

Corporate Lobbying and Financial Performance

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Abstract

Corporate lobbying activities are designed to influence legislators and thus to further company goals by encouraging favorable policies and/or outcomes. Using data that became available after the passage of the Lobbying Disclosure Act of 1995, this study evaluates the effectiveness of corporate lobbying from a financial perspective. Evidence from panel regressions suggests that lobbying intensity is positively related to the average firm's accounting-based financial performance. These results continue to hold when we explicitly model the decision to lobby in a Heckman sample selection framework. We also present market performance evidence using a portfolio approach, which compares excess returns of firms that lobby with control portfolios of firms based on size and book-to-market, and of non-lobbying firms. We find that portfolios of firms with the highest lobbying intensities significantly outperform their benchmarks in the three years following portfolio formation.

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1. INTRODUCTION

There is widespread disagreement over the impact of corporate political activity in the United States. One widely held view is that corporate interests unduly influence the regulatory and legislative processes, mainly via their ability to spend large sums of money. Academic studies however, have yet to reach a strong consensus. Early studies, e.g., Snyder (1992), consider whether political contributions affect legislative voting outcomes. Snyder concludes that “despite years of research by political scientists and economists, the extent to which money actually buys political influence on a regular basis remains a mystery.” With hindsight, it is clear that links to voting outcomes can easily become obscured, by e.g., complex omnibus legislation – where many unrelated pieces of legislation get combined, or by the inability to observe behind the scenes maneuvering by politicians themselves. Given these difficulties, this study focuses instead on the *financial* implications of corporate lobbying activities.

Generally speaking, corporate political interests can be communicated in one of two ways: either through *lobbying*, or through *donations* to politicians, political parties, or interest groups. Recently, Ansolabehere, de Figueiredo, and Snyder (2003) point out that most so-called “corporate” contributions are actually made by individuals, and not by corporations themselves.¹ Hence, in their view such donations should be considered *personal* consumption in advancing a *personal* political ideology, rather than as a form of *corporate* political involvement. This point is well taken, since legally, direct corporate

¹ The two primary categories of corporate political donations are Political Action Committee (PAC) donations, and the now-banned ‘Soft money’ donations. Soft money refers to largely unregulated contributions made to a political party for “party building” activities rather than for the direct support of particular candidates and campaigns. Soft-money contributions were banned in the Bipartisan Campaign Reform Act of 2002. PACs are specifically organized to elect political candidates. By law, corporations are prohibited from contributing to PACs, but may pay the administrative costs of affiliated PACs. Such affiliated PACs may only solicit contributions from corporate executives, shareholders, and their families.

political contributions are prohibited by the Tillman Act. Despite the logic of this personal/corporate distinction, recent evidence suggests that corporations do benefit from Political Action Committee (PAC) activities. For example, Jayachandran (2006) finds that the surprise change in political parties by Senator Jeffords (in 2001) cost firms that contributed (via PACs) to the Republicans nearly 1% of market value in the subsequent week. More recently, in a comprehensive study of PAC contributions, Cooper, Gulen and Ovtchinnikov (2007) find that firms with affiliated PACs outperform non-contributing firms.²

Surprisingly, studies of corporate lobbying – a much more common form of corporate political involvement – are notably absent from this debate. The purpose of this study is to fill this void. We measure corporate lobbying by expenditure totals as disclosed in legally required U.S. Senate filings, and we focus solely on the financial implications of such expenditures.³ We provide evidence from reported financial statement data (accounting performance), as well as from stock market returns (market performance). Added motivation for this study is provided by recent research into the financial implications of personal connections with politicians. These studies conclude that connected firms receive specific benefits from political connections, and importantly, that the value of these connections is priced by the market.⁴

² Aggarwal, Meschke & Wang (2008), however reach the opposite conclusion.

³ Recent news stories citing lobbying financial benefits include *The Washington Post* (2006) reporting that 60 companies (including Pfizer, Hewlett Packard and Altria) collectively spent approximately \$1.6 million dollars lobbying for a special low tax rate worth \$100 billion dollars, which would apply to the firms' earnings from foreign operations. The same article quoted the case of Carmen Group Inc., a lobbying services firm claiming to deliver a 100 to 1 (dollar) benefit-to-cost ratio for its clients. Similarly, *Fortune* (2006) estimated similarly large rates of return on political investment: 163,536% for Lockheed Martin, which spent \$55 million in lobbying since 1999 and won roughly \$90 billion in defense contracts; and 142,000% for Boeing, which spent \$57 million and got \$81 billion in contracts.

⁴ Recent studies find that political connections lead to better access to finance, and/or lower taxation, government bailouts, higher market returns, more government contracts, and greater market share, e.g.,

We examine the links between corporate lobbying and corporate performance from two perspectives. First, we examine accounting performance using panel regression methods. Empirically, we adopt the approach taken by researchers studying the value of R&D expenditures (e.g., Sougiannis, 1994; Amir and Lev, 1996; Lev and Sougiannis, 1996). We examine three measures of performance released in firms' financial statements: income before extraordinary items, net income, and operating cash flows. While not conclusive, the evidence points to a positive relationship between corporate lobbying expenditures and accounting earnings and cash flows from operation.

One drawback to a panel regression framework is that it makes no distinction between firms lobbying for defensive reasons and firms that lobby for preemptive reasons. For example, some corporate lobbying may be undertaken to express opposition to potentially damaging legislation or regulation (defensive), rather than to advocate for specific favorable policies (preemptive), e.g., securing direct government contracts, or advocating tariffs on competitors' products, etc. Empirically, a successful defensive outcome may simply be limiting the costs of unfavorable policies.⁵ Mixing defensive and preemptive lobbying in a single regression would lessen the average correlation between lobbying and financial performance. Similarly, another drawback is that potential self-selection may limit the inferences we can make from a panel regression approach. We

Claessens, Feijen, and Laeven, (2008), Faccio (2006), Faccio, Masulis, and McConnell (2006), Leuz and Oberholzer-Gee (2006), and Goldman, Rocholl, and So (2008b). In contrast, Fan, Wong, and Zhang (2007) find that politically connected Chinese firms have poorer financial performance. Interestingly, Goldman, Rocholl, and So (2008a), conclude that corporate donations are a less reliable predictor of future returns than are politically connected board members. See also Snyder (1990).

⁵ For our sample, we searched the Nexis© electronic data base for news stories involving firms in our top lobbying quintile (spending relative to assets), and found stories of both types of lobbying. Examples of preemptive lobbying include: lobbying to secure and keep government contracts (e.g., Alliant Techsystems, Armor Holdings, Cray); for stricter software piracy laws (Autodesk); for greater Medicare reimbursement (Celgene); and, for direct items in appropriations bills (Shaw Group). Defensive lobbying examples include: successful lobbying to limit state laws with greater consumer protection (Cephalon); and, lobbying to defeat a proposed effort to increase the Federal government's ability to negotiate prices for Medicare (Cephalon).

address this concern first by estimating a Heckman self-selection model, where the decision to lobby is explicitly modeled, and second, by taking a market-based approach, using observed market returns over a longer post-lobbying horizon.

Specifically, we examine the association between lobbying and market returns following the portfolio approach used by Chan, Lakonishok, and Sougiannis (2001) who study the stock market valuation of R&D expenditures. We compare the stock returns of firms that lobby according to their lobbying intensity (lobbying as a proportion of firm size or market value) with portfolios of matched non-lobbying firms. We find that firms with the highest lobbying intensities significantly outperform their benchmarks. Our results also imply that most lobbying expenditures are not associated with abnormal returns, and that simply spending the most on lobbying does not necessarily lead to better financial performance. While these results do not uniquely identify lobbying for defensive reasons versus preemptive lobbying, the approach does identify successful firms as those lobbying more intensively. We also document that the excess returns of lobbying-intensive firms diminish as time goes by, suggesting that lobbying has its greatest effects in the short term. One explanation for these results is a lack of transparency in lobbying disclosure; that is, despite the availability of lobbying data in U.S. Senate filings, it is not currently in a user-friendly (e.g., with standard alphanumeric firm identifiers) electronic form.

The rest of the paper is organized as follows. Section 2 develops our hypotheses in the context of related research. Section 3 describes the data and how we arrive at our final sample. Section 4 discusses the research design and presents the results of the analysis. Section 5 concludes.

2. BACKGROUND

By definition, lobbying activities can include direct, explicit effort in communicating with lawmakers to influence their opinions, as well as grass roots activities aiming to solicit general support for, or to indirectly create a favorable public environment for a desired legislative goal. Direct lobbying of politicians can target different levels of government such as the federal government or the state government. In this paper, we focus on direct lobbying at the federal level, which is defined as “*any communication made on behalf of a client to members of Congress, congressional staffers, the President, White House staff and high-level employees of nearly 200 agencies, regarding the formulation, modification, or adoption of legislation.*” (The Center for Public Integrity).

As noted in the introduction, it is surprising that empirical research has so far ignored the financial implications of corporate lobbying.⁶ First, lobbying is the largest form of corporate political involvement in America. In dollar terms, corporate lobbying is roughly 20 times greater than either PAC, or soft-money contributions per election cycle.⁷ Moreover, corporations, their trade associations, and other business-related interest groups account for nearly all the money spent on lobbying.⁸ Individual firms also spend impressive amounts annually. According to the data reported in Table 1, lobbying spending by the top twenty firms was more than \$160 million in 2005, with the top five firms accounting for 42% of the total. General Electric alone spent more than \$18 million, and Altria Group (which includes Kraft and Philip Morris) spent nearly \$14 million in that

⁶ The one exception we are aware of is Hochberg, Sapienza, and Vissing-Jorgensen (2008), who examine the financial returns to firms that lobbied against the Sarbanes-Oxley Act of 2002. There are however, frequent news stories suggesting substantial benefits from corporate lobbying for particular firms, e.g., *The Washington Post* (2006), and *Fortune* (2006).

⁷ The numbers of firms that lobby is also much larger (between two and four times) than those contributing via PACs or soft-moneys (see Table 2).

⁸ Milyo, Primo and Groseclose (2000) report that these groups accounted for roughly 90% of total lobbying spending in the 1997-98 election cycle.

year.⁹ A second reason the lack of attention to corporate lobbying is surprising is that lobbying has direct budgetary consequences, unlike political donations or contributions. Perhaps more important is that, according to the Center for Responsive Politics, there is very little correlation between campaign contributions and lobbying expenditures by businesses or industries.¹⁰ Thus, inferences reached from studies of corporate donations may not be reliable.

Despite these arguments, lobbying by corporations is similar to contributions and other forms of corporate political connections in that the links to financial performance are not always straightforward. One example, noted above, is that defensive corporate lobbying may be undertaken to express opposition to potentially damaging legislation or regulation. To the extent this type of lobbying dominates, realized financial performance may be only weakly (or negatively) correlated with lobbying expenditures. That is, if preemptive lobbying is positively correlated with financial performance, and defensive lobbying is weakly or negatively correlated, then estimates obtained from pooling all lobbying firms together will be downward biased.

Similarly, lobbying may be based on expected future profitability – and the effects can go either way. That is, firms expecting financial performance to improve may increase their lobbying efforts; thus creating a positive link between lobbying and subsequent performance. Alternatively, firms may increase spending when expected future profits drop in an effort to mitigate that decline. This concern suggests the importance of controlling for

⁹ For GE and Altria these numbers are relatively small, however in comparison to typical campaign spending, they are significant. For example, the average *two-year* election cycle spending by winning candidates for U.S. House and Senate seats (in the 2004 election) was \$1 million and \$7.8 million respectively.

¹⁰ On its web site the Center for Responsive Politics describes itself as a “nonpartisan, independent and nonprofit” organization that compiles data and reports on campaign contributions and lobbying. Their discussion of lobbying versus contributions tradeoffs can be found at: <http://www.opensecrets.org/lobby/lobby00/summary.php>.

factors that influence future financial performance. In addition, it suggests that managers with more discretion might be more able to engage in such ‘opportunistic’ lobbying. However, in our data we find little correlation between commonly used corporate governance scores and lobbying. As noted above, we take two additional empirical approaches to dealing with this potential endogeneity. First, we present estimates from a Heckman selection model, and second, in our portfolio analysis we focus on longer horizon performance, which should mitigate concerns that managers’ prior knowledge (of future performance) affects their decision to lobby.

The theoretical basis for this study relies on research in the political economy of business and regulation such as Stigler (1971).¹¹ In Stigler’s view the state, through its power to tax, subsidize, and regulate, can selectively help or hurt particular firms or industries. He discusses several specific forms of government influence, including: subsidies and earmarks, (by e.g., veterans, airlines, and universities); control over entry or rivals, (e.g., commercial airline authority, and, entry into banking); and import tariffs. According to Stigler, lobbying can generate positive returns for firms by any one (or a combination) of several means: securing direct subsidies or lower taxes, government contracts, limiting competition, or permitting entry into previously protected markets. However, as we argue above, lobbying may also be undertaken to express opposition to potentially damaging legislation or regulation, rather than to advocate for firm-specific favorable policies. Hence, the question of which effect dominates is ultimately empirical.

A closely related line of research focuses on valuing firms’ political connections. In addition to the studies noted above by Jayachandran (2006) and Cooper, Gulen and

¹¹ Another prominent contribution to political economy theory is Grossman and Helpman (1994, 2001) is related, though focuses primarily on contributions, rather than lobbying per se.

Ovtchinnikov (2007), Agrawal and Knoeber (2001) show that firms that need political connections (such as those facing intense competition or contracting with the government) tend to have outside board directors with political backgrounds. Fisman (2001) uses evidence from Indonesia to show political connections are valuable for firms. He demonstrates that the market value of firms connected to the Suharto family changed significantly when news about Suharto's health was announced. Faccio (2006) examines international firms with controlling shareholders or top managers who have political positions. She finds that politically-connected firms enjoy privileges such as easy access to debt financing and low taxation, as well as high market share. Faccio and Parsley (2009) find an economically meaningful 1.7% decline in firm value (averaged across American and international firms) after the sudden deaths of politicians that resided, or were born, in the same geographic location as the firms' headquarters. Interestingly, Goldman, Rocholl, and So (2008a) find that corporate donations are a less reliable predictor of future returns than are politically connected board members.

Similarly, a number of researchers in political science and economics have studied lobbying by firms or institutions – though all focus on different questions. Hansen and Mitchell (2000) count the number of corporate representatives (including consultants or corporate council offices) in Washington D.C. in 1988, and compare 'lobbying activities' of domestic and foreign firms. De Figueiredo and Tiller (2001) study the number of contacts to the Federal Communications Commission as a proxy for firms' lobbying effort. Their findings are generally consistent with the prediction of collective-action and

transaction cost theories in that large firms tend to lobby more.¹² More recently, de Figueiredo and Silverman (2006) measure the returns to lobbying efforts made by universities seeking educational earmarks. They find that a lobbying university with representatives in the Senate Appropriations Committee (SAC) can obtain an average of 11 to 17 dollars on every dollar they spend lobbying, and that a university with representation on the House Appropriations Committee (HAC) can obtain \$20-\$36 for each lobbying dollar. Finally, Yu and Yu (2006) examine the relation between corporate lobbying expenses and fraud detection. They find firms that lobby can evade fraud detection on average 117 days longer, and are 38% less likely to be detected by regulators than firms that do not. Also, fraudulent firms spend 77% more on lobbying than firms not involved in fraud. However, to our knowledge, this is the first study to examine the connection between corporate lobbying, quantified by the dollar amount of lobbying expenses, and financial performance.

3. DATA

We obtain lobbying data from the Center for Responsive Politics (CRP), financial data from COMPUSTAT, and returns and pricing data from CRSP. The Lobbying Disclosure Act of 1995 established the registration and reporting requirements for those who seek to affect U.S. government policies or the implementation of Federal programs. Registrants must file semi-annual reports (within 30 days of the end of the semi-annual

¹² The central theme of the collective action problem (Olson, 1965) is that smaller (poorer) entities will (rationally) free ride on the efforts of larger entities in providing public goods. Thus, to the extent that lobbying generates non-excludable benefits, larger firms will incur a disproportionate share of the costs of lobbying.

period) detailing the issue they lobby for and the amount spent.¹³ The CRP data includes lobbying, PAC contributions, and soft-money as distinct categories. It is compiled using the semi-annual lobbying disclosure reports filed with the Secretary of the Senate's Office of Public Records and is available by calendar year since 1998.

The CRP sums the mid-year and year-end total amounts of expenses reported by a registrant to arrive at annual figures for each firm. Adjustments are made if there are any subsequent amendment reports correcting the originally reported amount in either the mid-year or year-end filings.¹⁴ Lobbying can be done in-house, and/or via a contractual arrangement with external lobbyists to lobby on a firm's behalf. These external lobbyists must report for whom they lobby. The CRP uses the amount reported by the organization (including both in-house lobbying and external lobbyist filings) as the total lobbying expenditure for the period. Thus, even if an organization does not file for lobbying itself (e.g., because it has no in-house lobbying), the CRP sums all of the organization's contracted lobbying expenditures reported by its external lobbyists. Finally, when a parent firm and its subsidiary both file for lobbying, the CRP attributes all lobbying expenses to the parent firm.¹⁵

The CRP lobbying data include spending by publicly traded firms, privately held firms, trade associations, ideological organizations, and non-profit organizations. We merge the data with COMPUSTAT to extract only public firms. Since CRP does not use company identifiers (e.g., CUSIP, PERMNO, etc.), we manually verified the names of the

¹³ Typically, issues are very general, e.g., "Lobby for business and workforce development programs and appropriations". The CRP provides a considerable service by sifting, matching, and cleaning the raw lobbying disclosure data. To access the Senate lobby reports and registrations data base, go to <http://sopr.senate.gov>.

¹⁴ Such amendments, to the extent they are random, should bias our results toward not finding statistical significance.

¹⁵ See <http://www.opensecrets.org/lobbyists/methodology.asp> for more details about the CRP's methodology.

public firms to ensure the matching between COMPUSTAT and CRP lobbying data.

Table 2 compares the three categories of corporate political involvement for firms in COMPUSTAT that lobbied during 1998 to 2005. The relative magnitudes of lobbying, PAC contributions, and soft money donations are reported. Note that both PAC and soft money are reported by election cycle rather than calendar year. As seen in Table 2, the percentage of firms in COMPUSTAT involving in lobbying activities increases from 6.54% in 1998 to 11.79% in 2005. Clearly, lobbying accounts for the lion's share (in both dollar amounts and in the number of firms involved) among all types of corporate political expenditures.¹⁶ If we compare the average firm's political spending across the three categories (by aggregating lobbying expenses per year into amounts per election cycle to match the reported PAC and soft money) in the 1998 election cycle, for instance, we see that lobbying is around 22 times greater than PAC contributions, and around 20 times greater than soft-money contributions.¹⁷ All three types of spending increase across the sample, though soft money is relatively constant in the final two election cycles of its existence (i.e., 2000 and 2002). Figure 1 presents the total and average annual lobbying spending of sample firms in Panels A and B, respectively. The figure confirms that much of the growth in lobbying expenditures is due to additional firms, since the per-firm average has increased by only around \$40,000 since 2000.

In Table 3, we look across industry group and year. Firms in manufacturing (two-digit SIC=20-39), transportation and utilities (two-digit SIC=40-49), and finance,

¹⁶ If we restrict the sample to only those firms engaged in all three forms of political involvement, the number of firms falls below 200 (or roughly one-third of the full sample), and the resulting sample spends on average nearly three times more on lobbying than the full sample. In our regression analysis we do not restrict the sample to just these firms.

¹⁷ Total lobbying spending of our sample firms in the 1998 election cycle is \$789,391,490 ($=704*\$554,628+765*\$521,482$) and the amount of PAC contributions is \$36,385,753 ($=430*\$84,618$).

insurance and real estate industries (two-digit SIC=60-69) are more active in lobbying activities than are other firms, evident by the average lobbying spending. The public administration industry (two-digit SIC=90-99) has the highest average lobby spending among all the industry groups, however, there are relatively few firms in public administration involved in lobbying in most years, and most of these firms are conglomerates. These differences suggest to us the importance of controlling for industry effects in our analysis. Hence we include both industry and time fixed effects in all of our subsequent analyses.

To ensure that the lobbying data and financial data correspond to the same time period, we focus our analysis on firms with fiscal year ending December 31. Our sample of lobbying firms is reduced from 6,678 to 4,668 firm-year observations due to the elimination of firms with non-calendar fiscal year end.

Panels A and B of Table 4 reports descriptive statistics for the various measures of accounting performance, lobbying, and other independent variables used in our analysis. We separately report statistics for firms that lobby and for all firms in COMPUSTAT.

4. ANALYSES AND RESULTS

4.1. Lobbying activities and financial performance

In this section we test some of the implications posited by Stigler (1971) by comparing firms that lobby with firms that do not. For our empirical specification, we draw from studies investigating the impact of R&D expenditures on financial performance. Conceptually, lobbying is similar to R&D in that each is undertaken voluntarily and each potentially has investment aspects with uncertain future payoffs. Although these charges are fully expensed in the financial statements in the period in which they incur, they may

be expected to yield returns for firms in subsequent years.

We begin by presenting three econometric specifications paralleling those developed in e.g., Sougiannis (1994), Amir and Lev (1996), Lev and Sougiannis (1996). The general approach has also been used in other contexts, e.g., by Aboody, Barth, and Kasznik (1999). In these regressions we relate financial performance to lobbying intensity (lobbying relative to assets), market-to-book ratios, firm size (assets), and a number of controls standard in this literature. All regressions include Fama-French industry-dummies, time-dummies, and we report heteroscedasticity consistent standard errors that are clustered at the firm level.¹⁸ We examine three measures of firm performance. Hence, Table 5 presents a total of nine regressions (three econometric specifications for each measure of financial performance).

Specifically, in columns (1) - (3) we measure financial performance by using income before extraordinary items (*IBEI*). We choose income before extraordinary items instead of other earnings measures, such as income before interest, income tax, and depreciation and amortization, because lobbying activities may affect lobbying firms' effective tax rates and interest rates. In columns (4) - (6), we repeat the analysis using net income (*NI*), and in columns (7) - (9), we use cash from operations (*CFO*) as alternative financial performance measures. The general form of the specifications is:¹⁹

$$\begin{aligned}
 IBEI_{i,t} = & \alpha_0 + \beta_1 LOBBY_{i,t-1} + \alpha_2 MB_{i,t} + \alpha_3 ASSET_{i,t} + \sum_{k=1}^2 \lambda_k IBEI_{i,t-k} \\
 & + \sum_{t=1998}^{2004} \delta_t Year_t + \sum_{j=1}^{48} \gamma_j Industry_j + \varepsilon_{j,t},
 \end{aligned} \tag{1a}$$

¹⁸ See Moulton (1986) on the consequences of ignoring intragroup error correlation.

¹⁹ Specifications including firm fixed effects produce qualitatively similar results.

$$\begin{aligned} \Delta IBEI_{i,t} = & \alpha_0 + \beta_1 LOBBY_{i,t-1} + \alpha_2 MB_{i,t} + \alpha_3 ASSET_{i,t} + \sum_{k=1}^2 \lambda_k \Delta IBEI_{i,t-k} \\ & + \sum_{t=1998}^{2004} \delta_t Year_t + \sum_{j=1}^{48} \gamma_j Industry_j + \varepsilon_{j,t}, \end{aligned} \quad (1b)$$

$$\begin{aligned} \Delta IBEI_{i,t} = & \alpha_0 + \beta_1 \Delta LOBBY_{i,t-1} + \alpha_2 MB_{i,t} + \alpha_3 ASSET_{i,t} + \sum_{k=1}^2 \lambda_k \Delta IBEI_{i,t-k} \\ & + \sum_{t=1998}^{2004} \delta_t Year_t + \sum_{j=1}^{48} \gamma_j Industry_j + \varepsilon_{j,t}, \end{aligned} \quad (1c)$$

where “ Δ ” indicates the change from year $t-1$ to year t . Lobbying Intensity ($LOBBY$) is lobbying spending relative to assets. $ASSET_{i,t}$ is the amount of total assets at the beginning of year t ; and $Year$ and $Industry$ are year and Fama-French industry dummies. To control for firm specific drivers of financial performance, we include the firm’s market-to-book ratio (MB), size ($ASSET$), the previous two year’s financial performance (e.g., $\Delta IBEI_{i,t-1}$), time ($Year$) and industry ($Industry$) fixed effects.

Our objective in Table 5 is to check whether lobbying and financial performance are statistically significantly related. We present three econometric specifications for robustness. Equation (1a) relates current lobbying intensity to future performance. Under the assumption of integration of order one of both lobbying intensity and financial performance, equation (1b) estimates the cointegrating relationship. Finally, equation (1c) presents the first-differenced estimate of equation (1a).

We report the results of estimating these equations using all firms in COMPUSTAT. Firms that do not lobby are assigned a zero for the value of their lobbying expenses. The table reports t-statistics computed with standard errors adjusted for clustering observations at the firm level. Two lags of the dependent variable are included in each specification to mitigate potential problems from serial correlation. Using three lags of the dependent variable produces similar results, though with a smaller sample size.

According to columns (1) - (3), lobbying intensity is positively related to financial performance as measured by *IBEI*. However, the coefficient on *LOBBY* is statistically significant only when the dependent variable is the change in *IBEI*, and the R^2 statistic is higher for equation (1a). The coefficients on the lags of the dependent variable are positive and statistically significant in equation (1a), implying persistence in financial performance. The market-to-book ratio (*MB*), and the level of assets (*ASSET*), are not statistically significant in any of the specifications.

The results from estimating equations (1a) - (1c) for net income (*NI*), and cash from operations (*CFO*), are presented in columns (4) – (6), and (7) – (9), respectively. The coefficient on *LOBBY* is actually negative in column (4), though not statistically significant, while the specification in column (6) yields the strongest case for a positive relationship with net income. The coefficients on the lags of the dependent variable are signed as in columns (1) – (3), again suggesting the importance of controlling for prior years' performance. The results using cash from operations (*CFO*) provide more support for a positive and statistically significant relationship between lobbying and financial performance. Finally, only when *CFO* or Δ *CFO* is the dependent variable is the level of assets (*ASSET*) statistically significant.

To check for nonlinearities, we repeated these regressions focusing on the highest quintile of lobbying intensities. The question is whether the positive association is being driven by the firms that lobby the heaviest relative to assets. These results are presented in Appendix Table 1. Here, the results are mixed; in some cases we find that the coefficient on lobbying is higher, while overall the results do not seem particularly compelling. All other results remain the same.

It would be premature to conclude that lobbying is strongly positively related to financial performance. As discussed in the introduction, there are surely firms which win contracts and/or keep out competitors as a result of their lobbying efforts. There are also undoubtedly firms that lobby to lessen the impact of poorly thought out legislation and regulation. Hence we conclude from Table 5 that the evidence suggests a positive relation between financial performance and lobbying on average, but the evidence is not overwhelming support for Stigler's (1971) view that "regulation is acquired by the industry and is designed and operated primarily for its benefit". A second issue of the panel regression analysis is that firms that expect to do well in the future spend money on lobbying today (i.e., there may be reverse causality).²⁰ We have partially addressed this by examining lagged *LOBBY*, but the economic relationship may be more complicated than a simple one period lag. This possibility suggests that firms where managers have relatively high discretion (over, e.g., the decision to lobby) are likely to have weak corporate governance.

We checked this hypothesis directly by examining the correlation of lobbying expenditures with two widely used measures of corporate governance. The first measure, used by Gompers, Ishii, and Metrick (2003), attempts to measure shareholder rights across a large cross-section of U.S. firms. The second measure, produced by Bebchuk, Cohen, and Ferrel (2004), is designed to measure manager entrenchment comparatively, over a similarly broad set of U.S. corporations. Both measures use underlying data from the Investor Responsibility Research Center. Empirically, the simple correlation coefficient between either of these measures and lobbying never exceeds 0.20. Hence, reverse

²⁰ This view presumes that lobbying can add value, since it is not clear why (if there is no investment value to lobbying) shareholders of publicly traded firms would want to spend (part of) their expected future windfall on lobbying today.

causality seems implausible. Despite this low correlation, we cannot completely rule out reverse causality.

To summarize, results in Table 5 provide suggestive evidence that lobbying activities are positively associated with accounting-based measures of financial performance. Of course, we do not interpret them as a statement of causality. That is, what the results do not tell us is whether lobbying induces better financial performance or whether firms lobby more when they expect to do better, while other firms may not lobby based on a belief that such efforts would be fruitless. To the extent that there is a distinction between firms that know, or have reason to believe, that lobbying spending is likely to have a positive impact, and firms that know or believe lobbying will be unproductive, then these results lack generality. As a result, our variable of interest (lobbying spending) is correlated with the error term, causing OLS estimates to be biased.

Heckman (1979), Lee (1978), and Garen (1984) suggest a two-stage procedure to treat this self-selection bias. In the first stage we estimate a probit equation that predicts the probability of a firm lobbying. In the second stage we estimate the financial performance equation by OLS and include the correlation between the residuals in the lobby prediction and financial performance equations as an additional explanatory variable to control for the self-selection bias.

We implement this procedure by estimating a first stage probit specification:

$$\begin{aligned} \text{LOBBY}_{i,t} = & \beta_0 + \beta_1 \text{LOBBY}_{i,t-1} + \beta_2 \text{LOBBY}_{i,t-2} + \beta_3 \text{MB}_{i,t} + \beta_4 \text{ASSET}_{i,t} + \\ & \beta_5 \text{HERFINDAHL_INDEX}_{i,t} + \beta_6 \text{IMPORT_SHARE}_{i,t} + \\ & \beta_7 \text{IMPORT_GROWTH}_{i,t} + \varepsilon_{j,t}, \end{aligned} \tag{2a}$$

For simplicity, we only estimate one of the specifications in Table 5. In particular, we

estimate the following OLS regression in the second stage:

$$\begin{aligned} \Delta(\text{Financial Performance})_{i,t} = & \beta_0 + \beta_1 \Delta\text{LOBBY}_{i,t-1} + \beta_2 \text{MB}_{i,t} + \beta_3 \text{ASSET}_{i,t} + \\ & \beta_4 \Delta(\text{Financial Performance})_{i,t-1} + \beta_5 \Delta(\text{Financial Performance})_{i,t-2} + \\ & \beta_5 \lambda_{i,t} + \sum_{t=1998}^{2004} \delta_t \text{Year}_t + \sum_{j=1}^{48} \gamma_j \text{Industry}_j + \varepsilon_{j,t}, \end{aligned} \quad (2b)$$

where $\text{LOBBY}_{i,t-1}$ and $\text{LOBBY}_{i,t-2}$ are firm i 's lobbying spending in year $t-1$ and year $t-2$, respectively; $\Delta\text{LOBBY}_{i,t-1}$ is the change in lobbying spending from year $t-2$ to year $t-1$; $\text{MB}_{i,t}$ is the market-to-book ratio; $\text{ASSET}_{i,t}$ is the amount of total assets at the beginning of year t ; Financial Performance represents our financial performance measures, i.e., ΔIBEL , ΔNI , and ΔCFO that are defined previously; HERFINDAHL_INDEX is the industry concentration, calculated as the sum of the squares of the market shares of every firm in the industry;²¹ IMPORT_SHARE is the industry's share of imports relative to total industry shipments; IMPORT_GROWTH is the growth of sector i 's imports over the longest interval for which we have data²²; and λ is the inverse Mills ratio, included to correct the selection bias. We use the sector-specific import share and import growth as additional instruments to help forecast whether firms in sector i lobby, since access to foreign suppliers and/or markets may be reasons to lobby. We also include time and industry dummies in equation (2b) as before.

Table 6 presents the results from both stages of the estimation. In the first stage probit regression, all of the explanatory variables are statistically significant, with the exception of

²¹ For example, if there were only one firm in the industry, that firm would have 100% market share and the Herfindahl index would be equal to 10,000, the maximum possible value of the Herfindahl index.

²² Imports by sector are described in Robert Feenstra (1996), and the data are available at: <http://www.internationaldata.org/usixd/usixd4sic.html>. Import growth is the share of imports in SIC 4-digit sector i in 1994 (the last year available in Feenstra), relative to that in 1958, or the earliest year available. Import share is the share of imports in each SIC 4-digit sector relative to total industry shipments in 1994. A complete description of the data is at <http://www.internationaldata.org/notes/sicdescription.html>.

IMPORT_GROWTH. The significantly negative coefficient on *HERFINDAHL_INDEX* indicates that firms in more highly concentrated industries (with lower Herfindahl index) are less likely to lobby. This somewhat counterintuitive result may be due to well-known limitations in the Herfindahl index itself. For example, private firms, who are often notoriously engaged in politics (e.g., U.S. Sugar Corporation) are excluded from the index. The negative coefficient on import share suggests that firms in sectors dependent on imports lobby less. We find that firms that are relatively larger, with lower market-to-book ratios, and with positive prior year lobbying spending and less improvement in financial performance in the previous year, are more likely to lobby. The adjusted R-square statistic in the first stage regression is 0.93.

In the second stage OLS regressions, the inverse Mills ratio (λ) from stage one is included, which controls for potential self-selection bias. The significance of the coefficients on λ suggests the importance of controlling for self-selection bias. The coefficients on $\Delta LOBBY$ are positive and significant at the 5% level or better in all three regressions. Our results in the second stage financial performance model are consistent with those presented in Table 5, supporting a significant and positive association between changes in lobby spending and changes in financial performance, and suggests these results are not due to self-selection.

4.2. Portfolio based evidence

To further examine whether lobbying activity is associated with future stock returns and whether the stock market correctly anticipates the expected future benefits of lobbying spending, we follow Chan et al. (2001) and implement an investment strategy. Specifically, this test checks whether lobbying intensity is related to future stock returns and whether

firms engaging in lobbying activities financially outperform those do not. We construct two lobby intensity measures: (a) lobbying expenditures relative to assets, and (b) lobbying expenditures relative to market value.

We include all common stocks listed on the NYSE and Amex, as well as those listed on Nasdaq in our sample. Portfolios are formed at the end of March each *year*, allowing three-month's time between the end of a firm's fiscal year and the public disclosure of its lobbying activities for the market to react to the information.²³ Stocks of firms that lobby are assigned to one of five portfolios based on their ranked lobbying intensity. We keep stocks of non-lobbying firms in a separate category for comparison.

We then calculate each portfolio's average annual buy-and-hold return over each year from one to three years after portfolio formation. We also calculate each portfolio's average annual buy-and-hold return in excess of the equally weighted return²⁴ on a control portfolio of stocks matched by firm size and book-to-market in the first through third post-formation years. There are six ranks by size and five ranks by book-to-market ratio resulting in 30 control portfolios. The ranking by book-to-market is based on quintile breakpoints over all stocks, and the size rankings are based on six quintiles of market capitalization. Each stock's return is measured net of the buy and-hold return on its control portfolio.

Table 7 reports the returns and characteristics of portfolios classified by lobbying expenditure relative to assets. As shown in Panel C of Table 7, both book-to-market and sales-to-market ratios of the firms that lobby are lower than non-lobbying firms. This could

²³ The mandatory corporate filings are disclosed on the Senate website, generally within two months of filing, see http://www.senate.gov/legislative/Public_Disclosure/database_download.htm

²⁴ For robustness checks, we also construct value-weighted returns on the control portfolio and the results remain little changed.

indicate that firms that lobby have relatively high intangible assets that do not appear on their balance sheets, or that such firms are star performers. The earnings-to-price ratio, dividend yield and return on equity of lobbying and non-lobbying groups are not significantly different from each other. Also, note that firms that lobby tend to be much bigger than non-lobbying firms, consistent with Olson's collective action theory.

Panel A of Table 7 reports the raw returns before and after portfolio formation and Panel B reports excess returns are calculated after controlling for firm characteristics such as size and book-to-market ratio. It appears that only firms in the highest lobbying intensity quintile (group 5) consistently outperform non-lobbying firms once we focus on excess returns. The excess returns for the highest lobbying intensity portfolio appear substantial. For instance, the average annual return over three-year period after portfolio formation for the highest ranked portfolio is 5.5 percent per year, with the highest return in the first year following portfolio formation. The difference in the mean excess returns between the highest ranked lobbying intensity quintile and non-lobbying group is statistically significant at the 1% level (two-tailed t test = 3.44).

These results suggest that the stock market does not initially fully incorporate the value of corporate lobbying activities. If the stock price fully captures the value of a firm's lobbying activities, we would not find an association between lobbying intensity and future stock returns. The results also lessen the plausibility of causality running from performance to lobbying given that reverse causality would imply that managers accurately forecast profitability (excess market returns) three years into the future.

Table 8 repeats this analysis for portfolios sorted by lobbying expenditures relative

to market value of equity.²⁵ Results here are similar, though with some nuances; particularly for those firms with the highest lobbying intensity. Over the three years prior to portfolio formation, the average raw annual return of stocks ranked in the top quintile by lobbying relative to market is the lowest (13.91 percent, panel A) across the other four lobbying portfolios. In comparison, stocks of firms that do no lobbying have an average return over the same period of 22.54 percent per year. The earnings of stocks in quintile 5 are also the lowest in the table (Panel C). However, the stocks in the top quintile portfolio perform well in the years following portfolio formation. These firms earn a 35.90 percent average raw return in the first subsequent year, compared to 29.70 percent for stocks with no lobbying, and the difference is more noticeable when comparing excess returns. This indicates possible underpricing of actively lobbying firms. In other words, the market may fail to give enough credit to past losers that are investing heavily in corporate lobbying. The average annual excess rate of return over the three years following portfolio formation is 6.74 percent for the top lobbying quintile, while the non-lobbying firms earn essentially zero average excess returns. The difference in the mean excess returns between the two extreme groups is statistically significant at the 1% level (two-tailed t test = 4.04). This rebound effect is something also noted by Chan et al. (2001) for high R&D firms.

We investigate this rebound effect further in Table 9, using a two-way sort (first by lobbying intensity, then by past returns) to capture the influence of both past returns and lobbying intensity (measured relative to assets). Specifically, we examine whether past losers who spend heavily on lobbying tend to be undervalued. Within each of the portfolios sorted by lobbying intensity, we assign a stock to one of two equally sized groups, based

²⁵ We also examined the stock returns for portfolios sorted by lobbying expenditures relative to sales. Overall, the results support our findings in Tables 8 and 9 and again reveal an association between lobbying intensity and future stock returns.

on its rate of return over the three years prior to portfolio formation. Each stock's return is measured net of the return on a control portfolio matched on size, book-to-market, as well as its past three-year return. The table reports equally weighted excess returns on each portfolio. Within each quintile by lobbying expenditures relative to assets except for group 4, past losers experience higher excess return in the first year post portfolio formation than past winners. However, the results become weaker in the three-year post portfolio formation period where only past losers in groups 2 and 3 outperform past winners. Overall, the results provide evidence of market mispricing of lobbying activities.

5. CONCLUSIONS

There is growing interest in the political activities of corporations. To date, the overwhelming focus of the financial press and research among academics is on corporate political contributions. Contributions however, account for only a small part of corporate political activities – which are not corporate expenses at all since they are, in fact, made by individuals. We document that lobbying expenses are by far the largest form of corporate political activity in the United States. Measured by number of firms engaged, or by dollar amounts spent, lobbying activities far outweigh corporate PAC or the (now banned) corporate soft-money donations. This paper uses lobbying data that became publicly available after the passing of the Lobbying Disclosure Act of 1995 to examine the financial implications of this dominant category of corporate political activity.

We present several findings on the relation between corporate financial performance and lobbying. First, based on a pooled regression including all firms (i.e., those with zero and those with positive lobbying spending) we find evidence that lobbying expenditures are on average positively correlated with financial performance. We report

several robustness and sensitivity analyses, including various measures of financial performance and alternative empirical specifications. Our results appear robust to several different empirical specifications, and several measures of financial performance. We also report results from estimating a sample selection model, where the decision to lobby is explicitly modeled. Results from this exercise are more consistently positive and support the conclusion that lobbying expenditures are statistically significantly positively correlated with financial performance.

Some of the more interesting findings appear when we take a portfolio approach. Here, we compare returns of firms that lobby based on their lobbying intensity, to the returns generated by portfolios of non-lobbying firms. We find that portfolios of firms with the high lobbying intensities outperform their benchmarks of non-lobbying firms. We also show that increases in lobbying tend to follow poor performance, but what we observe is not simply a mean reversion in returns. Firms with the highest lobbying intensity outperform other firms with similar mean reversion in returns.

Many articles in the financial press suggest that the returns to lobbying are large. Our portfolio results suggest an answer to the natural follow-up question to such news stories, i.e., what keeps even more firms from engaging in lobbying activities? Our analysis of firm-level lobbying data suggests that, in fact, most firms do not enjoy superior financial performance as a result of lobbying. Specifically, we find that only firms that have been willing to commit to the highest lobbying intensities have outperformed their peers. Firms in this category earned an excess return of 5.5% over the three years following portfolio formation, while the rest of the firms earned essentially a zero excess return. Clearly, not all firms can be in the top-intensity group. Moreover, given the lack of

transparency in lobbying prior to the Lobbying Disclosure Act, estimates of the returns to lobbying would surely have been imprecise. Hence, going forward we should expect any rents to lobbying to be dissipated via either greater lobbying spending among all participants, or by new entrants. Finally, our results are consistent with defensive lobbying, i.e., lobbying designed to limit negative outcomes, by a substantial fraction of our sample firms since the majority of firms appear to earn low or even negative returns to their lobbying activity.

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Figure 1: Total and Average Annual Lobbying Spending in the period of 1998-2005

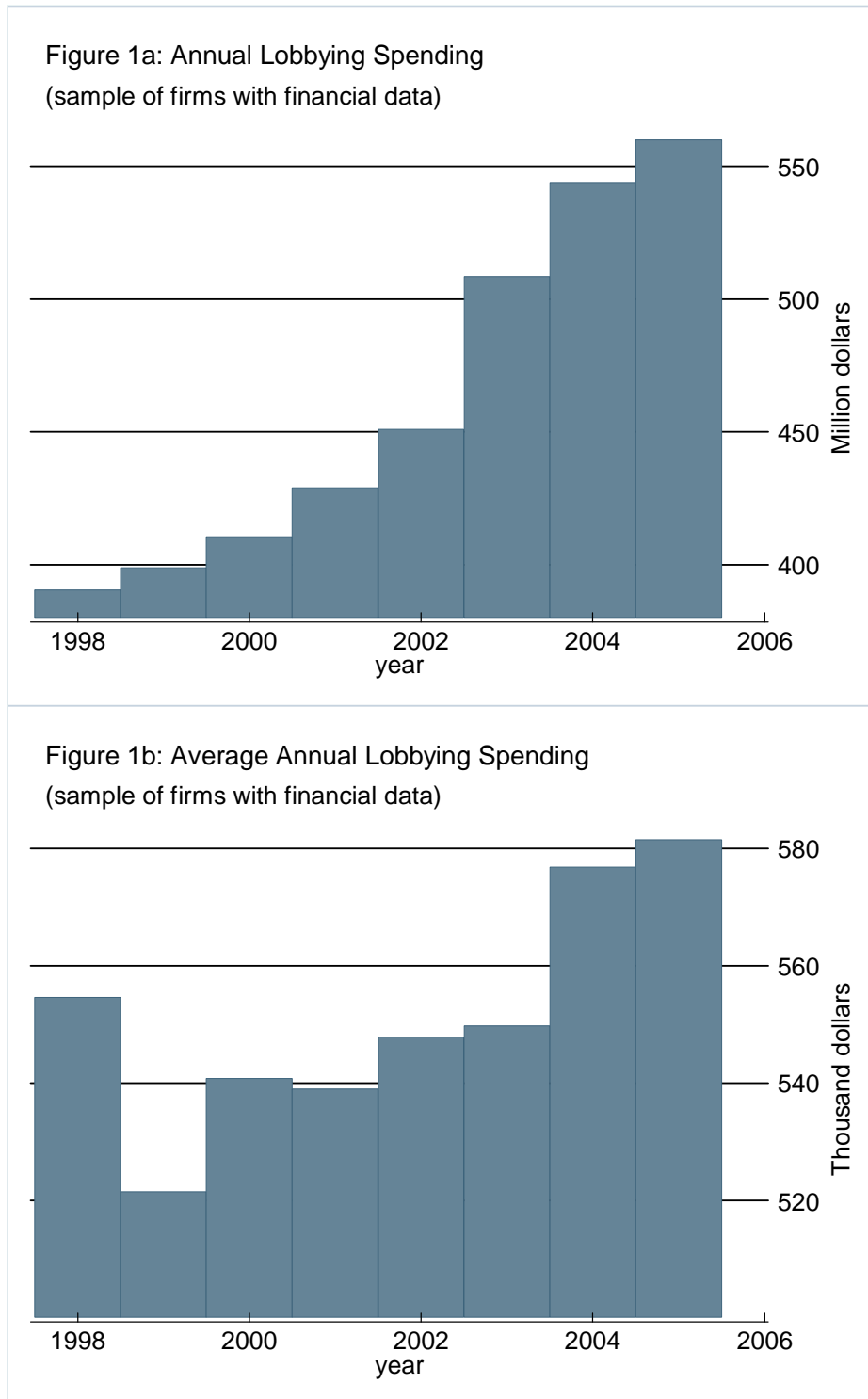


Table 1: Top 20 Lobbying Spenders in 2005 (in \$millions)

Variable definitions: Assets = total assets; Sales = net sales; IBEI = income before extraordinary items; lobbying spending = lobbying expenditures.

Rank	Company Name	Industry	Assets	Sales	IBEI	Lobbying Spending
1	General Electric	Conglomerates	673,342	148,019	18,275	18.77
2	Altria Group	Cigarettes	107,949	68,920	10,668	13.64
3	Northrop Grumman	Search, detection, navigation, guidance, aeronautical systems	34214	30721	1383	13.60
4	Southern Co	Electric services	39,877	13,554	1,621	12.96
5	Boeing Co	Aircraft	60,058	54,845	2,562	9.24
6	AIG	Life insurance	853,370	108,340	10,477	8.50
7	General Motors	Motor vehicles & car bodies	476,078	190,215	-10,458	7.76
8	Motorola Inc	Radio, TV broadcast, communication equipment	35,649	36,843	4,599	7.59
9	Lockheed Martin	Guided missiles & space vehicles & parts	27,744	37,213	1,825	7.34
10	Exxon Mobil	Petroleum refining	208,335	328,213	36,130	7.02
11	Verizon Communications	Telephone communications except radiotelephone	168,130	75,112	7,397	6.76
12	Pfizer Inc	Pharmaceutical Preparations	117,565	51,298	8,094	6.49
13	Amgen Inc	Biological products except diagnostic substances	29,297	12,430	3,674	5.72
14	Johnson & Johnson	Pharmaceutical Preparations	58,025	50,514	10,411	5.38
15	DaimlerChrysler	Motor vehicles & car bodies	238,773	177,365	3,376	5.34
16	ConocoPhillips	Petroleum refining	106,999	162,405	13,640	5.10
17	Bristol-Myers Squibb	Pharmaceutical	28,138	19,207	2,992	5.04
18	GlaxoSmithKline	Pharmaceutical	46,748	37,855	8,059	4.86
19	SBC Communications	Telephone communications except radiotelephone	145,632	43,862	4,786	4.84
20	Ford Motor Co	Motor vehicles & car bodies	269,476	177,089	2,228	4.80

Table 2: Three Categories of Corporate Political Involvement

Panel A: Lobbying Activities (Annual amounts)

Year	# of firms	Mean (\$)	Std Dev (million \$)	Min (\$)	Max (million \$)	# of firms in Compustat	% of firms in Compustat that lobby
1998	704	554,628	1.40	10,000	23	10765	6.54%
1999	765	521,482	1.23	10,000	14.7	10795	7.09%
2000	759	540,833	1.25	10,000	16	10347	7.34%
2001	796	539,003	1.24	10,000	15.4	9745	8.17%
2002	823	547,894	1.23	10,000	14	9292	8.86%
2003	925	549,761	1.28	10,000	17	9024	10.25%
2004	943	576,744	1.35	10,000	17.2	8716	10.82%
2005	963	581,447	1.41	10,000	18.8	8167	11.79%

Panel B: PAC Contributions (Election Cycle amounts)

Year	# of firms	Mean (\$)	Std Dev (million \$)	Min (\$)	Max (million \$)
1998	430	84,618	0.14	350	1.5
2000	487	94,036	0.16	125	1.8
2002	509	106,190	0.18	200	1.6
2004	527	127,146	0.22	150	2.1

Panel C: Soft-Money Contributions (Election Cycle amounts)

Year	# of firms	Mean (\$)	Std Dev (million \$)	Min (\$)	Max (million \$)
1998	324	116,607	0.21	250	2.4
2000	420	197,834	0.34	220	2.4
2002	423	195,574	0.38	250	2.9

Table 3: Average Lobby Spending by Industry Group and Year

This table reports data from the Center for Responsive Politics. The CRP data includes lobbying, PAC, and soft-money contributions as distinct categories. CRP reports lobbying expenses by calendar year and both PAC and soft-money contributions by election cycle

2-digit SIC^a	Industry	1998	1999	2000	2001	2002	2003	2004	2005	Average
01-09	Agriculture, forestry & fishing	0.200 (2) ^b	0.230 (5)	0.502 (3)	0.139 (4)	0.319 (4)	0.397 (4)	0.476 (4)	0.589 (4)	0.357 (4)
10-19	Mining & construction	0.410 (28)	0.403 (30)	0.420 (31)	0.329 (33)	0.376 (36)	0.253 (45)	0.284 (42)	0.269 (43)	0.343 (36)
20-29	Manufacturing	0.725 (141)	0.765 (147)	0.693 (150)	0.657 (152)	0.738 (144)	0.656 (163)	0.671 (166)	0.744 (175)	0.706 (155)
30-39	Manufacturing	0.628 (156)	0.530 (164)	0.548 (162)	0.528 (175)	0.484 (200)	0.480 (226)	0.494 (238)	0.481 (234)	0.522 (194)
40-49	Transportation & utilities	0.494 (159)	0.495 (166)	0.519 (163)	0.507 (167)	0.554 (160)	0.628 (158)	0.672 (150)	0.663 (150)	0.567 (159)
50-59	Wholesale & retail	0.215 (38)	0.208 (40)	0.235 (46)	0.487 (42)	0.242 (38)	0.297 (42)	0.293 (45)	0.301 (51)	0.285 (43)
60-69	Finance, insurance & real estate	0.671 (91)	0.567 (107)	0.615 (100)	0.673 (103)	0.830 (103)	0.837 (128)	0.893 (125)	0.878 (120)	0.745 (110)
70-79	Personal & business services	0.331 (54)	0.318 (64)	0.344 (70)	0.350 (83)	0.320 (90)	0.335 (100)	0.381 (107)	0.382 (114)	0.345 (85)
80-89	Healthcare & other services	0.132 (29)	0.122 (34)	0.195 (27)	0.201 (31)	0.190 (40)	0.200 (52)	0.268 (57)	0.310 (63)	0.202 (42)
90-99	Public administration	2.395 (3)	1.591 (5)	5.353 (3)	3.883 (4)	2.608 (5)	4.301 (4)	3.864 (5)	3.936 (5)	3.491 (4)

^aSIC classification is from the U.S. Department of Labor at <http://www.osha.gov>

^bNumber of firms is in parenthesis.

Table 4 Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
<i>Panel A: Firms with non-zero lobbying spending</i>					
IBEI	5,644	474.18	1,860.21	-25,779.47	36,130.00
NI	5,644	469.69	1,895.95	-25,779.47	36,130.00
CFO	5,510	978.98	3,152.81	-33,612.00	48,138.00
ASSET	5,647	22,524.54	88,388.92	0.00	1,494,037.00
LOBBY	6,678	0.55	1.30	0.01	22.97
MB	5,132	4.69	100.86	-656.93	7,071.35
PRICE	5,351	33.51	64.12	0.00	1,522.00
RETURN	3,292	0.14	0.63	-0.94	4.16
Δ IBEI	3,968	53.07	1,407.43	-26,472.00	27,357.88
Δ NI	3,968	58.78	1,447.95	-26,213.00	27,357.88
Δ CFO	3,879	94.79	2,135.10	-44,739.00	34,203.00
Δ LOBBY	4,744	0.02	0.56	-8.25	11.39
<i>Panel B: All Compustat firms</i>					
IBEI	54,843	113.85	937.94	-44,574.00	36,130.00
NI	54,844	110.30	1,114.96	-98,696.00	36,130.00
CFO	48,517	121.82	1,105.82	-33,612.00	48,138.00
ASSET	54,964	2,324.94	29,142.07	0.00	1,494,037.00
LOBBY	72,321	0.05	0.43	0.00	22.97
MB	46,798	133.13	987.63	-656.93	151,648.50
PRICE	59,080	29.83	960.54	0.00	88,620.00
RETURN	58,776	1.96	96.95	-1.00	1,499.90
Δ IBEI	44,040	14.96	762.95	-39,679.00	47,720.00
Δ NI	44,039	13.33	1,109.77	-93,775.00	101,335.00
Δ CFO	38,963	11.57	731.62	-44,739.00	34,203.00
Δ LOBBY	59,241	0.00	0.19	-8.25	12.48

Variable definitions:

IBEI	= income before extraordinary items, in \$millions;
NI	= net income, in \$millions;
CFO	= cash from operations, in \$millions;
ASSET	= total assets at the beginning of year t , in \$millions;
LOBBY	= annual lobbying spending, in \$millions;
MB	= market-to-book ratio at the end of the year;
PRICE	= share price at three months after the end of year t ;
RETURN	= change of market value from three months after the end of year $t-1$ to three months after the end of year t , deflated by market value at three months after the end of year $t-1$;
Δ IBEI	= change in income before extraordinary items from year $t-1$ to year t ;
Δ NI	= change in net income from year $t-1$ to year t ;
Δ CFO	= change in cash from operations from year $t-1$ to year t ;
Δ LOBBY	= change in lobbying expenditures from year $t-1$ to year t ;

Table 5 Panel Regressions of Firm Performance on Lobby Spending

The dependent variables are: IBEI = income before extraordinary items in year t ; Δ IBEI = change in income before extraordinary items from year $t-1$ to year t ; NI = net income in year t ; Δ NI = change in net income from year $t-1$ to year t ; CFO = cash from operations in year t ; Δ CFO = change in cash from operations from year $t-1$ to year t . Independent variables are: LOBBY = lobbying relative to assets in year $t-1$; MB = market-to-book ratio at the end of year t ; ASSET = total assets at the beginning of the year t (coefficients are multiplied by 1000). The sample includes all stocks on the NYSE, AMEX, and Nasdaq with coverage on the CRSP and COMPUSTAT files annually, for the years 1998-2005. All models are ordinary least squares estimates with two-tailed z-statistics (adjusted for clustering at the firm level) in the parenthesis under the coefficient estimates. *, **, and *** indicate the regression coefficients are significantly different from zero at the 10%, 5%, and 1% level, respectively.

Dependent Variable:	(1) IBEI	(2) Δ IBEI	(3) Δ IBEI	(4) NI	(5) Δ NI	(6) Δ NI	(7) CFO	(8) Δ CFO	(9) Δ CFO
LOBBY _{$t-1$}	3.803 (0.505)	8.526*** (2.847)		-12.996 (-1.231)	2.737 (0.656)		14.159*** (18.198)	14.875*** (18.508)	
Δ LOBBY _{$t-1$}			30.641*** (5.165)			15.850*** (4.526)			21.379*** (6.376)
ASSET _{t}	-0.0139 (-1.514)	-0.0193 (-1.237)	-0.0193 (-1.237)	-0.0097 (-0.924)	-0.0063 (-0.213)	-0.0063 (-0.213)	-0.0073** (-2.570)	-0.0060** (-2.232)	-0.0001** (-2.173)
MB _{t}	0.010 (1.368)	0.005 (1.389)	0.005 (1.389)	0.013 (1.441)	0.005 (1.319)	0.005 (1.319)	0.000 (1.519)	0.000 (1.351)	0.000 (1.377)
Dep. Var _{$t-1$}	0.529*** (5.682)	-0.417*** (-6.755)	-0.417*** (-6.755)	0.294*** (2.660)	-0.562*** (-12.738)	-0.562*** (-12.738)	0.516*** (8.818)	-0.499*** (-9.495)	-0.327*** (-3.585)
Dep. Var _{$t-2$}	0.127** (2.363)	-0.269*** (-14.188)	-0.269*** (-14.191)	0.131*** (2.438)	-0.287*** (-13.550)	-0.287*** (-13.550)	0.329*** (6.777)	-0.171*** (-3.282)	-0.260*** (-5.370)
Obs.	31843	24468	24468	31842	24468	24468	27925	24468	21434
# groups	7525	6447	6447	7524	6446	6446	6620	5658	5658
Adj. R-squared	0.40	0.17	0.17	0.19	0.26	0.26	0.45	0.38	0.37
Year dummies	yes	yes	yes	yes	yes	yes	yes	yes	yes
Industry dummies	yes	yes	yes	yes	yes	yes	yes	yes	yes

Table 6 Heckman Selection Model of Firm Performance on Lobby Spending

In the first stage (the selection equation) the decision to lobby is estimated as a function of HERFINDAHL_INDEX, i.e., the sum of squares of the market shares of every firm in the industry, IMPORT_SHARE, which is the industry's share of imports relative to total industry shipments, and IMPORT_GROWTH, which is the growth of sector i 's imports over the longest interval for which we have data during the period 1958-1994. The second stage the dependent variables are: Δ IIBEI = change in income before extraordinary items from year $t-1$ to year t ; Δ NI = change in net income from year $t-1$ to year t ; Δ CFO = change in cash from operations from year $t-1$ to year t . Independent variables are: LOBBY = lobbying relative to assets in year $t-1$; MB = market-to-book ratio at the end of year t ; ASSET = total assets at the beginning of the year t (coefficients are multiplied by 1000). The sample includes all stocks on the NYSE, AMEX, and Nasdaq with coverage on the CRSP and COMPUSTAT files annually, for the years 1998-2005. All models are ordinary least squares estimates with two-tailed z-statistics (adjusted for clustering at the firm level) in the parenthesis under the coefficient estimates. *, **, and *** indicate the regression coefficients are significantly different from zero at the 10%, 5%, and 1% level, respectively.

	First Stage Probit	Second Stage OLS			
		Dep. Variable:	Δ IIBEI	Δ NI	Δ CFO
CONSTANT	-3.451*** (-29.68)	Δ LOBBY _{t-1}	26.135*** (3.14)	26.908** (2.03)	25.154*** (10.04)
LOBBY _{t-1}	3.958*** (4.43)	ASSET _t	-0.0007 (-0.04)	0.0169 (0.49)	0.0004*** (3.69)
LOBBY _{t-2}	2.373*** (2.34)	MB _t	0.0016 (0.65)	0.0012 (0.35)	0.00002 (0.51)
ASSET _t	0.1095*** (17.04)	Dep. Var _{t-1}	-0.5907*** (-7.61)	-0.6429*** (-25.52)	-0.2783*** (-9.45)
MB _t	-0.0103*** (-15.79)	Dep. Var _{t-2}	-0.3286*** (-9.57)	-0.3330*** (-30.97)	-0.3338 (-5.39)
HERFINDAHL_INDEX	-0.0002** (-2.12)	Mills ratio (λ)	-0.0453** (-2.15)	-0.0410* (-1.94)	-0.3039*** (-4.29)
IMPORT_SHARE	-0.5165** (-2.09)				
IMPORT_GROWTH	0.0003 (1.28)				
Obs.	23071		23071	23071	20123
# groups	6087		6087	6086	5319
Adj. R-squared	0.93		0.13	0.002	0.31
Year dummies	yes		yes	yes	yes
Industry dummies	yes		yes	yes	yes

Table 7 Returns and Characteristics of Portfolios Classified by Lobbying Expenditure Relative to Assets

The sample includes all stocks on the NYSE, AMEX, and Nasdaq with coverage on the CRSP and COMPUSTAT files. In Panel A, each portfolio's average annual buy-and-hold return is reported over the three years prior to portfolio formation; over each year from one to three years after portfolio formation; and averaged over the three years after portfolio formation. Panel B reports each portfolio's average return in excess of the equally weighted return on a control portfolio of stocks matched by firm size and book-to-market in the first through third years. Panel C reports characteristics of the portfolios: the average number of component stocks; the ratios of lobbying expenditures to assets, to sales, and to market value of equity; book value of equity relative to market value of equity; sales relative to market value of equity; earnings relative to price; annual dividends divided by market value of equity; return on equity (earnings divided by the prior year's book value of equity); and the natural logarithm of total assets in millions of dollars.

Rank	1(Low)	2	3	4	5(High)	Non-Lobbying
Panel A: Returns before and after portfolio formation						
Average annual return over 3-year period before portfolio formation	0.1681	0.1495	0.1798	0.2653	0.2353	0.2254
First year after portfolio formation	0.1148	0.1601	0.1396	0.2088	0.3277	0.2970
Second year after portfolio formation	0.1842	0.1612	0.2350	0.1703	0.2488	0.2480
Third year after portfolio formation	0.1491	0.1923	0.1680	0.1714	0.2278	0.2419
Average annual return over 3-year period after portfolio formation	0.1494	0.1712	0.1809	0.1835	0.2681	0.2623
Panel B: Excess returns before and after portfolio formation						
Average annual return over 3-year period before portfolio formation	-0.0381	-0.0761	-0.0588	-0.0071	-0.0514	0.0060
First year after portfolio formation	-0.0263	0.0160	-0.0112	0.0481	0.1083	-0.0035
Second year after portfolio formation	0.0200	-0.0123	0.0641	0.0003	0.0230	-0.0025
Third year after portfolio formation	-0.0142	0.0215	-0.0031	0.0036	0.0349	-0.0011
Average annual return over 3-year period after portfolio formation	-0.0068	0.0084	0.0166	0.0173	0.0554	-0.0024
Panel C: Characteristics of Portfolios						
Average number of observations	485	491	490	491	488	18,835
Lobby spending relative to assets	0.0006%	0.0025%	0.0067%	0.0149%	0.1151%	0%
Lobby spending relative to sales	0.0023%	0.0049%	0.0160%	0.1305%	0.3712%	0%
Lobby spending relative to market value	0.0021%	0.0052%	0.0111%	0.0223%	0.1021%	0%
Book-to-market	0.5405	0.5363	0.5288	0.5020	0.4849	14.2556
Sales-to-market	1.2345	1.4492	1.3465	1.2013	1.3486	15.9459
Earnings-to-price	-0.0070	0.0001	0.0076	0.0111	-0.0767	1.7937
Dividend yield	0.0200	0.0171	0.0177	0.0171	0.0083	1.5858
Return on equity	0.0984	0.0957	0.2068	0.1316	0.0988	0.0868
Log Assets	9.3298	8.5327	8.2146	7.9626	6.0142	5.5047

Table 8 Returns and Characteristics of Portfolios Classified by Lobbying Expenditure Relative to Market Value

The sample includes all stocks on the NYSE, AMEX, and Nasdaq with coverage on the CRSP and COMPUSTAT files. In Panel A, each portfolio's average annual buy-and-hold return is reported over the three years prior to portfolio formation; over each year from one to three years after portfolio formation; and averaged over the three years after portfolio formation. Panel B reports each portfolio's average return in excess of the equally weighted return on a control portfolio of stocks matched by firm size and book-to-market in the first through third years. Panel C reports characteristics of the portfolios: the average number of component stocks; the ratios of lobbying expenditures to assets, to sales, and to market value of equity; book value of equity relative to market value of equity; sales relative to market value of equity; earnings relative to price; annual dividends divided by market value of equity; return on equity (earnings divided by the prior year's book value of equity); and the natural logarithm of total assets in millions of dollars.

Rank	1(Low)	2	3	4	5(High)	Non-Lobbying
Panel A: Returns before and after portfolio formation						
Average annual return over 3-year period before portfolio formation	0.2578	0.2490	0.1815	0.1712	0.1391	0.2254
First year after portfolio formation	0.0800	0.1255	0.1614	0.2249	0.3590	0.2970
Second year after portfolio formation	0.1414	0.1594	0.1808	0.2150	0.3026	0.2480
Third year after portfolio formation	0.1148	0.1479	0.1633	0.1981	0.2844	0.2419
Average annual return over 3-year period after portfolio formation	0.1120	0.1443	0.1685	0.2127	0.3153	0.2623
Panel B: Excess returns before and after portfolio formation						
Average annual return over 3-year period before portfolio formation	-0.0199	-0.0191	-0.0723	-0.0558	-0.0643	0.0060
First year after portfolio formation	-0.0307	-0.0016	0.0268	0.0533	0.0870	-0.0035
Second year after portfolio formation	0.0087	0.0082	0.0063	0.0187	0.0534	-0.0025
Third year after portfolio formation	-0.0262	-0.0094	0.0013	0.0153	0.0617	-0.0011
Average annual return over 3-year period after portfolio formation	-0.0161	-0.0009	0.0114	0.0291	0.0674	-0.0024
Panel C: Characteristics of Portfolios						
Average number of observations	485	491	490	491	488	18,835
Lobby spending relative to assets	0.0016%	0.0051%	0.0097%	0.0197%	0.1035%	
Lobby spending relative to sales	0.0037%	0.0139%	0.0635%	0.0804%	0.3613%	
Lobby spending relative to market value	0.0008%	0.0030%	0.0072%	0.0175%	0.1144%	
Book-to-market	0.3561	0.4007	0.4683	0.5867	0.7801	14.2556
Sales-to-market	0.7443	0.9177	1.1169	1.5498	2.2504	15.9459
Earnings-to-price	0.0280	-0.0026	0.0120	-0.0098	-0.0922	1.7937
Dividend yield	0.0146	0.0137	0.0167	0.0176	0.0174	1.5858
Return on equity	0.1977	0.0978	0.1400	0.0588	0.1385	0.0868
Log Assets	9.6101	8.9058	8.2617	7.5269	5.7513	5.5047

**Table 9 Excess Returns of Portfolios Classified by Lobbying Expenditure
Relative to Assets and by Past 3-year Return**

The sample includes all firms listed on NYSE, AMEX, and Nasdaq with coverage on the CRSP and COMPUSTAT files. All stocks with lobbying expenditures are ranked by lobbying expenditures relative to assets, and assigned to one of five equally sized portfolios. Within each of the five portfolios, stocks are further ranked by their rates of return over the prior three years and subdivided into two equally sized groups. The table reports each portfolio's average excess return over each of the first three years following portfolio formation and over all three years after portfolio formation. Excess returns are computed relative to a control portfolio of stocks based on size and book-to-market and then past three-year return. The excess return is the difference between the stock's annual buy-and-hold return and the return on the control portfolio.

Ranked by Lobby spending relative to assets	Past 3-year return	Excess Return in Year after Portfolio Formation			Average Excess Return over 3 Post-formation Years
		First Year	Second Year	Third Year	
1(Low)	1(Low)	-0.0260	-0.0037	-0.0141	-0.0146
	2(High)	-0.0265	0.0435	-0.0142	0.0009
2	1	0.0063	0.0393	0.0276	0.0244
	2	0.0257	-0.0632	0.0154	-0.0074
3	1	-0.0100	0.0804	0.0002	0.0235
	2	-0.0124	0.0482	-0.0064	0.0098
4	1	0.0118	0.0004	-0.0086	0.0012
	2	0.0840	0.0003	0.0155	0.0333
5(High)	1(Low)	0.1155	-0.0081	0.0116	0.0397
	2(High)	0.1012	0.0539	0.0581	0.0710

**Appendix Table 1 Regressions of Firm Performance on Lobby Spending
(Top quintile of lobbying intensity firms)**

The dependent variables are: IBEI = income before extraordinary items in year t ; Δ IBEI = change in income before extraordinary items from year $t-1$ to year t ; NI = net income in year t ; Δ NI = change in net income from year $t-1$ to year t ; CFO = cash from operations in year t ; Δ CFO = change in cash from operations from year $t-1$ to year t . Independent variables are: LOBBY = lobbying relative to assets in year $t-1$; MB = market-to-book ratio at the end of year t ; ASSET = total assets at the beginning of the year t (coefficients are multiplied by 1000). The sample includes all stocks on the NYSE, AMEX, and Nasdaq with coverage on the CRSP and COMPUSTAT files annually, for the years 1998-2005. All models are ordinary least squares estimates with two-tailed z-statistics (adjusted for clustering at the firm level) in the parenthesis under the coefficient estimates. *, **, and *** indicate the regression coefficients are significantly different from zero at the 10%, 5%, and 1% level, respectively.

Dependent Variable:	(1) IBEI	(2) Δ IBEI	(3) Δ IBEI	(4) NI	(5) Δ NI	(6) Δ NI	(7) CFO	(8) Δ CFO	(9) Δ CFO
Lobby _{t-1}	4.532 (0.618)	8.966*** (3.412)		-12.005 (-1.179)	3.333 (0.928)		14.186*** (19.352)	14.840*** (19.161)	
Δ LOBBY _{t-1}			29.863*** (4.455)			13.936*** (2.790)			20.351*** (5.725)
ASSET _t	-0.0139 (-1.514)	-0.0193 (-1.237)	-0.0193 (-1.237)	-0.0097 (-0.924)	-0.0063 (-0.213)	-0.0063 (-0.213)	-0.0073*** (-2.606)	-0.0060** (-2.234)	-0.0060** (-2.234)
MB _t	0.010 (1.368)	0.005 (1.389)	0.005 (1.389)	0.013 (1.441)	0.005 (1.319)	0.005 (1.319)	0.000 (1.520)	0.000 (1.351)	0.000 (1.351)
Dep. Var. _{t-1}	0.529*** (5.682)	-0.417*** (-6.755)	-0.417*** (-6.755)	0.294*** (2.660)	-0.562*** (-12.738)	-0.562*** (-12.738)	0.513*** (8.869)	-0.501*** (-9.624)	-0.501*** (-9.624)
Dep. Var. _{t-2}	0.127** (2.363)	-0.269*** (-14.188)	-0.269*** (-14.188)	0.131** (2.438)	-0.287*** (-13.550)	-0.287*** (-13.550)	0.328*** (6.814)	-0.172*** (-3.341)	-0.172*** (-3.341)
Obs.	31843	24468	24468	31842	24468	24468	27925	21434	21434
# groups	7525	6447	6447	7524	6446	6446	6620	5658	5685
Adj. R-squared	0.40	0.17	0.17	0.19	0.26	0.26	0.45	0.38	0.37
Industry dummies	yes	yes	yes	yes	yes	yes	yes	yes	yes