can observe annual sales, allowing us to calculate a firm-level measure of exposure. We reiterate that these are only a subset of all firms in the lobbying data, but argue that the tighter internal validity of calculating firm-specific measures of exposure is worth the price of reduced external validity.

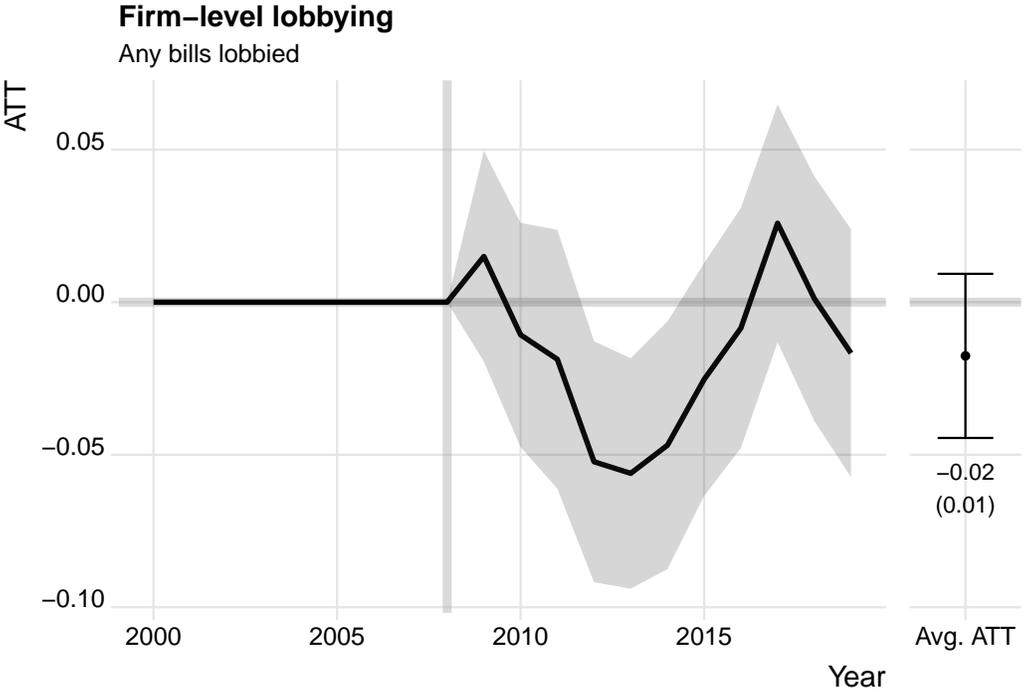
Figure 14: Average Treatment Effects on the Treated, Firm-level Analysis



In terms of total lobbying expenditures, we find stronger evidence of a causal effect associated with the GFC. As illustrated in Figure 14, the difference between insulated and exposed firms is more than a 70% decline in lobbying expenditures in the years following the GFC and a net decline of roughly 55% over the entire post-GFC period. Unlike the sector-defined exposure measures used earlier, the difference between insulated and exposed firms persists longer, although there is some evidence of a reversion since 2015.

Evidence of this pattern is stronger still if we replace the logged total amount of lobbying spent with an indicator for whether the firm lobbied at all in a given year. Figure 15 plots the ATT over time, revealing that the divergence between insulated and exposed firms was widest between 2010 and 2015 before shrinking again. Substantively, this divergence represents an approximately 5 percentage point reduction in the probability exposed firms lobby compared to insulated firms at most. While small, this is relative to a base rate of 10.9% in the period prior to the GFC, meaning the effect of the GFC on firm-level lobbying was an almost 50% decline.

Figure 15: Average Treatment Effects on the Treated, Firm-level Analysis



5 Conclusion

A fundamental assumption of the path-breaking work of Rogowski (1987) is that a reversal of financial fortunes translates into a change in political capital. Yet, there is little empirical work in IPE studying precise channels impacting political power following crises. We take

a narrow approach by carefully examining a rich dataset on two key channels — campaign contributions and lobbying expenditures — in an important case, the United States, following the 2008 global financial crisis. We interrogate whether the GFC presented an upheaval in these prevailing channels of political influence.

In line with [Rogowski](#)'s theory, we show that the GFC did indeed disrupt the relative influence of different economic actors on politics. Specifically, both campaign contributions and lobbying expenditures among the firms most exposed to the crisis declined significantly. Furthermore, these shifts in the tools of political influence tended to impact incumbents negatively, and with more political capital being directed at open seats. We proposed that those firms more exposed to the GFC represent the status quo winners. Our results thus suggest that the status quo winners retreated from political spending more so than the status quo losers whose voices were amplified with their increased spending profiles.

Many scholars are scrutinizing the origins of the recent backlash against the status quo system, focusing on how deteriorating economic conditions have led people to change their preferences over open economies. Rather than look at changing preferences, our work here emphasizes instead changes in the amplification of the voice and influence — specifically via campaign contributions and lobbying expenditures.

Our measurements of exposure to the crisis are noisy, biasing against our main findings, and so we look forward to future work that investigates how political expenditures influence voting behavior and policy. A more fine-grained measure of exposure to the GFC using a crosswalk between the firm employment data (14 million firms) and the firm-level expenditure data would allow for the examination of intra-industry competition at the firm level, identifying more specifically the intra-industry winners and losers from the status quo system.

The purpose of this paper is to contribute to the work showing that anti-status quo preferences have persisted throughout the integration of world markets ([Jensen, Quinn, and Weymouth, 2017](#); [Bearce and Moya, 2020](#); [Flaherty and Rogowski, 2021](#); [Mutz, 2021](#)) and

especially after economic crises ([Alarian, 2017](#); [Acevedo, 2020](#); [Jurado et al., 2020](#); [Lonergan and Blyth, 2020](#)). One of the effects of the GFC seems to have been to increase the relative influence of these preferences in US politics. This paper thus adds to the literature on economic shocks and political outcomes, providing a clear channel through which these relative shifts in economic power translate into political power. We conclude that our analysis reveals a mechanism by which the global financial crisis amplified the political voice and representation of people who had lost from the status quo economic system.

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