



Does Lobbying Pay in Times of Crisis? A Coordination Perspective on Lobbying

Raquel Gonçalves de Mendonça Santos Reis
Dissertation written under the supervision of Prof. Dr. Ekin Ilseven

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Abstract – English

Firms operate in an environment constantly shaped by government actions. Regulatory changes, legislative reforms and policy interventions frequently alter the conditions under which firms compete. In response, firms engage in corporate political activity, particularly lobbying, to influence policy outcomes and anticipate regulatory changes. This thesis investigates whether lobbying improves firm performance during external shocks and whether its effectiveness depends on the type of disruption firms face. This study reframes lobbying as an investment in coordination capability between firms and government actors. Building on this perspective, shocks are classified into three categories: Type I market disruptions originating outside of the regulatory system, Type II regulatory shocks arising directly from government action and Type III systemic crises that affect the broader economic system. Type I shocks serve as the conceptual baseline. Each type poses a different coordinated adaptation challenge for the firm and the regulators. For the empirical analysis, the study combines U.S. corporate lobbying data with firm-level financial and market data between 1998-2025. Using an event-study framework and regression analysis across major economic, regulatory and geopolitical shocks, the study evaluates how lobbying expenditures relate to firm performance around these events. The results show that lobbying does not improve performance following Type I shocks but is associated with more favorable outcomes during Type II regulatory shocks. However, lobbying provides limited protection during Type III systemic crises. These findings highlight that the strategic value of lobbying depends on the nature of environmental disruptions and introduce a coordination-based perspective on corporate political activity.

KEYWORDS: corporate political activity – coordination capability – corporate lobbying – firm performance – external shocks

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AUTHOR: Raquel Gonçalves de Mendonça Santos Reis

Abstract – Portuguese

As empresas operam num ambiente moldado por ações governamentais. Alterações regulatórias, reformas legislativas e intervenções políticas modificam frequentemente as condições sob as quais as empresas competem. Em resposta, as empresas envolvem-se em atividades políticas corporativas, em particular lobbying, com o objetivo de influenciar resultados políticos e antecipar mudanças regulatórias. Esta dissertação investiga se o lobbying melhora o desempenho das empresas durante choques externos e se a sua eficácia depende do tipo de disrupção enfrentada. Este estudo reconceptualiza o lobbying como um investimento na capacidade de coordenação entre empresas e atores governamentais. Com base nesta perspetiva, os choques são classificados em três categorias: Tipo I, disrupções de mercado externas ao sistema regulatório; Tipo II, choques regulatórios decorrentes da ação governamental e Tipo III, crises sistémicas que afetam o sistema económico no seu conjunto. Os choques de Tipo I funcionam como referência conceptual. Cada tipo coloca um desafio distinto de adaptação coordenada para empresas e reguladores. A análise empírica combina dados de lobbying empresarial nos Estados Unidos com dados financeiros e de mercado ao nível da empresa entre 1998 e 2025. Utilizando uma abordagem de estudo de eventos e regressões aplicadas a choques económicos, regulatórios e geopolíticos, avalia-se a relação entre gastos em lobbying e desempenho empresarial. Os resultados mostram que o lobbying não melhora o desempenho após os choques de Tipo I, mas está associado a melhores resultados de Tipo II. Contudo, oferece proteção limitada em crises de Tipo III, evidenciando que o seu valor depende da natureza das disrupções.

PALAVRAS-CHAVE: atividade política corporativa – capacidade de coordenação – lobbying corporativo – desempenho empresarial – choques externos

TÍTULO: Quando Compensa Fazer *Lobbying* em Tempos de Crise? Uma Perspetiva de Coordenação sobre o *Lobbying*

AUTOR: Raquel Gonçalves de Mendonça Santos Reis

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1. Introduction

Firms' strategies and management have become increasingly tied to government actions and regulatory policy. Firms devote substantial resources to influence and change public policy. In the United States, lobbying expenditures reach billions annually, exceeding \$5 billion in 2025 so far (OpenSecrets). However, lobbying remains a controversial practice. Critics argue that it allows firms to distort public policy in their favor and prioritize special interests over the common good. Others claim that lobbying can improve policy outcomes by providing policymakers with technical information about industries, regulatory consequences, and economic trade-offs. These opposing views make lobbying one of the most debated forms of corporate political engagement.

Despite the prevalence of lobbying in academic research, its influence has produced mixed findings regarding its economic implications. While some studies suggest that lobbying as a form of corporate political engagement can generate tangible performance gains, such as increased net income, market share, and passenger loads (Shaffer et al., 2000), these benefits are often contingent upon specific institutional access (De Figueiredo & Silverman, 2006) or the strategic communication of specialized information (Schuler, 1996). Other studies find that these efforts frequently fail to translate into long-term financial sustainability (Lenway et al., 1990) or show no statistically significant correlation with market value and accounting returns (Hersch et al., 2008). Additionally, lobbying has been linked to detrimental performance outcomes, including depressed market valuations (Coates, 2010) and severe financial underperformance during periods of systemic instability (Igan et al., 2009; Hadani & Schuler, 2013). As a result, literature has yet to reach a clear consensus on whether lobbying systematically improves firm performance.

One possible reason for these inconsistent findings may be found in how literature conceptualizes the role of lobbying. Much of the existing literature treats lobbying as a resource acquisition or allocation strategy, emphasizing the ability of firms to obtain regulatory favors, subsidies or preferential treatment from the government. In this view, political engagement functions similarly to other firm resources: firms invest in lobbying with the objective of obtaining policy advantages to improve firm performance and competitiveness. This thesis proposes a different interpretation. Instead of viewing lobbying as a tool for extracting policy benefits, it conceptualizes lobbying as an investment from a coordination perspective where there is a firm-government relationship. Governments play a crucial role in shaping the regulatory environment under which firms operate.

Regulatory changes, legislative reforms and geopolitical events often alter the environment, forcing firms to rapidly adapt to new conditions to survive. Under such circumstances, firms that maintain stronger political connections and information channels through lobbying may be better positioned to anticipate policy changes and consequently adjust their strategies accordingly. From this perspective, lobbying represents a mechanism that facilitates coordination between firms and the evolving regulatory environment. However, coordination capabilities do not necessarily generate benefits in all contexts. In some situations, political engagement may help firms respond more effectively to crises, while in others, it may prove to be ineffective or even detrimental if the source of disruption lies outside of the regulatory system. This implies that the value of lobbying depends on the nature of the shocks firms face. Environmental crises can originate from multiple sources: market disturbances, regulatory reforms and system-wide shocks.

Building on this logic, this thesis studies whether the performance implications of lobbying vary depending on the type of external shock firms encounter. Specifically, shocks are classified into three categories: Type I shocks originate from outside of the regulatory system and because of this they serve as the conceptual baseline for evaluating the effectiveness of lobbying. In these contexts, lobbying is not expected to provide meaningful advantages in responding to this type of disruption. Type II shocks originate from regulation or legislative changes, and Type II shocks originate from systemic crises. By distinguishing these types of shocks this study evaluates whether lobbying provides firms with advantages in adapting to different forms of environmental disruption.

To investigate such questions, this thesis analyzes a dataset combining U.S. corporate lobbying records with financial and market data for S&P 500 index firms between 1998-2024. Lobbying activity is measured using firm-level lobbying expenditures reported under the Lobbying Disclosure Act. The data is merged with firm financial information and stock market performance measures. The empirical analysis includes an event-study framework with OLS regressions per shock, which estimates are then aggregated using meta-analysis to obtain pooled lobbying coefficients for each shock category, allowing comparison across shock types. The results validate that the value of lobbying activities depends strongly on the type of shock firms experience.

Lobbying does not appear to improve firm performance following Type I shocks with is consistent with the initial expectation as the conceptual baseline. In contrast, lobbying is associated with improved performance following Type II shocks, consistent with the idea that firms with higher

lobbying expenditure experience more favorable performance when compared to the Type I baseline. For Type III shocks, the results indicate that high levels of uncertainty may overwhelm firm-level political advantages, meaning that lobbying does not significantly mitigate negative performance effects relative to the Type I baseline.

These findings contribute to the corporate political activity literature in several ways. First, they help reconcile the mixed evidence on the economic value of lobbying by demonstrating that its effectiveness depends on the type of external shock firms face. Rather than being universally beneficial or ineffective, it provides limited benefits following non-regulatory shocks but becomes more relevant when firms face regulation- By contrast, during systemic-wide shocks the magnitude of disruption can overwhelm firm-level political advantages, reducing the ability of lobbying to mitigate negative performance effects. Second, the study introduces a coordination perspective on corporate political engagement, highlighting the role of lobbying as a mechanism that facilitates the interactions between firms and government actors during periods of regulatory uncertainty. Additionally, the findings provide practical insights for managers and policymakers by clarifying the conditions under which lobbying activities are more likely to generate strategic value, particularly when firms operate in environments where government actions shape market outcomes.

Overall, this thesis shows that lobbying should not be understood as only a tool for securing regulatory advantages. In turn, its value is in its ability to enable firms to coordinate with government actors when firms must adapt to policy changes and regulatory uncertainty during external shocks.

2. Literature Review

In the United States, the expansion in federal regulation since the 1970s has not only altered the business-government relationship but also the structure of the economy (Weidenbaum, 1980). With the increase of government intervention, the traditional boundaries between the roles of firms and government became less clearly defined. Traditional corporate strategies overlooked government influence and its effect on both business and markets. Now, firms need to adapt their internal structures and strategic approach in a way that allows them to survive in the new evolving environment (Weidenbaum, 1980). As a result, government policy becomes an important source of uncertainty for firms (Boddewyn, 1988; Jacobson et al., 1993), so firms must adopt political

strategies (Yoffie, 1988). As a result, firms increasingly recognized government action as part of the competitive environment, using political engagement to shape favorable conditions for their objectives (Epstein, 1969). If firms choose to ignore this phenomenon it may result in a loss of sales and increases costs (Weidenbaum, 1980). These developments highlight the extent to which government decisions shape the competitive environment of firms. Government policy determines the rules of commerce, the structure and size of markets (Schuler et al., 2002), making the government an important stakeholder for businesses.

2.1 Stakeholder Theory

In 1984, Freeman first defined stakeholder as “any group or individual that can affect or be affected by the realization of an organization’s purpose” and later in 2004 added that a stakeholder’s concerns are part of the business processes and strategic decisions. Thus, emphasizes the value of investing in relationships with the entities who possess a stake in the business (Freeman, 2004). Donaldson & Preston (1995) argue that stakeholder theory goes beyond recognizing stakeholders but also provides guidance for organizational structure and firm operations.

Within this framework, governments represent an influential stakeholder. In competitive environments, firms’ strategic decisions are directly affected by government policies (Shaffer, 1995). Given the influence of government policy, firms often adopt proactive political strategies rather than simply reacting to legislation (Keim, 1981). Political engagement is more likely when government actions significantly affect the business environment, either to promote new policies or preserve existing ones that benefit firm operations and future opportunities (Bonardi et al., 2005). Consequently, many firms actively attempt to influence public policy decisions, through a variety of resource allocation methods and combination of different strategies, to shape the environment in which they operate (Hillman & Hitt, 1999; Baysinger, 1984; Schuler et al., 2002). This engagement may generate many strategic benefits for firms, such as access to policymakers and early information. Businesses with such advantages enjoy a competitive advantage over those who do not (Schuler et al., 2002). Weidenbaum (1980) argues that business–government relations improve when firms actively engage with the policy process. Thus, making constituency building an important organizational phenomenon among U.S. firms (Baysinger, 1984)

2.2 Resource-Based View

The resource-based view argues that firms own heterogeneous bundles of resources that shape their ability to compete and generate superior performance. Firms possess a competitive advantage when their resources are valuable, rare, difficult to imitate, and non-substitutable (Barney, 1991). Political ties constitute one such relational resource typically identified as a strong source of competitive advantage.

Political ties are more than temporary strategic advancements; they are considered part of the firm's attributes and relationships. Firms therefore have incentives to establish and maintain political connections (Faccio, 2006). Political connections can provide firms with advantages such as improved access to financing, favorable regulation, and a greater likelihood of government bailouts (Li et al., 2008; Goldman et al., 2009), suggesting they may represent firm-specific valuable resources developed through repeated interactions and investment with political actors. Political engagement requires firms to allocate substantial financial and organizational resources. As regulation expanded in the United States, firms increasingly redirected resources from traditional market activities toward interactions with policymakers (Weidenbaum, 1980). Additionally, firms' political actions depend on their available resources. Firms with greater resources are more likely to engage in individual political action, such as lobbying or campaign financing, whereas firms with fewer resources often rely on collective political action through industry associations (Hillman & Hitt, 1999; Schuler et al., 2002).

Political capital is also path-dependent since it develops gradually through repeated interactions with political actors and institutions that accumulate over time as firms invest in lobbying efforts and access to policymakers. Research characterizes the long-term objective of corporate political activity as maintaining parity with competitors or achieving strategic advantage (Schuler, et al., 2002). The evolution of firms' political engagement further reflects its path-dependent nature. Firms adjust their level of political activity depending on the perceived attractiveness of political markets (Bonardi et al., 2005). This implies that political engagement evolves over time as businesses look to gain and maintain access to policymakers.

2.3 Lobbying as Political Capital

Within the broader strategic management perspective, lobbying is considered a nonmarket strategy, meaning that it represents firms' actions directed at political, regulatory and social environment rather than traditional market competition (Baron, 1997, 1999). While market strategies involve activities such as pricing or product positioning, nonmarket strategies influence the institutional environment to enhance firm value (Baron, 1997, 1999). Lobbying is often identified as one of the primary tactics that interest groups use to gain political access (Smith, 1995).

In the corporate political activity literature, lobbying is often conceptualized as part of an information strategy, firms attempt to affect policy outcomes by communicating information about their policy preferences. This may evolve providing policymakers information about costs and benefits associated with different policy alternatives (Aplin & Hegarty, 1980), to shape legislative or regulatory decisions. In this context, lobbying, typically exercised by professional lobbyists or firm executives, refers to the supply of information to policymakers representing the interests of the firm. This can happen through informal meetings, formal consultations or social interactions (Hillman & Hitt, 1999; de Figueiredo & Tiller, 2000). Firms that adopt a proactive political strategy may exert direct pressure on policymakers by employing lobbyists to represent their interests (Hillman & Hitt, 1999). Schuler (1996) illustrated how firms that engage in lobbying can secure favorable policy outcomes. In his empirical study of domestic steel producers in the United States, he shows that these firms obtained trade protection through lobbying efforts, allowing them to stabilize prices and profits even when the market was declining.

2.4 Organizational Resilience

One implication of these theories as well as findings is that their value should be even higher under heightened uncertainty and turbulence; in other words, political capital should translate into organizational resilience against shocks. Being a useful construct to think about crisis response and firm performance in the aftermath of shocks, organizational resilience is the capacity of firms to absorb, adapt to and recover from environmental disruptions while maintaining organizational effectiveness. Ortriz-de-Mandojana & Bansal (2016) conceptualizes it as a path-dependent construct with long-term outcomes. In their empirical study, resilient firms demonstrate higher survival rates, lower financial volatility and stronger sales growth over time. Similarly, Williams et al. (2017) define organizational resilience as a firm's capability to maintain effective functioning

throughout periods of external disruption. A central mechanism through which firms build resilience is the ability to manage environmental uncertainty.

Within the corporate political activity literature, firms use political engagement to reduce uncertainty associated with government actions and policy change (Hillman et al., 2004), presumably expected to improve organizational resilience. Bonardi, Holburn, and Vanden Bergh (2006) show that firms in highly regulated industries engage in political strategies to influence regulatory environments affecting firm performance. Through lobbying and other forms of political engagement, firms may attempt to influence the design or implementation of policies that affect their operations. These interactions may generate informational advantages by providing firms with greater insight into policy processes and regulatory developments (Hillman, 2005), allowing firms to respond more quickly to external disruptions by adjusting their strategies before competitors. Politically connected firms are more likely to receive government bailouts when facing financial distress, suggesting that political relationships may provide firms with preferential access to government support (Faccio, 2006).

Despite these conceptual foundations linking political engagement to organizational resilience, literature on lobbying during crisis periods remains limited and produces mixed findings. Igan, Mishra, and Tressel (2009) analyze the role of lobbying by financial institutions prior to the 2007–2008 financial crisis and find that banks with higher lobbying expenditures exhibited greater risk-taking behavior and experienced significantly worse performance during the crisis. Similarly, Hadani and Schuler (2013) argue that corporate political investments do not consistently generate positive economic returns and may fail to produce expected benefits under conditions of high uncertainty.

As such, empirical findings remain mixed and little research directly examines how lobbying affects organizational resilience, i.e. firm performance in crisis times. This thesis addresses this gap by viewing lobbying as a mechanism that facilitates coordination between firms and government actors specifically during periods of uncertainty. In crisis situations, firms must interpret rapidly evolving policy responses and adjust their strategies accordingly. Building on this perspective, the following section develops a theoretical framework that explains how the effectiveness of lobbying may depend on the type of external shock firms face.

3. Theory and Hypotheses

Based on prior literature, firms and governments are stakeholders that must mutually adapt during crises. Since firms operate in environments characterized by constant business challenges, they must adapt rapidly to meet market expectations, yet in a coordinated fashion (Koçak et al., 2022).

One of the characteristics of the environments in which firms operate is the ongoing interaction between government policy and corporate activity. Under stable conditions, these interactions tend to follow relatively predictable patterns as firms rely on established organizational routines that help navigate familiar situations (Aggarwal et al., 2017). However, crises and shocks can alter the environment in which these interactions take place. Government influences firms through regulatory reforms, policy changes or new legislation, in turn firms influence the policy environment through compliance, lobbying and other forms of political engagement. These actors operate in a system of interdependence in which the actions of one actor depend on the actions of others, requiring coordination across actors (Puranam et al., 2014). Turbulent periods alter the institutional and market environment, and this interdependence is particularly salient during these periods of disruption. In these contexts, actors must mutually adjust their actions in response to one another. (Stan & Puranam, 2017; Koçak et al, 2022).

These adaptation challenges question why some firms respond more effectively to environmental disruptions than others. The literature on strategic management has long argued that firms differ in their ability to adapt to environmental changes due to the differences in their resources and capabilities. From a resource-based view, firms possess heterogeneous bundles of resources which shape the strategies they implement and consequently their ability to adapt to environmental change (Barney, 1991). One such resource is political capital: relationships, knowledge and influence firms develop in the political scope, through activities such as lobbying and regulatory engagement (Hillman & Hitt, 1999; Hillman et al., 2004; Bonardi et al, 2006; Hadani & Schuler, 2013). However, political capital differs from many traditional resources emphasized in the resource-based view as it is inherently relational. In these settings characterized by interdependence, where outcomes depend on the actions of multiple actors, its value and effectiveness depend on the ability of firms and government actors to coordinate and adjust their interactions in response to environmental change (Stan & Puranam, 2017; Puranam & Swamy, 2016).

Not all shocks generate adaptation problems involving both firms and government. There are events that affect mostly firms' operating environment without immediately requiring policy changes, such as natural disasters, supply chain disruptions or sudden financial crashes. These crises create uncertainty for the firms involved, but they do not necessarily trigger immediate response from the government. The nature of the shock itself can influence the difficulty of adaptation, to some degree (Aggarwal et al., 2017). From the perspective of organizational adaptation literature, such events are often addressed through internal adjustments, as firms adapt by modifying routines, structures, or resource allocations (Clement, 2023). Consequently, since there is no policy uncertainty or change through which lobbying could influence firms' outcomes, political capital provides little advantage in addressing these crises. These shocks therefore represent a conceptual baseline in which firms adapt mostly on their own and political capital activity is unlikely to affect performance.

On the other hand, some environmental shifts originate directly from government actions, such as regulatory reforms, legislative changes or new policy initiatives. In these situations, source of disruption originates from the government decision-making and firms must adapt to those changes. The government, however, does not simultaneously adjust its actions in response to individual firms. This also represents a one-sided adaptation problem in which firms must adjust their strategies to account for the regulatory changes, instead of mutually coordinating adjustments with policymakers. Organizations often face contexts in which actors must learn to make choices that are interdependent with those of others operating in different domains (Puranam & Swamy, 2016).

In this context, firms must learn how to anticipate and respond to policy decisions taken by government actors. When environmental shifts originate from government actions, it creates an environment in which firms can engage with policymakers through corporate political activity. Therefore, firms with greater political capital may possess advantages in responding to regulatory shocks. Lobbying activities facilitate the flow of information between firm and government actors and enable firms to develop relationships with policymakers (Hillman & Hitt, 1999; Hillman, Keim, & Schuler, 2004). These interactions can improve the firm's ability to align their actions with the regulatory conditions. Consequently, firms with greater political engagement are likely to adapt more effectively to shocks originating from government policy changes. Lobbying activities can improve firms' ability to anticipate and respond to regulatory developments, due to information exchange and coordination with policymakers. Based on these observations, I propose the following:

Hypothesis 1: *Firms with higher levels of lobbying activity will exhibit better performance following shocks originating from government policy changes.*

There is another case where some shock affect both firms and governments simultaneously, in cases such as financial crises, systemic economics disruptions and major geopolitical shocks. These events are characterized by market disruption while at the same time rapid policy responses from the government. Since uncertainty rises for both actors, they must simultaneously adapt their responses. When environmental shocks alter the conditions under which actors interact, the pattern of their interdependence may also change. Stan & Puranam (2017) describe it as an interdependence shift and when such cases occur, actors discover new patterns of mutually consistent behavior.

Environmental shifts may also change previously known interdependencies or introduce new ones, which can further complicate coordination (Schmidt & Foss, 2023). This simultaneity creates a mutual adaptation problem in which the actions of one actor influence the environment to which the other is trying to adapt. It becomes difficult for firms to anticipate any regulatory action or align their strategies with government policies. In such cases, corporate political engagement may not prove as useful as it does in regulatory shocks, because policymakers themselves may be uncertain about the appropriate policy response. As a result, lobbying may expose firms to increased policy uncertainty, misaligning even more their responses with government actions. Political engagement may become a liability when firms and governments must adapt simultaneously to systemic shocks. Hence, I predict:

Hypothesis 2: *Firms with higher levels of lobbying activity will experience worse performance following systemic shocks that create mutual adaptation challenges between firms and government.*

4. Empirical Setting

4.1 Empirical Context

Lobbying has long accompanied the United States' economic and institutional development. Initially, consisting mostly of individuals petitioning the government for economic benefits through policy adjustments and a practice protected under the First Amendment. The expansion of the American economy propelled a more organized practice of lobbying activities, particularly around

sectors such as railways and tariff policies (OpenSecrets; U.S Senate). Over time, lobbying evolved into a more institutionalized activity carried out by organized interest groups with several actors: corporations, trade associations, labor unions or any other organized interest group hire professional lobbyists to advocate for specific interests with policymakers. The current federal regulation stems from the Lobbying Disclosure Act of 1995, later amended by the Honest Leadership and Open Government Act of 2007. With these, lobbyists are required to register and periodically disclose their activities to promote transparency and reduce corruption risks (Holman, 2006; Perez Ludena & Ozdemir, 2025).

4.2 Overview of Lobbying Activity

To understand how lobbying activity operates in the 21st century, OpenSecrets (OS) database offers extensive records that can be leveraged to describe how lobbying has evolved over time until today. While the Lobbying Disclosure Act was approved in 1995, consistent digital reporting only became operational in late 1990s. This explains why OS federal lobbying expenditure is only reported starting in 1998. The dataset covers the period 1998-2025 and is structured at the client-filing level. Data is organized at the quarterly report level, capturing which company (labelled as client) is working with which lobbying organization to lobby certain agencies. Their lobbying dataset provides information on the following variables: client name, unique client identifier (Uniqid), reporting year and quarter, total reported lobbying expenditures, issues, bills and agencies lobbied, lobbying firms employed and number of lobbyists involved. Each lobbying entity is a client to which is assigned the unique OS identifier (Uniqid). The dataset has a total of 54,207 unique firms and 257 unique agencies lobbied. Lobbying activity is reported on a quarterly basis. Each datapoint in this dataset is a specific lobbying related report, which is not systematically consolidated annually.

In Figure 1, the top panel plot shows the number of distinct lobbying firms per year, and the bottom panel plot shows how total lobbying expenditure evolves over time in the OpenSecrets universe, measured in billions of USD. Both panels grow strongly through the 2000s, peak around just before 2010 (maybe around 2008/2009). The bottom panel declines more than the top panel early 2010. The ups and downs are more frequent and instable in the bottom panel than in the top panel where there's a somewhat stability after the decline. Then there's a small recovery right after 2015. The

sharp drop in the final year is likely to be due to incomplete reporting rather than a true structural break.

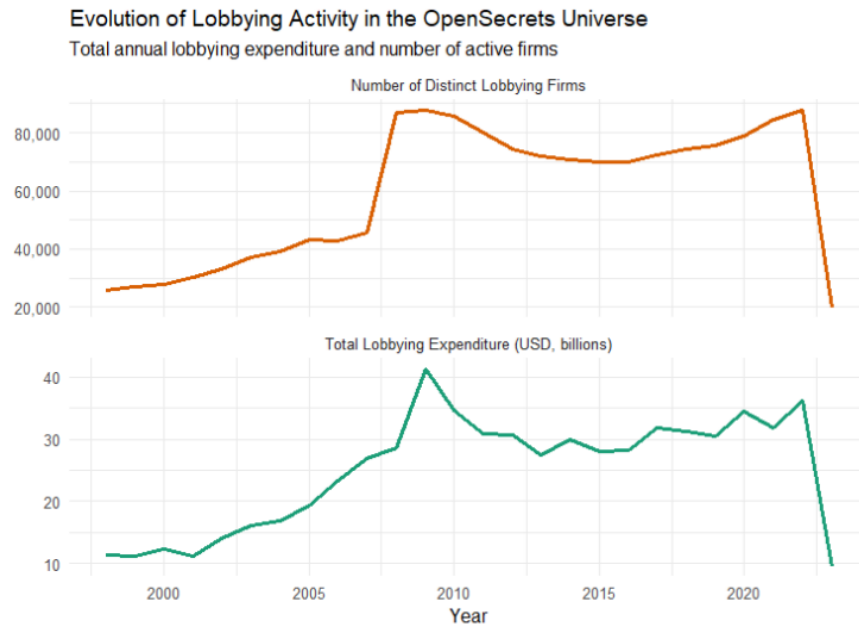


Figure 1: *Evolution of Lobbying Activity: Number of Firms and Total Expenditures*

In Figure 2, the histogram displays the distribution of annual firm-level lobbying expenditures across all firm-year observations. Because lobbying spending is highly skewed, the horizontal axis is plotted on a logarithmic scale to allow meaningful visualization of both small and large spenders.

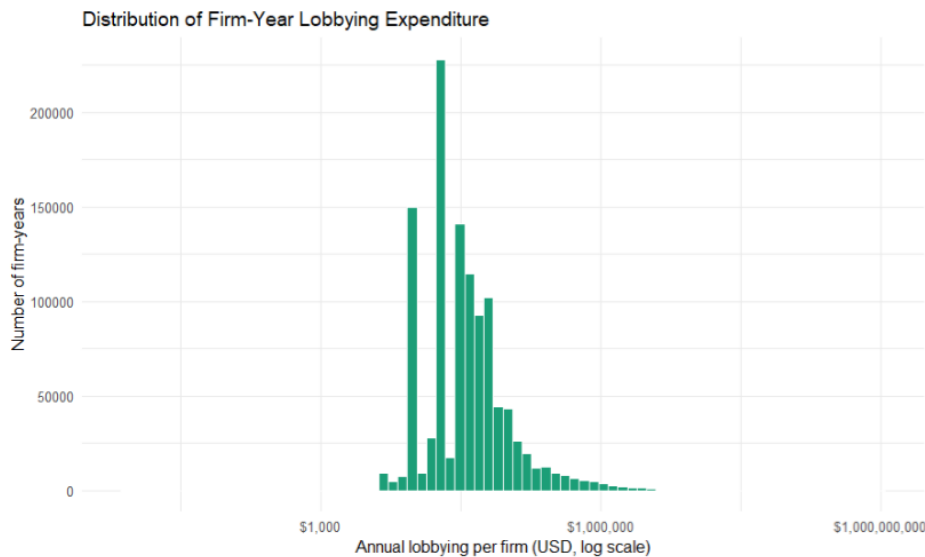


Figure 2: *Distribution of Firm-Year Lobbying Expenditures (Log Scale)*

The distribution shows that firm-year lobbying expenditures are highly concentrated. It also exhibits pronounced right-skewness, with most firms spending generally below one million USD per year and a small fraction accounting for extremely large expenditures extending into hundreds of millions of USD.

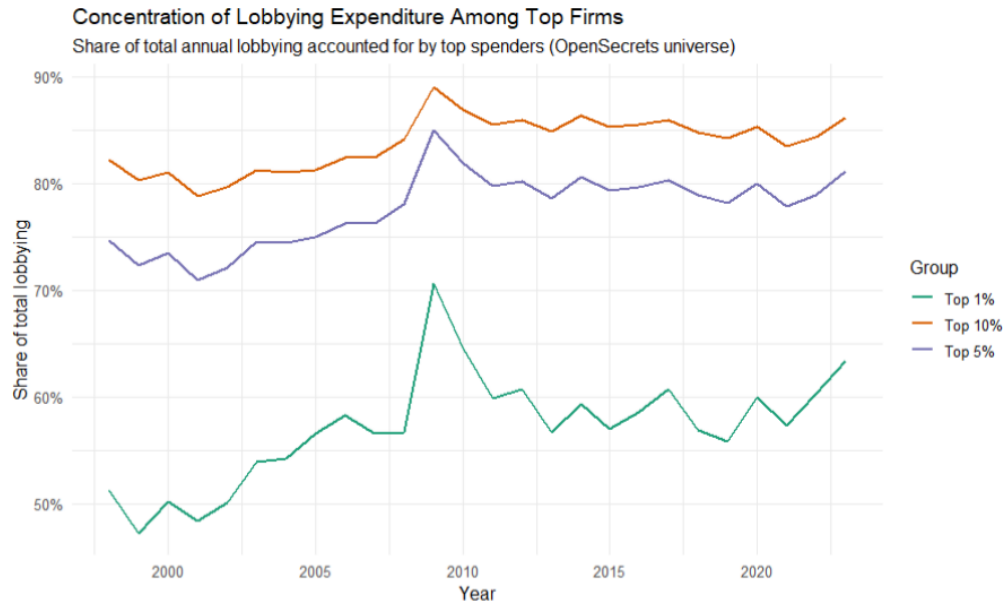


Figure 3: Lobbying Expenditure Concentration Among Top-Spending Firms

In Figure 3, the graph illustrates the concentration of total annual lobbying expenditure accounted for by the top 1%, 5% and 10% of firms over time. Lobbying expenditures are highly concentrated throughout the sample period. The top 10% of firms consistently account for the higher annual spending, while the top 1% alone accounts for more than half. This indicates that political engagement is not evenly distributed as it is dominated by a small number of firms.

4.3 Lobbying and Top Agencies

To visualize how lobbying expenditure is distributed across government institutions, I focused on the date pertaining to the then agencies that have the highest number of lobbying filings: Department of Commerce, Defense, Health & Human Services, State, Treasury, Environmental Protection Agency, Office of U.S Trade Representative, U.S House of Representatives, U.S Senate and the White House.

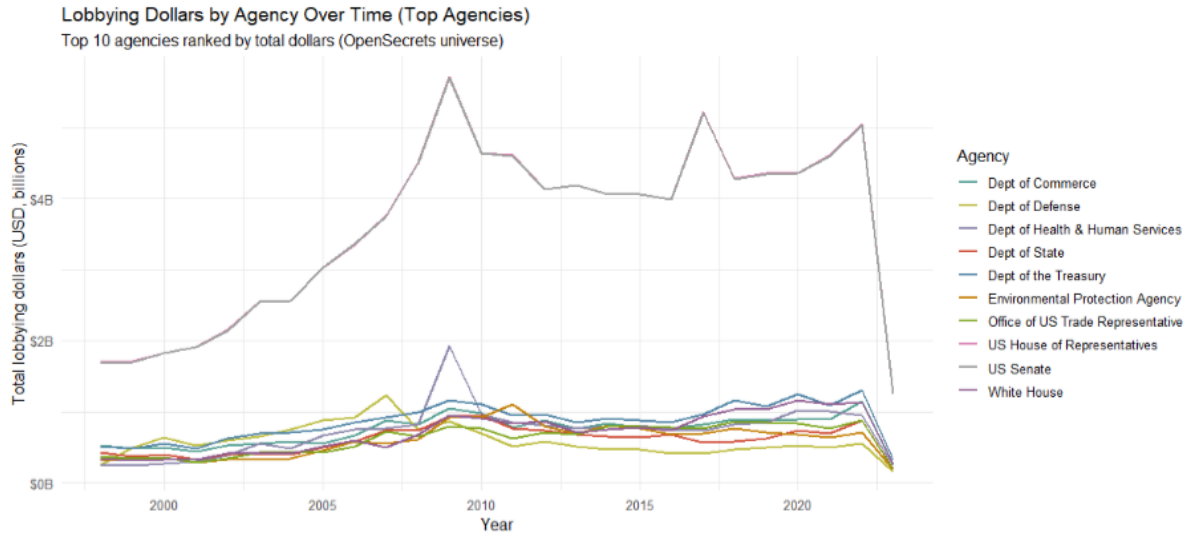


Figure 4: Lobbying Spending by Federal Agency Over Time

Figure 4 reports the total annual lobbying expenditure directed toward the top ten agencies over time. Figure 5 shows how often agencies are lobbied, measured by the number of filings. In Figure 4 both the U.S House of Representatives and the U.S Senate have the highest and same concentration of lobbying expenditure. Both agencies exhibit a strong upward trend from the late 1990s through the late 2000s and functioning in the following years. The remaining agencies receive substantially lower but relatively stable levels of spending.

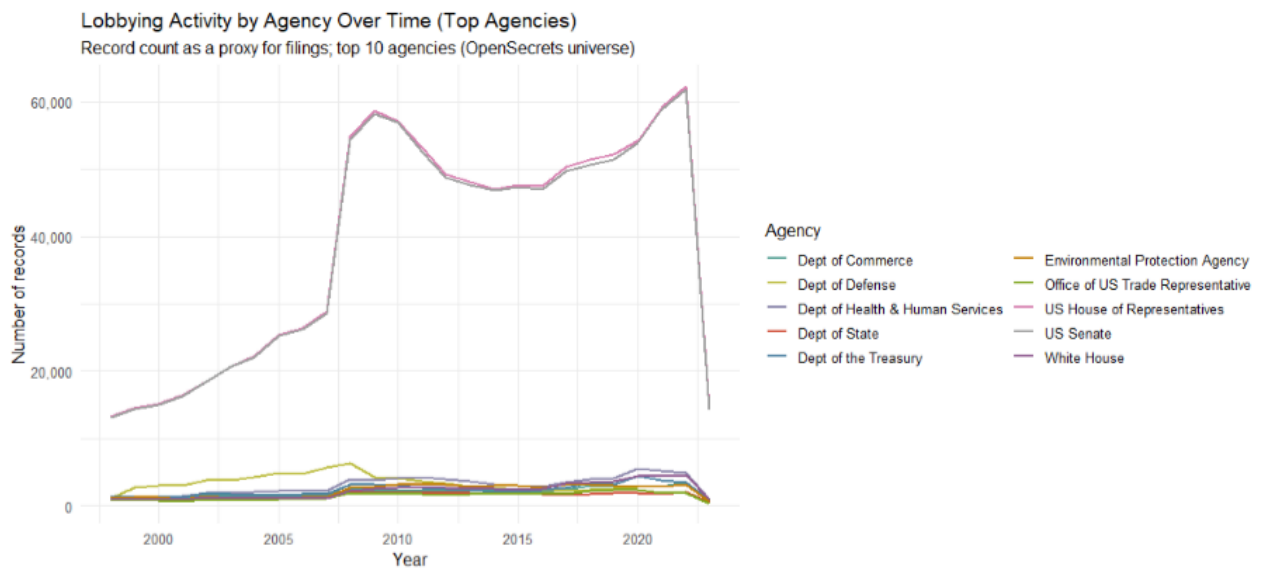


Figure 5: Lobbying Activity by Federal Agency (Filing Counts)

Similar to Figure 4, in Figure 5 the U.S House of Representatives and the U.S Senate dominate the lobbying activity, with similar increases in the mid-2000s and remaining substantially higher than other agencies throughout the following years. The remaining agencies show comparatively lower but stable lobbying spending throughout the sample period.

4.4 Total Lobbying Expenditure (S&P 500 firms vs OS universe)

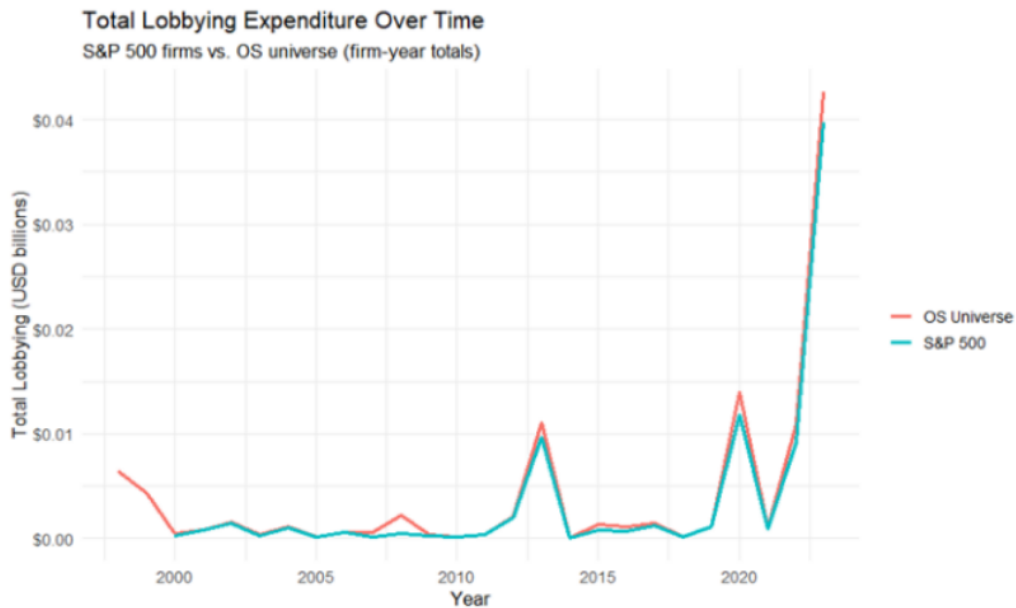


Figure 6: *Total Lobbying Expenditures Over Time: S&P 500 vs. OpenSecrets Universe*

Figure 6 compares the total annual lobbying expenditure from the S&P 500 firms and the OS universe from the years of 1998-2025. The two series track each other closely throughout the sample period, with S&P 500 firms accounting for most reported lobbying expenditures in most years. While they're relatively similar in terms of spending, we can clearly see that S&P 500 firms only start lobbying after the year 2000.

5. Methodology

5.1 Data

The data used relies on two sources. Firm-level lobbying expenditure was obtained from the OpenSecrets (OS) database and financial and stock price data were obtained from Compustat via WRDS. Despite its comprehensive coverage, there are several limitations in this database. First,

LDA's self-reported nature of expenditures may introduce measures, particularly for small clients and low levels of lobbying. Second, the data present is only at the federal level, so state and local lobbying are not captured. Finally, some firms lobby through trade associations or industry coalitions so the true political engagement data may be understated. Compustat is a database provided by S&P Global and it contains firm-level financial and market data on publicly traded firms. Each observation corresponds to a specific firm on a specific trading day. The annual firm-level financial variables are also obtained from Compustat.

5.2 Unit of Analysis: S&P 500 Firms

The S&P 500 (Standard and Poor's 500) is a stock market index tracking the performance of the 500 leading companies listed on U.S. stock exchanges. This index is compiled and maintained by S&P Dow Jones Indices and firms must satisfy specific eligibility criteria for inclusion. These include minimum market capitalization thresholds, U.S. incorporation and listing requirements, sufficient liquidity, public float, and sustained profitability over recent quarters. As a result, the index represents large, financially viable, and actively traded companies, covering approximately 80% of the total U.S. equity market.

I chose S&P 500 firms because they represent large-cap and systemically important firms that are more exposed to macroeconomic and regulatory shocks and therefore face stronger coordination demands during crises. Their size, organizational complexity and capital market exposure also make them more likely to engage in corporate political activity, including lobbying. As shown in the descriptive analysis (Figure 6), lobbying expenditure in OpenSecrets is concentrated among large publicly traded firms, and S&P 500 lobbying tracks closely the aggregate OpenSecrets total, indicating that large firms drive most of corporate political engagement.

5.3 Crisis Types by Coordination Needs

In this thesis, crises are defined as significant market-wide impacts of economic or institutional relevance with a sudden, clearly identifiable onset date. These events represent exogenous shocks to individual firms' lobbying decisions and are identified using historical macroeconomic records and financial market timelines. Each shock is assigned to a clearly defined event window with a start and end date. The start date corresponds to the point when the disruptive event becomes publicly observable and begins affecting market expectations, serving as the anchor for the event-

study design around which abnormal returns are calculated. The end date marks the stabilization of the initial crisis phase. Because lobbying effectiveness may vary depending on both the nature of the shock and the extent of government involvement, shocks are classified into three categories: Type I, Type II and Type III. This classification is based on the dominant source of disruption at the beginning of the event, not on the magnitude of the observed outcomes, ensuring consistency with the theoretical mechanisms tested in the empirical analysis.

Type I shocks are non-regulatory shocks that originate outside of the regulatory system and arise from economic, technological, or environmental disruptions rather than immediate government intervention. The Dot-Com Bubble Burst (2000-2001), driven by the collapse of technology stock valuations, is an example of this type of shock. Type I shocks serve as the baseline category in the empirical analysis. Type II shocks are regulatory shocks in which the disruption originates from policy or regulatory change that directly alters firms' operating conditions. The Affordable Care Act (2010) is an example, as the introduction of major regulatory reforms in the U.S. healthcare system significantly affected healthcare-related industries. This category provides the empirical basis for testing Hypothesis 1. Type III shocks are system-wide crisis that stem from major government intervention or regulatory response. These shocks occur when an economy-wide disruption is accompanied by either large-scale government intervention or regulatory restructuring. In the Global Financial Crisis (2008-2009) there were both severe financial market disruptions and extensive government intervention. This type of shock serves as the empirical setting through which Hypothesis 2 is tested.

Table 1 summarizes the shocks used in this study. The sample includes 27 shocks: 8 Type I, 13 Type II, and 6 Type III events. The lobbying data covers the period from 1998 to 2024, consistent with the availability of firm-level lobbying expenditure data.

5.4 Data Construction

To construct the firm-level panel, lobbying entities from the OpenSecrets database were manually matched to publicly traded firms in the Compustat financial dataset, because the two databases do not share a common firm identifier. OpenSecrets identifies entities using a unique identifier (Uniqid), while Compustat uses GVKEY. Ambiguous cases were verified individually to ensure accurate firm-level matches. In total, 79.2% of lobbying entities were successfully matched to

Compustat firms. The remaining entities likely correspond to organizations that do not appear in Compustat rather than reflecting data limitations.

Table 1: Sample of Shock Events and Classification

Shock	Description	Type	Timeframe
Atlantic Hurricane Season 2017	Cluster of major Atlantic hurricanes	Type I	25/08/2017–01/10/2017
Dot-Com Bubble Collapse	Collapse of technology stock valuations	Type I	10/03/2000–09/10/2002
Repo Market Liquidity Crisis	Short-term liquidity crisis in U.S. repo markets	Type I	16/09/2019–30/09/2019
Flash Crash	Extreme short-term market crash in U.S. equities	Type I	06/05/2010–10/05/2010
Hurricane Sandy	Major hurricane affecting U.S. East Coast	Type I	22/10/2012–15/11/2012
Oil Price Collapse	Sharp global oil price decline	Type I	01/06/2014–11/02/2016
Chinese Market Turbulence	Volatility in Chinese stock markets	Type I	11/08/2015–25/08/2015
Texas Winter Storm Uri	Extreme winter storm in Texas	Type I	13/02/2021–20/02/2021
U.S. Presidential Election 2016	U.S. presidential election outcome	Type II	08/11/2016–15/12/2016
Bush v. Gore Election Dispute	Disputed U.S. presidential election outcome	Type II	07/11/2000–12/12/2000
Federal Reserve Tightening Cycle	Rapid monetary tightening by the Federal Reserve	Type II	16/03/2022–26/07/2023
Affordable Care Act	Major healthcare regulation reform	Type II	23/03/2010–30/04/2010
Net Neutrality Repeal	Repeal of U.S. net neutrality rules	Type II	14/12/2017–31/01/2018
Brexit Referendum	UK referendum to leave the European Union	Type II	23/06/2016–15/07/2016
EPA Regulatory Shift	Environmental regulatory policy changes	Type II	03/08/2015–09/02/2016
Sarbanes–Oxley Act	Corporate governance regulation reform	Type II	16/10/2001–30/07/2002
GDPR Implementation	European Union data protection regulation	Type II	25/05/2018–30/06/2018
U.S. Debt Ceiling Crisis	Political conflict over U.S. debt ceiling	Type II	01/07/2011–08/08/2011
U.S. Government Shutdown	Temporary shutdown of U.S. federal government	Type II	01/10/2013–17/10/2013
U.S.–China Trade War	Escalation of tariffs between U.S. and China	Type II	22/03/2018–15/12/2019
Tax Cuts and Jobs Act	Major corporate tax reform in the U.S.	Type II	22/12/2017–31/01/2018
Global Financial Crisis	Global financial system collapse	Type III	09/08/2007–09/03/2009
September 11 Attacks	Terrorist attacks disrupting global markets	Type III	11/09/2001–28/09/2001
U.S. Regional Banking Crisis	Collapse of several U.S. regional banks	Type III	10/03/2023–01/05/2023
Russia–Ukraine Invasion	Russian invasion of Ukraine	Type III	24/02/2022–15/04/2022
COVID-19 Pandemic	Global pandemic and economic shutdown	Type III	20/02/2020–30/04/2020
U.S. Invasion of Iraq	Geopolitical conflict affecting global markets	Type III	20/03/2003–01/05/2003

Firm names were standardized prior to matching. All names were converted to uppercase, punctuation was removed and whitespace was standardized. Common corporate suffixes (e.g., INC, CORP, CO, LTD, LLC, PLC, HOLDINGS, GROUP) and symbols such as “&” and possessive “S” were maintained to preserve official firm identifiers. The OpenSecrets dataset reports lobbying expenditures at the parent-firm level, including activities conducted by subsidiaries.

In the merged dataset, firms are identified by GVKEY. Although some firms exhibit intermittent periods with no recorded lobbying expenditure, the dataset provides sufficient firm-level coverage across the sample period. The final empirical sample contains 458 unique firms. While the raw lobbying data span 1998–2025, the empirical analysis focuses on 2001–2023 to align with the shock sample period. To construct the event-study panel, daily stock price data from Compustat were used. The dataset includes the trading date (*datadate*), the raw closing price (*PRCCD*), the split adjustment factor (*AJEXDI*) and the total return factor (*TRFD*). Raw closing prices were adjusted before computing returns. I used the split adjustment factor (*AJEXDI*) to correct stock splits and the total return factor (*TRFD*) to include dividend distributions. These adjustments account for mechanical price changes and ensure that the resulting returns reflect economically meaningful changes in firm valuation. Shock events are anchored on the start date of each crisis. Because financial markets operate only on trading days, events occurring on weekends or holidays are aligned with the next available trading day in the stock price panel. This ensures that abnormal return calculations are based on observed market prices and that the event window begins on the first trading day following the shock.

5.5 Variables

Outcome Variable. The dependent variable is the change in cumulative abnormal return (ΔCAR), calculated as the difference between post-shock and pre-shock cumulative abnormal returns.

$$\Delta CAR = CAR_{post} - CAR_{pre}$$

Cumulative abnormal returns (CAR) represent the cumulative abnormal stock return relative to a benchmark return over a specified event window. The ΔCAR measure captures changes in firm valuation associated with the shock event. Abnormal returns are defined as the difference between the firm’s daily return and the benchmark return on the same day. Abnormal returns are benchmarked using the daily equal-weighted cross-firm mean return from the available stock panel, rather than the S&P 500 index.

Independent Variable. The main input variable is total lobbying expenditure accumulated over the four years preceding the shock, measured using the variable *lobby4y_loglp*. The total lobbying expenditure is constructed as a weighted aggregation of a firm’s lobbying expenditure over the previous four years.

$$\text{Lobbying Expenditure} = L_t + \frac{L_{t-1}}{2} + \frac{L_{t-2}}{3} + \frac{L_{t-3}}{4}$$

L_t represents the firm's lobbying expenditure in the event year. L_{t-1} , L_{t-2} and L_{t-3} represent lobbying expenditures in the previous one, two and three years, respectively. I assigned greater weight in comparison to the other years to reflect the idea that recent political engagement is more likely to influence firms' relationships with policymakers and consequently their ability to respond to regulatory developments. Lobbying activity is measured using the four years preceding each shock event, reflecting the cumulative nature of political influence. To reduce skewness and accommodate zero expenditures, lobbying is transformed using $\log(1 + x)$. The resulting variable, *lobby4y_loglp*, captures the log-transformed lobbying expenditure prior to the shock.

Control Variables. The analysis includes firm-level controls to account for observable differences in financial characteristics. Firm size is measured as the logarithm of total assets (*loglp_at*), capturing the greater resources and resilience of larger firms. Financial leverage, measured as the ratio of long-term debt to total assets (*leverage_lt_at*), accounts for financial constraints that may limit firms' flexibility during crises. Firm profitability is measured using return on assets (*roa_ni*), defined as net income divided by total assets, capturing firms' operational efficiency and financial health. Industry fixed effects (*gind*) are included to control systematic differences across industries. The *gind* variable corresponds to the Global Industry Classification Standard (GICS) industry level, which provides a more granular classification than broader sector-level groupings.

5.6 Empirical Method

The hypotheses are tested using two empirical methods: shock-level ordinary least squares (OLS) regressions and a meta-analysis of the estimated coefficients.

OLS regressions. OLS regressions are used within the event-study framework to examine how stock prices respond to shocks and whether firm characteristics explain variation in these responses. Estimating a separate regression for each shock allows the analysis to assess whether firms with different levels of lobbying activity experience different stock market reactions. The pre-regression dataset contains 6,565 firm-shock observations across 27 shocks. For each shock, the following regression is estimated:

$$\Delta CAR = \beta_0 + \beta_1 \text{Lobby} + \text{Controls} + \varepsilon$$

where ΔCAR represents the change in cumulative abnormal returns following the shock, and β_1 captures the association between a firm's lobbying activity and its stock market response. Observations with missing values are excluded from the regression sample.

The main specification uses a 30-day event window, over which cumulative abnormal returns are measured. This window is appropriate since shocks studied are primarily regulatory, geopolitical, or macroeconomic rather than firm-specific events. Therefore, these shocks tend to unfold gradually as information becomes available and investors process their economic and regulatory implications. A longer event window therefore allows the analysis to capture the full market adjustment.

All continuous variables are winsorized at the 1% level to mitigate the influence of extreme observations. All regressions use heteroskedasticity-robust standard errors (HC1), as the assumption of homoskedasticity is unlikely to hold given cross-sectional differences in firm characteristics. The HC1 estimator applies a degrees-of-freedom correction to the HC0 heteroskedasticity-consistent covariance estimator proposed by White (1980). For robustness, the analysis also reports HC0 and HC3 standard errors. HC0 corresponds to the original heteroskedasticity-consistent estimator, while HC3 applies a stronger correction for small-sample bias. Results using HC0 are consistent with the main specification, with identical coefficients and only minor differences in inference. In contrast, HC3 produces undefined standard errors in some specifications, likely due to limited observations within certain shocks.

Meta-analysis. Meta-analysis is used because the shock types represent meta-classifications of events. Each individual shock provides an estimate of the lobbying effect, but the theoretical predictions concern differences across categories of shocks (Type I, Type II and Type III).

In the second step, the lobbying coefficients estimated for each shock from the OLS regressions are combined using a meta-analysis. For each shock, the estimated lobbying coefficient and its corresponding standard error are extracted from the shock-level regression results. These estimates are then used as inputs to the meta-analysis, supplied to the *rma()* function in the *metafor* package in R, where the lobbying coefficient is specified as the effect size (denoted y_i) and the associated standard error represents the precision of the estimate (denoted SE_i). The meta-analysis specifies a random-effects model estimated via restricted maximum likelihood (REML). τ^2 is estimated inside the REML procedure and incorporated into the weighting scheme by increasing the variance used

for each estimate. Its primary role is to account for heterogeneity in the true lobbying effects across shocks, while also stabilizing the weighting scheme by preventing estimates with very small standard errors from receiving disproportionate weight. In this framework, the pooled effect is computed as a weighted average of the shock-level coefficients. Each estimate is weighted by the inverse of its variance, so shocks with more precise estimates receive greater weight. The pooled effect is computed as:

$$\hat{\mu} = \frac{\sum w_i \hat{\beta}_i}{\sum w_i}, \text{ where } w_i = \frac{1}{SE^2_i + \tau^2}$$

I conducted three separate meta-analyses are conducted for each shock category (Type I, Type II and Type III), producing pooled estimates of the lobbying effect within each category. Type I shocks served as the baseline category. After obtaining pooled coefficients, I conducted difference-in-coefficients tests comparing Type II with Type I and Type III with Type I. These tests evaluate whether the estimated lobbying effects differ significantly across shock categories. The difference between pooled coefficients is divided by the square root of the sum of the squared standard errors to obtain a z-statistic, which is then used to test whether the lobbying effects differ significantly across shock types.

5.7 Robustness Tests

Several robustness tests were conducted to assess the stability of the results. First, the analysis was replicated without winsorization to ensure that findings are not driven by outlier treatment. The results were identical to the baseline specification at both the shock-level and meta-analysis level, indicating that the findings are not influenced by extreme observations. Second, alternative standard error specifications were explored, including HC0, firm- and industry-clustered, and non-clustered errors. The estimated lobbying coefficients remained stable across specifications. HC0 and HC1 produced similar coefficients although some variation in magnitude is observed. HC3 presented undefined standard errors for several shocks, likely use to small sample size or limited variation. Third, I test robustness to alternative profitability measures by replacing ROA based on net income (roa_ni) with an EBITA-based measure (roa_ebitda_at). The results remain consistent with similar coefficient magnitudes and statistical significance across shocks and pooled estimates, suggesting that the findings are not sensitive to the profitability measure.

6. Results and Analysis

Table 2 reports descriptive statistics for the variables used in the regression analysis. The average change in cumulative abnormal returns (ΔCAR) across firm–shock observations is -0.042 , indicating that shocks tend to generate slightly negative abnormal returns on average. However, the large standard deviation and wide range of values suggest substantial variation in firms’ market reactions to shocks. The lobbying shows considerable heterogeneity across firms, with ranges from 0 to 15.86 and a relatively large standard deviation ($\text{SD} = 3.21$), relative to its mean (1.01).

Table 2: *Descriptive statistics for regression variables*

Variable	Mean	SD	Min	Max	N
ΔCAR	-0.0424	0.4501	-6.7834	3.7473	6,565
lobby4y_loglp	1.0081	3.2078	0.0000	15.8557	6,565
roa_ni	0.0690	0.0778	-1.2270	0.5111	6,565
leverage_lt_at	0.6479	0.2082	0.0980	2.9191	6,565
loglp_at	10.1502	1.0835	7.3501	13.5865	6,565

The control variables also display reasonable distributions: the average return on assets is approximately 6.9%. For large publicly traded firms, ROA typically falls somewhere around 5%-10%, the values on the table express that firms in the sample are profitable on average. Average financial leverage is 0.65, which means that 65% of assets are financed with long-term debt. For large firms, leverage often falls around 0.4-0.7 so these firms have substantial, but not extreme debt. The firm size (measured by the mean log of total assets) is 10.15, which shows that the average firm in the sample is very large. This makes sense because the sample is the S&P 500 firms. These values are consistent with typical characteristics of large publicly traded firms.

Table 3: Correlation matrix of regression variables

Variable	delta_car	lobby4y_log1p	roa_ni	leverage_lt_at	log1p_at
Δ CAR	1.000	-0.004	0.110	-0.006	-0.012
lobby4y_log1p	-0.004	1.000	-0.003	0.014	0.094
roa_ni	0.110	-0.003	1.000	-0.065	-0.239
leverage_lt_at	-0.006	0.014	-0.065	1.000	0.032
log1p_at	-0.012	0.094	-0.239	0.032	1.000

Table 3 reports pairwise Pearson correlations between the variables used in the regression analysis. Overall, the correlations are small in magnitude. The largest absolute correlation between two different variables is -0.239 between *roa_ni* and *log1p_at*. This value remains well below conventional multicollinearity thresholds, which typically arise when correlations exceed 0.7–0.8. Therefore, multicollinearity is unlikely to pose a concern for the estimation results.

The dependent variable, Δ CAR, exhibits weak correlations with the explanatory variables, ranging between -0.01 and 0.11. This indicates that market reactions vary across firms and shocks, rather than being mechanically determined by firm characteristics. The lobbying variable also displays very low correlations with the financial control variable (-0.003 with profitability, 0.014 with leverage, and 0.094 with firm size). These values indicate that lobbying activity is largely independent of firms' short-term financial characteristics, although the small positive correlation with firm size is consistent with the expectation that larger firms tend to engage somewhat more in political activity. If lobbying were highly correlated with profitability or leverage (e.g., correlations above 0.6–0.7), it would be difficult to isolate its independent effect in the regression analysis. Overall, the low correlations across variables indicate that the regression estimates are unlikely to be driven by strong linear relationships among the explanatory variables.

6.1 Per-shock Regression Results

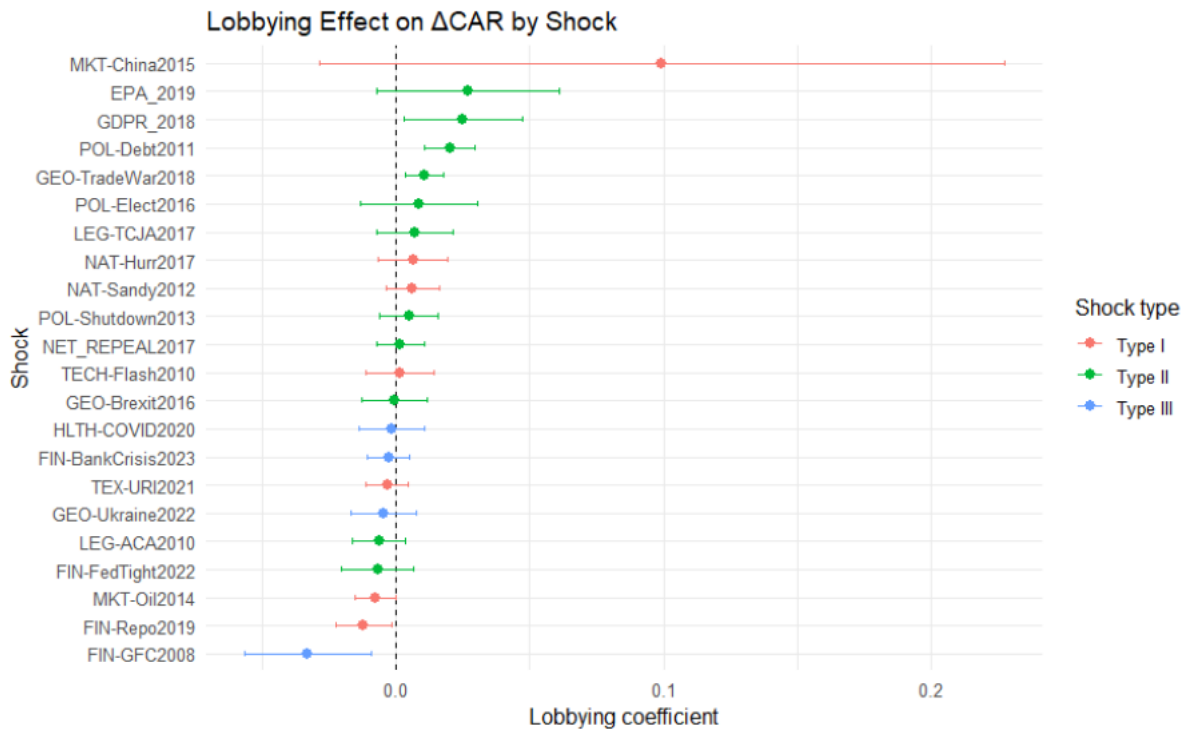


Figure 7: *Estimated Lobbying Effects on Δ CAR Across Shock Events*

Figure 7 presents the lobbying coefficients estimates from the per-shock OLS regressions, along with their corresponding confidence intervals. The initial regression procedure was performed for 27 shocks using the main specification. However, for five shocks the regression could not produce valid coefficient estimates, resulting in missing values for the lobbying coefficient. These shocks with insufficient observations were excluded from the post-regressions sample. As a result, the subsequent meta-analysis is conducted using a sample of 22 shocks.

Several shocks exhibit statistically significant lobbying effects ($p < 0.05$). Negative lobbying effects appear in FIN-GFC2008 ($\beta = -0.0330$, $p = 0.007$), FIN-Repo2019 ($\beta = -0.0121$, $p = 0.027$) and MKT-Oil2014 ($\beta = -0.0079$, $p = 0.042$). These results suggest that during major financial disruptions or large market shocks, lobbying does not appear to protect firms from negative market reactions. Positive lobbying effects appear in GDPR-2018 ($\beta = 0.0250$, $p = 0.028$), GEO-TradeWar2018 ($\beta = 0.0107$, $p = 0.0039$), POL-Debt2011 ($\beta = 0.0201$, $p < 0.001$). These shocks are mostly associated with policy or regulatory developments, suggesting that lobbying may provide advantages when firms face regulatory uncertainty. The magnitude of the coefficient

varies substantially across shocks. The Global Financial Crisis produces the most negative lobbying effect ($\beta = -0.033$), while the GDPR regulatory shock has one of the strongest positive effects ($\beta = 0.025$), indicating that the impact of lobbying varies considerably depending on the specific shock. The number of firm observations also varies across shocks, ranging from roughly 222-360 firm observations depending on the event, reflecting differences in firm coverage and data availability across shocks.

Table 4: Pooled meta-analysis estimates by shock type under the main specification

Shock type	Pooled coefficient	Robust SE	p-value	95% CI	Number of shocks
Type I	-0.0020	0.0030	0.5097	[-0.0079, 0.0039]	7
Type II	0.0062**	0.0031	0.0460	[0.0001, 0.0122]	11
Type III	-0.0047	0.0030	0.1135	[-0.0106, 0.0011]	4

Notes: Each row reports the pooled lobbying coefficient from a separate random-effects meta-analysis by shock type.

*** $p < .01$, ** $p < .05$, * $p < .10$.

6.2 Meta-Analysis Results

Table 5 shows the pooled lobbying coefficients obtained from the separate meta-analyses for each shock type. Figure 2 presents the corresponding forest plot, displaying pooled lobbying coefficients and their confidence intervals for each shock type. The pooled estimate for Type I shocks is shown as the baseline for comparison with the pooled effects of Type II and Type III shocks.

The pooled effect for Type I shocks is small and statistically insignificant ($\beta = -0.0020$, SE = 0.0030, $p = 0.510$). This indicates that lobbying does not meaningfully affect firms' abnormal returns during operational shocks. In contrast, Type II shocks exhibit a positive and statistically significant pooled coefficient ($\beta = 0.0062$, SE = 0.0031, $p = 0.046$). This suggests that firms with greater lobbying intensity experience higher abnormal returns during regulatory shocks. The pooled coefficient for Type III shocks is negative but statistically insignificant ($\beta = -0.0047$, SE =

0.0030, $p = 0.114$). This indicates that lobbying does not significantly protect firms during systemic crises.

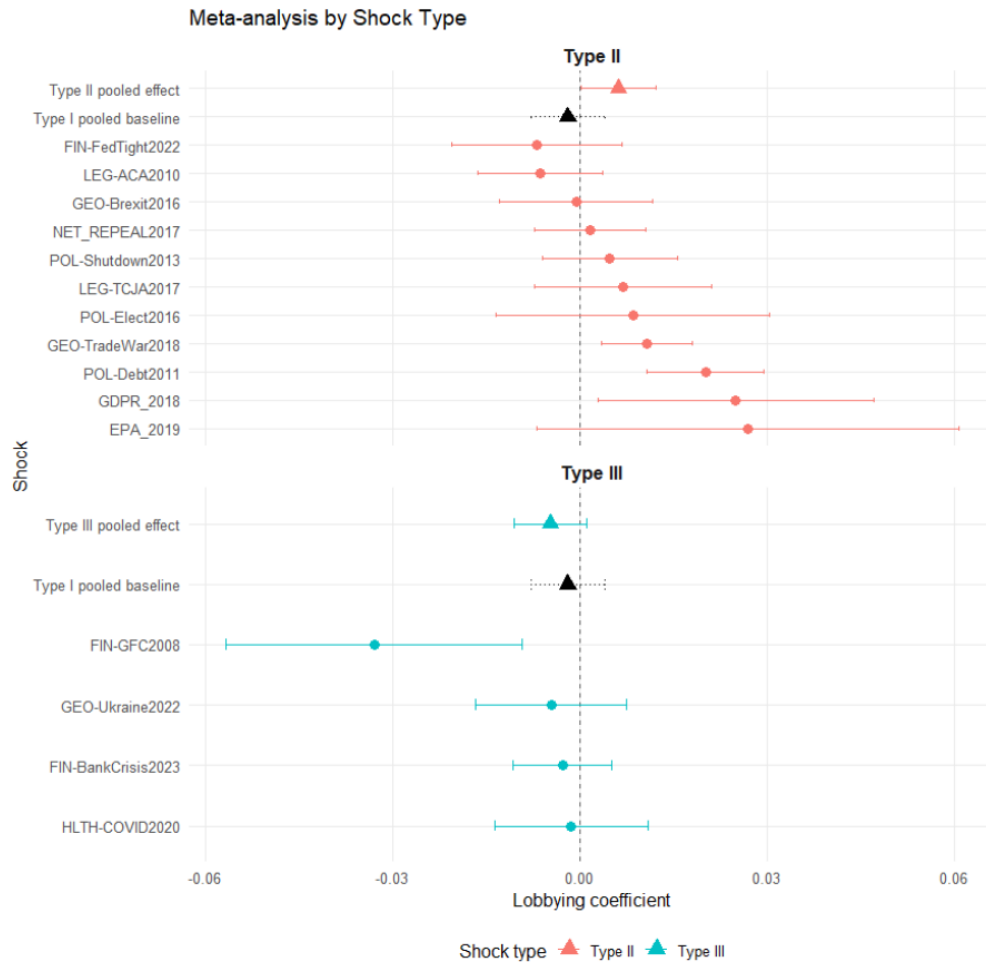


Figure 8: Meta-analysis of Lobbying Effects on Abnormal Returns by Shock Type

Overall, these results indicate that lobbying appears to be most beneficial in regulatory shocks, and it does not significantly affect firm performance in non-regulatory or systemic shocks. The observed distribution of the coefficients across the three shock types is consistent with the expectations and hypotheses proposed earlier. Non-regulatory shocks are not primarily shaped by government policy, limiting the strategic usefulness of political engagement. Regulatory shocks originate directly from government actions, making lobbying more valuable for firms. Systemic shocks affect both firms and governments simultaneously, creating mutual adaptation challenges that may reduce the effectiveness of lobbying. The forest plot illustrates this pattern by

showing that most individual shock estimates cluster around zero for Type I shocks, while several Type II shocks display positive coefficients. Type III shocks tend to exhibit more negative estimates.

Table 5: *Differences in pooled meta-analysis estimates across shock types*

Comparison	Coefficient difference	Std. error	z-value	p-value	95% CI
Type II - Type I	0.0081*	0.0043	1.889	0.0588	[-0.0003, 0.0166]
Type III - Type I	-0.0028	0.0042	-0.649	0.5160	[-0.0111, 0.0056]

*** $p < .01$, ** $p < .05$, * $p < .10$.

Table 6 reports the formal statistical comparisons between the pooled lobbying effects across shock types. Following standard meta-analysis practice, I computed the difference between the estimates and divided it by the square root of the sum of the squared standard errors. This way I was able to construct the z-statistic I used to assess whether the coefficients differed significantly.

The difference between Type II and Type I shocks is positive and marginally significant (difference = 0.0081, $z = 1.89$, $p = 0.059$). This indicates that lobbying generates larger abnormal returns in regulatory shocks than in operational shocks, providing moderate support for Hypothesis 1. By contrast, the difference between Type III and Type I shocks is small and statistically insignificant (difference = -0.0028 , $z = -0.65$, $p = 0.515$). Therefore, the results do not support Hypothesis 2.

These comparisons confirm that the effectiveness of lobbying differs across shock types. In particular, the statistically stronger lobbying effect in Type II shocks suggests that political engagement is most valuable when firms face regulatory or policy uncertainty. At the same time, the absence of statistically significant differences in Type III shocks suggests that systemic crises may reduce the relevance of firm-level political strategies, as macroeconomic disruptions seem to overlook firm political engagement. The meta-analysis results indicate that lobbying advantages depend on the nature of the shock. Lobbying does not systematically improve firm performance across all shocks, but it appears to provide advantages in regulatory contexts.

7. Discussion

This thesis aims to investigate whether corporate political engagement, operationalized through lobbying expenditures, influences firm performance following different types of shocks. Based on the literature of organizational adaptation, resource-based view and stakeholder theory, this study examines how the value of political capital varies depending on the nature of the challenges firms face.

The baseline expectation is that lobbying should have limited value during non-regulatory shocks, as these events originate outside of the regulatory system. Hypothesis 1 predicts that lobbying becomes more valuable during regulatory shocks, since firms can use political engagement to influence or anticipate policy changes. Hypothesis 2 predicts that lobbying becomes less effective during system-wide crises, where the scale of the disruption and the regulatory uncertainty may limit firms' lobbying effect. The shock typology developed in this study classifies the 27 identified crises into three categories based on their origin: Type I shocks (non-regulatory shocks), Type II shocks (regulatory shocks), and Type III shocks (system-wide crises). The empirical strategy combined an event-study framework with per-shock OLS regressions, where the effect of lobbying on abnormal stock returns was estimated separately for each shock. These estimates were then aggregated using meta-analysis to obtain pooled lobbying coefficients for each shock category, allowing comparison across shock types and evaluation of the hypotheses.

The first and strongest empirical finding supports Hypothesis 1. The pooled meta-analysis shows that lobbying has a positive and statistically significant effect after regulatory shocks (Type II). This suggests that firms with greater political engagement experience more favorable stock market reactions during events driven by government policy. The result is consistent with the theoretical expectation that lobbying provides beneficial influence when policy decisions directly shape firm outcomes. When shocks originate in the regulatory environment, political capital can therefore function as a strategic resource that helps firms navigate policy uncertainty.

The second empirical result concerns system-wide crises (Type III). The pooled lobbying coefficient for Type III shocks is negative and more negative than the corresponding estimate for the baseline Type I shocks, which aligns with the prediction of Hypothesis 2. However, the difference between the Type III and Type I pooled coefficients is not statistically significant. One possible explanation is the limited number of shocks available in this category, as only four

system-wide crises were identified in the dataset. Statistical inference is typically more reliable when a larger number of observations is available, and the small sample size makes it more difficult to detect statistically significant differences. Nonetheless, the direction of the estimated effect remains consistent with the theoretical prediction that lobbying becomes less effective during large macroeconomic crises that simultaneously affect firms and governments.

The third key result concerns the baseline Type I shocks, where lobbying does not exhibit a meaningful effect on firms' abnormal returns. The pooled coefficient for this category is close to zero and statistically insignificant. This finding is consistent with the theoretical baseline expectation that lobbying should not provide substantial advantages when shocks originate from non-regulatory sources. In these situations, firms primarily need to adapt through internal operational or market responses rather than through political engagement. As a result, political capital provides limited strategic value when government policy is not the primary driver of the disruption. These findings suggest that the value of lobbying depends on the nature of the shock. Political engagement appears to be most beneficial when disruptions originate in the regulatory environment, less effective during large systemic crises, and largely irrelevant when shocks arise from non-regulatory sources.

7.1 Contributions to Corporate Political Activity Literature

This study contributes to the literature on corporate political activity (CPA) by clarifying if lobbying contributes to firm performance under crises of several natures, namely non-regulatory, regulatory and systemic-wide. Prior research has produced mixed findings regarding the economic value of political engagement.

Some studies show that lobbying can generate positive economic outcomes. Shaffer et al. (2000) analyze actions taken by U.S.-based international airlines and found that collective lobbying efforts reported in the media are positively associated with firms' net income, passenger load factor and market share. Another study shows that even though lobbying may prove to be an efficient strategic tool, its success depends on firms' political positioning and access to policymakers: De Figueiredo & Silverman (2006) analyze education institutions and found that lobbying is only effective for schools with a representative on a Congressional Appropriations Committee.

Other studies find limited or no evidence that lobbying systematically improves firm financial performance. Hersch et al. (2008) analyzed advertising firms and found that there is no statistically significant relationship between a firm's lobbying expenditure and its market value or accounting returns. While Schuler (1996) illustrates that firms can successfully secure trade protection by engaging in information-based lobbying, Lenway et al. (1990) find that the benefits obtained through political intervention often fail to translate into long-term financial performance. Lenway & Schuler (1991) found that testifying before Congress or meetings with regulators was not consistently related to better firm outcomes. These results of these studies suggest that lobbying does not automatically translate into economic benefits.

In some cases, lobbying has been associated with negative outcomes. Coates (2010) looked at the S&P 500 index companies and found a strong negative correlation between lobbying and firm value. More specifically, he found that companies that spent more on lobbying generally had lower market valuations. Igan et al. (2009) studied the behavior of mortgage lenders leading up to the 2008 global financial crisis. The findings showed that lenders that lobbied more had the worst financial results. Hadani & Schuler (2013) argue that lobbying does not consistently produce positive financial returns and that political investments often fail to generate the expected economic benefits.

Because of these mixed results, scholars emphasize that the relationship between lobbying and firm performance is complex and context dependent. These mixed findings highlight the importance of studying under which conditions do lobbying become a valuable strategic tool for firms, especially under periods of extreme uncertainty. Despite the extensive literature examining lobbying and its economic implications, empirical research examining the role of lobbying during periods of crisis remains limited. Building on this literature, this thesis contributes by examining how lobbying affects firm performance across multiple external shocks and by distinguishing between different categories of shocks.

Prior studies have focused on institutional conditions, lobbying structures, reputational constraints, or a small number of isolated crises. This thesis extends this literature by showing that the effectiveness of lobbying depends on the nature of the crisis firms face, examining a sample of disruptive events between 1998-2024. The findings show that lobbying provides limited benefits following non-regulatory shocks, where disruptions originate outside of the regulatory system and

government has minimal influence. In contrast, lobbying becomes more relevant in regulatory shocks, where government decision-making directly affects firm outcomes. Finally, during systemic-wide shocks, the scale of the disruption may overwhelm firm-level political advantages, reducing the effectiveness of lobbying in mitigating negative performance effects. By distinguishing between different categories of shocks, this thesis helps clarify the mixed findings in the corporate political activity literature. Instead of treating lobbying as universally beneficial or ineffective, the results suggest that the value of political capital depends on the type of environmental disruption firms experience.

One possible reason for these inconsistent findings may be in how literature conceptualizes the role of lobbying. Much of the existing research implicitly treats lobbying as a resource acquisition or resource allocation strategy, emphasizing firms' ability to obtain regulatory favors, subsidies or preferential treatment from the government. In this perspective, lobbying functions like other firms' resources: firms invest in lobbying to secure policy advantages and improve firm performance and competitiveness. This thesis proposes a different interpretation. Instead of viewing lobbying primarily as a tool for extracting policy benefits, it conceptualizes lobbying from a coordination perspective, emphasizing the relationship between firms and government actors.

The findings of this thesis also generate several implications for managers. While managers may assume that lobbying consistently improves firms' ability to influence policy outcomes, the results suggest that political engagement should instead be strategically targeted. In uncertainty environments where the changes seem to be at the hands of the government, lobbying appears to be most valuable for firms. In contrast, in systemic crises where there is high policy uncertainty, lobbying may reflect negatively on firms' performance. Managers should therefore prioritize operational adaptability and internal resilience rather than relying primarily on political ties during periods of systemic disruption. The findings suggest that lobbying should be treated as a context-dependent strategic investment, not a universally beneficial capability.

7.2 Limitations

This study acknowledges several key limitations. Although the results are statistically significant, they should be interpreted in the light of the study's empirical limitations. First, the analysis focuses exclusively on firms included in the S&P 500 index. While the results are statistically significant, they must be understood within the constraints of the study's design.

Greater financial resources and more established political connections tend to be associated with larger firms, which may influence both their lobbying behavior and resilience to shocks. Therefore, the findings do not capture smaller firms or those operating outside this index. Future research could extend the analysis to a broader set of firms and include companies outside the S&P 500. This would allow for comparison across different firm sizes and levels of political engagement.

Second, the study does not include an explicit control group of non-lobbying firms. Although this study uses the variation in lobbying expenditures to estimate the effect of political engagement, the analysis does not directly compare firms that lobby with firms that do not lobby. This may limit the ability to fully isolate the causal effect of lobbying activity on firm performance. To address this limitation, future research could compare lobbying firms with similar non-lobbying firms that share comparable characteristics.

Third, the number of shocks included in the meta-analysis is relatively small. The pre-regression analysis identifies 27 shocks, of which only 22 were included into the meta-analysis, due to the limited number of observations in 5 crises. Statistical inference in meta-analysis typically works better with larger numbers of observations, and the limited number of shocks in some categories may reduce the power of statistical tests. In particular, the small number of Type III shocks may explain why some estimated differences across shock types are not statistically significant despite being consistent with theoretical predictions. Future research could expand the dataset by incorporating additional shocks over longer time periods or by including shocks from other institutional contexts.

Finally, lobbying data presents several measurement challenges. The OpenSecrets dataset records lobbying expenditures reported under the Lobbying Disclosure Act, but the structure of the data can be complex. Firms may report lobbying activities through subsidiaries, trade associations, or external lobbying firms, which can complicate the identification and matching of lobbying activity to individual companies. To address this limitation, future research could conduct a more detailed examination of how lobbying activities are reported across subsidiaries, affiliated organizations, and external lobbying firms to attribute more accurate lobbying expenditures to individual companies. While these limitations do not invalidate the findings, they highlight important directions for future research on the role of corporate activity during economic and regulatory shocks.

8. Conclusion

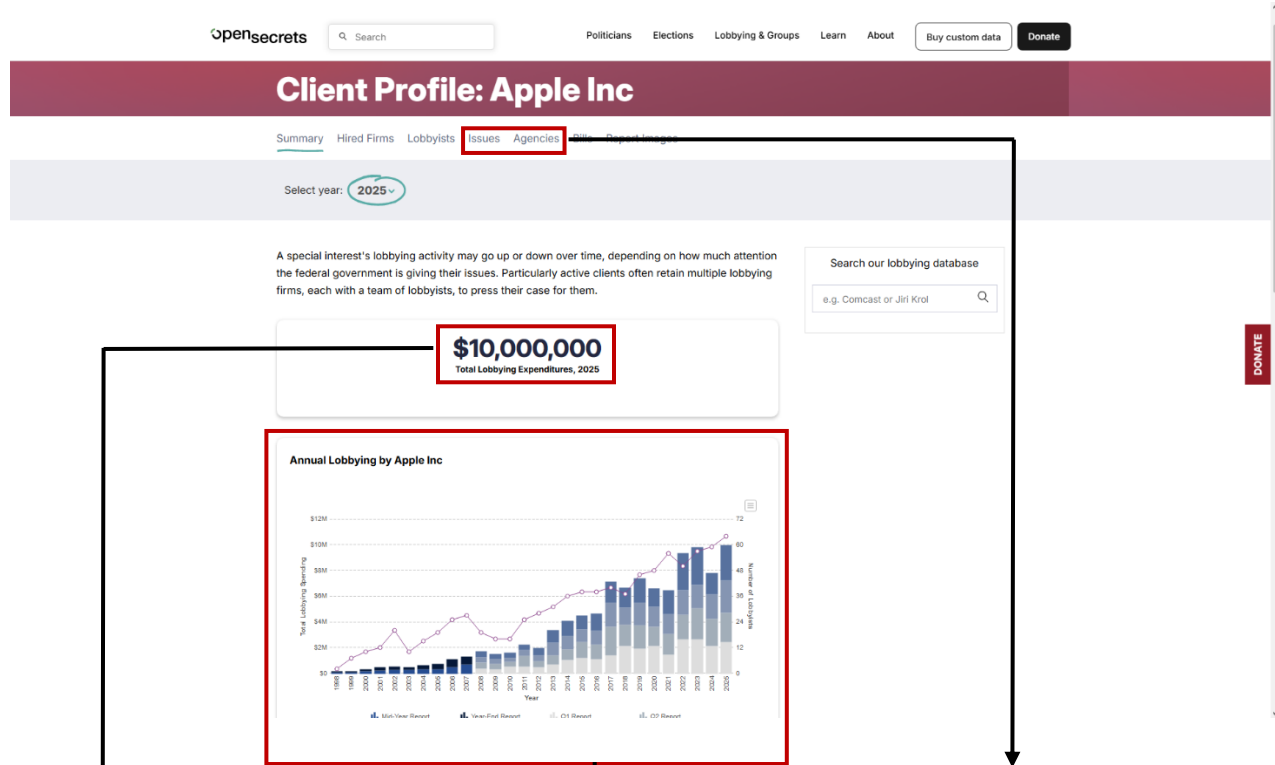
In this thesis, I explored whether corporate lobbying helps firms adapt to different types of shocks. I used an event-study framework combined with per-shock OLS regressions and meta-analysis. This study examined how lobbying influences firms' abnormal stock returns during three categories of crises: non-regulatory shocks, regulatory shocks, and system-wide crises.

The findings contribute to the growing literature on corporate political activity by demonstrating that the value of lobbying depends on the nature of the shock firms face. The results show that lobbying has a positive and statistically significant effect during regulatory shocks, suggesting that political engagement can help firms navigate policy-driven disruptions. By contrast, lobbying does not appear to provide meaningful advantages during non-regulatory shocks, where disruptions originate primarily from outside of the regulatory system. Finally, during large system-wide crises, the estimated effect of lobbying becomes more negative relative to the baseline category, although this difference is not statistically significant. Taken together, these results suggest that political capital is most valuable when shocks originate directly from the regulatory environment. These findings also offer a possible explanation for the inconsistent results reported in the existing literature. Much of the prior research implicitly conceptualizes lobbying as a resource acquisition or resource allocation strategy. This thesis suggests a different interpretation: rather than acting only as a mechanism for extracting policy benefits lobbying functions as a coordination mechanism between firms and government actors.

In conclusion, the findings of this thesis contribute to a deeper understanding of how lobbying interacts with different types of economic and institutional shocks. Furthermore, they also suggest that the way corporate political activity is typically conceptualized in literature may be incomplete. While lobbying has often been viewed as a form of resource management or allocation, this perspective may overlook the relationship between firms and policymakers. By incorporating a coordination approach, this thesis highlights that lobbying is not only a bundle of political resources but also a mechanism through which firms align with government actors under uncertainty. In contexts of crisis, where uncertainty is higher, this coordination becomes more evident, influencing the extent to which political engagement supports firm adaptation and resilience.

Appendix A – OpenSecrets Lobbying Data

Figure 9: Client Profile Interface (Example: Apple Inc.):



Total annual lobbying expenditures reported under the LDA. This measure is used to construct firm-level political capital, aggregated at the firm-year

Issues: Identifies the policy areas associated with lobbying activity, capturing firms’ regulatory domains.
Agencies: Identifies targeted federal agencies, reflecting firms’ interaction with government actors and regulatory exposure.

Time series of lobbying expenditures, illustrating variation in firm political engagement over time. This variation underlies the construction of dynamic measures of political capital.

Appendix B – Shock-Level OLS Estimates of Lobbying Effects (Main Specification)

Table 6: *Per-shock OLS estimates of lobbying under the main specification*

Shock	Lobbying coefficient	Robust SE	t-value	p-value	95% CI	N
FIN GFC2008	-0.033***	0.0121	-2.720	0.0072	[-0.0568, -0.0092]	222
MKT China2015	0.0993	0.0653	1.522	0.1295	[-0.0286, 0.2273]	279
FIN Repo2019	-0.0121**	0.0054	-2.222	0.0272	[-0.0227, -0.0014]	315
FIN FedTight2022	-0.007	0.0070	-0.995	0.3204	[-0.0206, 0.0067]	360
GEO Ukraine2022	-0.0046	0.0062	-0.748	0.4553	[-0.0167, 0.0075]	360
LEG ACA2010	-0.0064	0.0051	-1.251	0.2125	[-0.0164, 0.0036]	239
MKT Oil2014	-0.0079**	0.0039	-2.037	0.0428	[-0.0155, -0.0003]	274
HLTH COVID2020	-0.0014	0.0063	-0.227	0.8207	[-0.0137, 0.0108]	331
POL Elect2016	0.0085	0.0112	0.759	0.4484	[-0.0134, 0.0304]	291
GEO Brexit2016	-6e-04	0.0063	-0.097	0.9227	[-0.0129, 0.0117]	291
TECH Flash2010	0.0015	0.0065	0.227	0.8203	[-0.0113, 0.0143]	239
TEX URI2021	-0.0033	0.0041	-0.810	0.4187	[-0.0113, 0.0047]	349
FIN BankCrisis2023	-0.0028	0.0040	-0.699	0.4848	[-0.0108, 0.0051]	364
NET REPEAL2017	0.0016	0.0045	0.353	0.7245	[-0.0073, 0.0105]	296

LEG TCJA2017	0.0069	0.0072	0.960	0.3382	[-0.0072, 0.0211]	296
EPA 2019	0.0269	0.0173	1.555	0.1213	[-0.0070, 0.0608]	279
NAT Hurr2017	0.0063	0.0065	0.963	0.3364	[-0.0065, 0.0191]	296
POL Shutdown2013	0.0048	0.0055	0.862	0.3896	[-0.0061, 0.0156]	272
NAT Sandy2012	0.0062	0.0050	1.232	0.2196	[-0.0037, 0.0161]	251
GDPR 2018	0.025**	0.0113	2.209	0.0281	[0.0028, 0.0472]	305
GEO TradeWar2018	0.0107***	0.0037	2.912	0.0039	[0.0035, 0.0180]	305
POL Debt2011	0.0201***	0.0048	4.191	0.0000	[0.0107, 0.0295]	244

*** $p < .01$, ** $p < .05$, * $p < .10$.

Appendix C – Robustness to Winsorization

Table 7: *Comparison of pooled lobbying effects: baseline vs no winsorization*

Shock Type	Baseline β	No-winsor β	Δ	Significance change
Type I	-0.0020	-0.0020	0.0000	No
Type II	0.0062	0.0062	0.0000	No
Type III	-0.0047	-0.0047	0.0000	No

Notes: This table compares pooled lobbying coefficients from the baseline specification with those obtained without winsorization. Δ represents the difference between the two estimates. Results are identical across specifications, indicating that the findings are not driven by extreme observations.

Appendix D – Robustness to Alternative Standard Error Specifications

Table 8: Meta-analysis across alternative standard error specifications

Shock Type	HC1 (baseline)	HC0	Firm-clustered	Industry-clustered	Non-clustered
Type I	-0.0020 (0.0030)	-0.0052 (0.0065)	-0.0028 (0.0040)	-0.0020 (0.0030)	-0.0045 (0.0058)
Type II	0.0062** (0.0031)	0.0056** (0.0026)	0.0054** (0.0027)	0.0019 (0.0018)	0.0055** (0.0026)
Type III	-0.0047 (0.0030)	-0.0029 (0.0027)	-0.0020 (0.0027)	-0.0016 (0.0027)	-0.0026 (0.0027)

Notes: Each cell reports the pooled lobbying coefficient from a random-effects meta-analysis, with the corresponding standard error in parentheses. HC1 is the baseline specification. HC3 estimates are excluded due to unstable variance estimates resulting from small within-shock samples. *** $p < .01$, ** $p < .05$, * $p < .10$.

Appendix E – Robustness to Alternative Profitability Measures

Table 9: Pooled meta-analysis estimates by shock type using EBITDA-based profitability

Shock type	Pooled lobbying effect	Robust SE	95% CI	k
Type I	-0.0012	0.0027	[-0.0065, 0.0041]	7
Type II	0.0065**	0.0027	[0.0013, 0.0117]	11
Type III	-0.0036	0.0029	[-0.0093, 0.0021]	4

Notes: Each row reports the pooled lobbying coefficient from a separate random-effects meta-analysis by shock type. Profitability is measured as EBITDA scaled by total assets. Shock-level regressions use winsorized variables, HC1 robust standard errors, and industry fixed effects where feasible. Hurricane Katrina is excluded. *** $p < .01$, ** $p < .05$, * $p < .10$.

Table 10: Comparison of pooled lobbying effects across profitability measures

Shock Type	β (ROA_NI)	β (ROA_EBITDA)	Δ	Significance change
Type I	-0.0020	-0.0012	0.0008	No
Type II	0.0062**	0.0065**	0.0004	No
Type III	-0.0047	-0.0036	0.0011	No

Notes: This table compares pooled lobbying coefficients from the baseline specification using return on assets based on net income with the robustness specification using EBITDA scaled by total assets. Δ represents the difference between the two estimates. Significance is based on z-statistics from random-effects meta-analysis. *** $p < .01$, ** $p < .05$, * $p < .10$.

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