Corporate Lobbying Revisited

Kim, Jin-Hyuk

2008

1 Introduction

Corporate lobbying has been a long-standing, contentious issue among scholars, practitioners, and policy-makers. Despite the popular concern that powerful corporations benefit from political favors through lobbying, the theoretical and empirical research on this issue has not received as much attention. Although the literature is replete with studies on campaign contributions, a distinction between the two activities has not been clearly drawn, and complementary analyses on lobbying have been relatively scarce. The current paper attempts to fill this gap by looking at the determinants of both campaign contributions and lobbying expenditures and then measuring the returns to lobbying as assessed by the financial market.

More specifically, this paper addresses two main questions: How do the determinants of lobbying expenditures differ from those of campaign contributions? How do lobbying expenditures pay off in terms of the firm's financial performance? Such a quantitative study can serve as a building block for normative discussion on the public policy of lobbying regulation as well as for the positive development of formal theories. Whereas the existing literature focuses mainly on special interest groups' contributions through political action committees (PACs) and the resulting electoral and legislative effects, the current paper documents lobbying expenditures and their effect on firm performance.

This paper employs a model similar to the Structure-Conduct-Performance (S/C/P) paradigm found in the industrial organization literature. Environmental or structural forces affect a firm's political conduct, which in turn affects the firm's performance. The first part of this article examines the former link. I test the collective action theory together with two other complementary hypotheses as determinants of political activities. The two main findings are that free-riding and rent-seeking incentives are robustly relevant for both types of political spending and that the firms' management incentives as well as economic hardship are also relevant for lobbying expenditures, but not for campaign contributions.

The second part of this article explores the relationship between lobbying and firm performance and tries to discern the causal relationship. Perhaps the most straightforward measure that applies to a broad spectrum of industries and corresponds to the concept of firm performance is equity returns. I estimate a panel model using three different types of equity returns as the dependent variables and lobbying expenditures as the main explanatory variable. Using an IV method to correct for the endogeneity of lobbying, I find

some evidence that lobbying has positive and significant effects on the firms' equity returns. Moreover, the effect is stronger relative to the market and less so relative to the industry.

The remainder of this paper is organized as follows. Section 2 briefly mentions the relevant literature. The dataset is described in section 3. Section 4 examines the determinants of the two political strategies. Section 5 measures the financial returns to lobbying. Section 6 concludes.

2   Related Literature

There is an extensive literature in management, political science, and economics on the determinants of corporate campaign contributions.[1] Among others, Grier et al. (1994) examined the determinants of PAC contributions using 124 industries over five election cycles and found that industry concentration, government sales, regulation, antitrust indictments, and firm size were important variables. Hansen and Mitchell (2000) similarly examined PAC contributions and the number of lobbyists using Fortune 500 companies. Numerous other studies examined the patterns of political activities in various industries.[2]

However, one of the criticisms of the traditional literature is that campaign contributions are overemphasized and often confused with lobbying itself when in reality "corporations spend an order of magnitude more on lobbying activities than they do on soft money contributions or than their affiliated PACs spend in campaign contributions" (Milyo et al. 2000). Brasher and Lowery (2006) and Drope and Hansen (2006) are the most recent studies using the same lobbying expenditure data as that used in this paper.[3] The current paper adds to the literature by testing a larger set of hypotheses on the antecedents of lobbying

The management literature often emphasizes the importance of non-market strategies aimed at influencing government policies (e.g., Baron 2002, Bonardi et al. 2005). One of the popular views is that the political market works on the principles of supply and demand. That is, politicians need money and information, and interest groups supply them in exchange for benefits.

---

[1]For surveys, see Hillman et al. (2004), and Potters and Sloof (1996).

[2]See, for example, Lichtenberg (1989), Schuler (1996), Kroszner and Stratmann (1998), and de Figueiredo and Tiller (2001).

[3]Brasher and Lowery (2006) focus on firm diversification and economic conditions as determinants of lobbying; Drope and Hansen (2006) show that the larger-firm sample bias may not be a significant problem.

Numerous studies find political favors in terms of, for example, trade barriers (Goldberg and Maggi 1999), academic earmarks (de Figueiredo and Silverman 2006), regulatory inspections (Gordon and Hafer 2005), and rate-of-return regulation (Bonardi et al. 2006).

Others find political influence on the stock market. Fisman (2001) shows the importance of political connections in the Indonesian stock market; Jayachandran (2006) finds that the U.S. equity market is affected by the control of Congress; Knight (2006) shows that policy platforms are capitalized in the equity prices. However, these studies use an event-study methodology, which has a short time window around the specific events. The current paper presents counterpart evidence using a longitudinal dataset, which provides a more straightforward measure of the financial returns to lobbying.

3   Data Description

The S&P 500 Index's constituent firms, as of December 2004, make up the sample universe, where the sample horizon for most of the variables is from 1998 to 2004.[4] This Index covers 80 percent of the U.S. capital market. Focusing on these relatively large but representative firms is of particular interest from a policy perspective because their political influence is of greater public concern. Moreover, the results of the analysis are not diluted by the inclusion of smaller firms. However, restricting the sample in this way carries its own cost in that the findings may not be generalized.

The dataset is best described by following the S/C/P framework. First, the structure consists of four groups of variables. The first group describes the industry structure: concentration ratio, government purchase, and regulation. The second group captures aspects of management incentives and control: CEO compensation, CEO incentive payments, and corporate governance. The third group measures the firms' needs for protection: three-year sales growth rates, lagged stock returns, and industry import share. Finally, the fourth group includes control variables: sales volume, number of employees, diversification, and sector and year dummies.[5]

---

[4]Two recently incorporated firms are excluded from the sample because of too few observations.

[5]Sector is defined following the S&P's Global Industry Classification Standard, which provides 10 sector classifications: consumer discretionary, consumer staples, energy, financials, health care, industrials, information technology, materials, telecommunications services, and utilities.

There are well-known difficulties in assigning industry characteristics to the firms. An industry definition can be too large or too small; for example, GE is a conglomerate operating in several industries. I use 1997 and 2002 census data to construct industry characteristics as follows. For most of the firms, I use the primary industry assignment given by Compustat, which is mostly at the 6-digit NAICS level.[6] Then, I evaluate each company's profile using Hoover's and construct simple average data to assign industry characteristics for the few companies that have a major presence in multiple industries.

Second, a firm's political conduct is measured by its lobbying expenditures, PAC contributions, and soft money contributions (all in logs). Lobbying expenditure data are collected directly from the disclosure forms available at the Senate. PAC and soft money contributions data are obtained from the Center for Responsive Politics. Third, a firm's performance is measured by its equity returns. I consider unadjusted, market-adjusted, and industry-adjusted stock returns for the dependent variable. All the financial data come from CRSP and Compustat, where a small number of extreme values are excluded as outliers.

The following descriptive statistics reveal some interesting patterns of corporate political activities. There is a large variation in the level of firms' political spending in the sample. Lobbying expenditures generally far exceed campaign contributions. The correlation between PAC and soft money contributions is 0.6, and the correlation between lobbying expenditures and the combined contributions is 0.73. Although this correlation is relatively high, it may be necessary to distinguish lobbying from contributions empirically as well as theoretically.

Table 1 illustrates the variation in lobbying expenditures, sorted by the S&P's 10-sector classification. The second column shows average annual lobbying expenditures. The number of firms belonging to each spending category is then counted. In the entire sample, 71 firms spend nothing, whereas 66 firms spend more than an average of $2 million per year. The mean of this distribution is $957,000, and the median is $166,000 per year. The distribution also varies by sector. For example, firms in the telecom sector on average spend a lot more than those in the IT sector.

Table 2 similarly shows the variation in the sample regarding the level of campaign contributions. The overall mean is $119,000, and the median is

---

[6]Compustat also assigns 4-digit and 5-digit NAICS codes in some cases where appropriate. The 6-digit NAICS level roughly corresponds to the 4-digit SIC level, which is most commonly used in the industrial organization literature. The Herfindahl-Hirschman Index (HHI) has very high correlation with 4-digit SIC (and thus 6-digit NAICS).

Sector	Lobby	0	0-100	100-500	500-2mil	2mil+	N
ConsDisc	483	18	30	24	12	5	89
ConsStap	855	6	12	8	8	2	36
Energy	1,013	1	11	5	7	4	28
Financial	901	11	26	17	19	9	82
Health	1,010	5	10	20	10	9	54
Industrial	1,701	5	11	10	14	15	55
IT	603	22	22	13	15	7	79
Material	646	2	7	11	9	3	32
Telecom	4,325	1	0	2	1	6	10
Utilities	1,265	0	2	7	18	6	33
Total	957	71	131	117	113	66	498

Table. 1: Sector Lobbying Profile. Average annual lobbying expenditures (in thousands of dollars) and the distribution of firms by sector and spending category.

$27,000 per year. The sample firms are classified into four categories. A firm is counted as $Dem(Rep)$ if more than 70 percent of its total contributions goes to the Democratic(Republican) party. Otherwise, it is classified as *Balance*. *Little* counts the number of firms that spend less than $10,000 during the entire sample period. The distribution of this classification shows the different political inclinations of the firms, that is, a partisan supporter, a balanced donor, or a politically apathetic firm.

The last three columns of Table 2 show summary statistics. The first one, $(R-D)/(R+D)$, is a measure of partisan bias for which exactly balanced contributions would produce zero (Tripathi et al. 2002). The all-positive numbers highlight funding asymmetry between the two parties. The next column is the ratio of soft money to PAC contributions, which shows the importance of both measures. The last column is the ratio of lobbying to combined contributions. It indicates that lobbying expenditures are, on average, 6.67 times larger than total campaign contributions in this sample.

4 Determinants of Lobbying

This section shows that there is a subtle difference between the determinants of lobbying expenditures and campaign contributions. In addition to the variables previously identified in the literature, a new set of variables are used to test the hypotheses which follow. Perhaps the most studied determinant

Sector	Contribution	Dem	Rep	Balance	Little	R-D / R+D	Soft / PAC	Lob / Con
ConsDisc	68	9	38	16	26	0.51	1.44	3.68
ConsStap	169	1	16	13	6	0.52	0.87	3.08
Energy	117	0	18	2	8	0.75	0.97	7.80
Financial	137	3	31	34	14	0.35	0.49	4.15
Health	106	1	22	16	15	0.44	0.55	9.63
Industrial	200	1	28	18	8	0.49	0.58	7.89
IT	45	4	21	17	37	0.40	3.24	10.33
Material	58	0	18	6	8	0.60	0.32	8.73
Telecom	544	0	0	9	1	0.20	0.74	6.97
Utilities	150	1	14	18	0	0.31	0.60	9.11
Total	119	20	206	149	123	0.455	0.72	6.67

Table. 2: Sector Contributions Profile. Average annualized campaign contributions (PAC and soft money combined) in thousands of dollars. The middle four columns show the number of firms in each category. For the last three columns, 88 firms are excluded to avoid zero denominators, and the median values are shown. R(D) represents contributions to Republican(Democratic) party.

of corporate political activities is the well-known collective action theory (Olson 1965), which implies that firms in highly concentrated industries are more likely to overcome the free-riding problem and engage in influence activities. In fact, there are a myriad of studies, mostly using PAC contributions data, that examine this hypothesis. However, the findings are mixed, and no consensus has been achieved yet (see, e.g., Hansen et al. 2005 and references therein).

The logic of collective action is closely related to the firms' rent-seeking incentives (Tullock 1967). All other things being equal, a small number of firms in oligopolistic industries may find it worthwhile to incur the costs of influencing the government when the benefits from government procurements or regulatory change far exceed the costs. That is, when the government is a big purchaser from an industry or the industry is heavily regulated, the industry's stakes are higher regarding government action, part of which the industry is willing to expend on influencing activities. Thus, the members of such industries have more incentive to maintain collaborative lobbying efforts and discourage other members' free-riding through monitoring.

Formally, the first hypothesis is that the four-firm concentration ratio, the share of government purchases, and the regulated industry dummy would

have positive effects on both the decision to lobby and the amount of spending. Due to its long-standing theoretical appeal, these traditional variables are reexamined here. However, using a longitudinal dataset and including other variables that capture complementary hypotheses would provide a more reliable test that could gauge the relative explanatory power of the collective action theory. In addition, by applying the Olsonian theory to lobbying expenditures as well as campaign contributions, the findings could show its relevance for different types of political strategies.

The second hypothesis is concerned with the internal organization of firms, especially the incentive of key decision-makers inside the firms. Whereas the Olsonian theory largely abstracts from any individual firm heterogeneity within industries, it seems plausible that different styles of each firm's management and governance affect their political strategies. That is, firms in the same industry may have different propensities to lobby depending on how keen their key executives are towards lobbying or how effectively the shareholders can constrain executive power. This view is complementary to the Olsonian hypothesis in the sense that it can explain variation within an industry that is not captured by the first hypothesis.

In fact, a number of authors have dealt with this organizational politics perspective of corporate political activities but with mixed findings (e.g., Sabato 1984, Boies 1989, Hart 2001). I propose another test of this sort using the framework of management versus shareholder power. Indeed, if CEOs are the initiators of political strategies, the prediction is that highly paid CEOs are more likely to engage in lobbying if they expect lobbying to be beneficial for their firms so that they can ultimately benefit from pay increases or stock option exercises.[7] Here I use two measures of CEO compensation—total amount as well as share of stock-related payment—both of which are expected to be positively correlated with lobbying.

However, an important consideration is the linkage between the CEOs' incentives and the actual decisions that are reached. That is, even if the key executives want to divert a firm's limited resources into lobbying, they should be able to do so. A corporate-governance index measures how much the management can control a firm's decision-making process in the face of shareholder challenges. Strong shareholder rights can prevent lobbying if it is deemed an inefficient use of resources, but entrenched and powerful management can overrule and direct the resource flow. A higher value of the Index used here represents stronger management and thus is expected to be

---

[7]Gordon et al. (2007) find a positive relationship between the executives' incentive payments and their campaign contributions along these lines.

positively correlated with lobbying.[8]

The third hypothesis is concerned with the firms' need for protection. This is an extended hypothesis originally drawn from the extensive literature on trade protection (e.g., Hillman 1982, El-Agraa 1987, Schuler 1996). The original protection theory says that a high level of import penetration would make the affected industries vulnerable because of increased foreign competition, and such industries would then turn to the government for protection. The logic of this theory can hold more broadly. Namely, it suggests that a firm or an industry that has experienced a decline in the recent past is also at risk, so it may have an incentive to start or increase its spending on lobbying activities in order to seek government protection.

The reason why firms in an expanding industry generally are less likely to lobby is because potential entrants can cause free-riding problems (Grossman and Helpman 1996), or a smaller firm size prevents them from borrowing enough funds for lobbying from the capital market (Brainard and Verdier 1997). I test this hypothesis using two proxies that measure the firm's recent performance as well as import penetration rate of the industry. These proxies are the firm's past 3-year sales growth rate and the 1-year lagged stock returns. If a firm's sales volume or its market value decreases, it is a clear sign of economic hardship, thus such firms are expected to lobby more just like those firms that are adversely affected by foreign imports.

However, there is a qualification to this generalization. That is, it may not necessarily be the mediocre recent performance that triggers more lobbying; it could be that a firm engages in lobbying because it anticipates a hardship in the near future. If this is true, then poor performance in the preceding periods may not be a significant determinant for the level of political engagement. For example, Microsoft, which has been hugely successful, can strengthen its lobbying activities in order to shield itself from likely antitrust complaints. Thus, the effects of past economic performance on the firms' lobbying activities can be ambiguous; however, normally it is expected that declining firms tend to lobby more because of the reasons given above.

Finally, there are important control variables that the literature has identified. The literature consistently finds that the firm size variable has a positive and significant explanatory power in explaining PAC formation and contributions. The logic is that larger firms have more resources available, so that they can afford to hire top lobbyists or have a specialized lobbying team within the firm. Another rationale is that large firms can benefit proportionately more

---

[8]This Index is originally from Investor Responsibility Research Center. See Gompers et al. (2003) for the details of the particular corporate governance index used in this paper.

from the industry's rent-seeking activities. However, the choice of sales revenue as the usual firm size proxy seems rather ad hoc, so I use the number of employees as well as the sales volume to see if the findings are sensitive to the choice of the firm size proxies.

There is also a debate in the literature on whether more diversified companies tend to lobby more. I measure the degree of firm diversification by counting the number of its business segments. On one hand, diversified companies may have more incentive to lobby because they are likely to encounter more opportunities to exploit rents. On the other hand, they may have less incentive to lobby because multiple issues tend to erode the economies of scale and potentially conflict with each other.[9] However, for large diverse companies like the S&P firms, the former effect is likely to dominate the latter, so the expectation is that the firm's size-related variables and diversification are all positively related to the firm's political activities.

The standard technique in this strand of literature is the Heckman selection model. The reason why the selection model is typically used is because the dependent variable is truncated at zero. That is, if firms have different underlying propensities to lobby, then spending is observed only when such proclivity exceeds a certain threshold. It is well known that OLS estimates are biased under this assumption, and the selection model yields consistent estimates by including the hazard rate (lambda) as an additional regressor. It also has the advantage that the estimates are obtained for both participation and expenditure equations. Table 3 presents the estimation results of the selection model using the two-step procedure.[10]

Looking at the table, each column reports the estimation result of the participation and the expenditure equations for the two dependent variables—lobbying expenditures and total campaign contributions. The estimates of the two equations show the effects of each explanatory variable on the formation of and the level of expenditure on lobbying. Note that, while lobbying data is annual, contributions data are aggregated over election cycles, so the number of observations is smaller. The qualitative results presented in this table are robust to various inclusions and exclusions.[11] Interestingly, the hazard rate (lambda) is not significant in the case of campaign contributions, which

---

[9]See, for example, Zardkoohi (1985), Grier et al. (1991), and Brasher and Lowery (2006) for this issue.

[10]Likelihood estimation does not change any qualitative results of the table.

[11]Such exercises do not change any qualitative predictions, but there is an exception. It appears that excluding some variables (e.g., CEO salary, employment size) makes the number of business segments statistically significant in both stages of contributions equations, whereas in Table 3 they are not.

	Lobbying		Contributions	
	participation	expenditure	participation	expenditure
Concentration ratio	0.93**	1.13**	0.86**	0.88**
	(0.17)	(0.18)	(0.22)	(0.27)
Government purchase	2.87**	1.70**	1.90**	2.48**
	(0.44)	(0.32)	(0.53)	(0.46)
Regulated industry	44.01**	87.87**	48.38**	72.71**
	(8.93)	(8.75)	(12.24)	(13.57)
log(1+CEO compensation)	8.02**	14.25**	-1.91	2.46
	(2.59)	(3.01)	(3.57)	(4.32)
CEO incentive payment	0.13	-0.05	0.53	0.14
	(0.10)	(0.05)	(0.33)	(0.07)
Corporate governance	6.57**	-1.94	8.30**	-3.70
	(1.17)	(1.42)	(1.58)	(2.26)
3-year sales growth	-0.42**	-0.59**	0.20	-0.04
	(0.12)	(0.15)	(0.15)	(0.18)
Lagged stock return	-2.59	-1.84	3.73	5.18
	(3.48)	(3.85)	(4.58)	(4.91)
Import share	0.17*	-0.40**	0.16	-0.21
	(0.07)	(0.08)	(0.10)	(0.12)
log(sales)	60.78**	96.77**	53.56**	81.90**
	(5.18)	(7.33)	(6.73)	(10.76)
log(1+number of employees)	-13.35**	-23.23**	2.53	2.93
	(5.01)	(5.38)	(6.58)	(7.91)
Number of business segments	10.52**	18.65**	6.09	5.23
	(2.63)	(2.44)	(3.51)	(3.58)
Lambda		74.96**		54.65
		(23.30)		(37.07)
Sector dummies	yes	yes	yes	yes
Year dummies	yes	yes	yes	yes

Table. 3: Determinants of Lobbying and Contributions. The dependent variable in participation equation is $I(y > 0)$, and it is $\log(1 + y)$ in expenditure equation; N(lobbying)=3125(894 censored), and N(contributions)=1768(506 censored). Standard errors are in the parentheses. All figures are multiplied by 100. **1%, *5% significance level.

suggests that the selection problem is not a significant factor for campaign contributions.

The first three variables represent the industry structure, and I find strong evidence that the collective action problem and the rent-seeking concerns are important determinants of both lobbying and campaign contributions. The four-firm concentration ratio, share of government purchases, and regulated industry dummy are all significantly and positively correlated with the decisions to participate in and spend money on both types of political activities. Thus, firms in a concentrated or regulated industry with government procurement tend to become active lobbyists. This result is somewhat surprising given the mixed findings in the literature, and it may be due to the longer sample horizon and the inclusion of other regressors used in this analysis.

The next three variables show some differences between lobbying and contributing. While stronger management control has a positive and significant effect on the decision to lobby and contribute (but not on the amounts of spending), only lobbying is positively and significantly related to CEO compensation. This implies that, while entrenched management tends to initiate both types of political activities, highly paid CEOs focus more on lobbying than campaign contributions. This suggests that, if the CEOs expect a return from the political investment, it is more likely from lobbying than from making contributions. However, contrary to the hypothesis, the CEOs' stock-related payments do not have a significant effect on the political activities.

The difference between lobbying and contributing also emerges in the next set of variables where declining firms or industries are expected to lobby more for protection. The firm's past 3-year sales growth rate is indeed negatively and significantly related to the decision to lobby and the amount of lobbying, but not to campaign contributions.[12] Import penetration has a positive effect on the decision to lobby, but it has a negative effect on its expenditure.[13] In both equations, import penetration does not have a significant effect on campaign contributions, which again suggests that contributions are not directly aimed at gaining political benefits. However, the 1-year lagged

---

[12]One reason why distressed firms may increase lobbying expenditures rather than campaign contributions could be that lobbying is directed to the Congress and the federal government, which is in a position to deliver political favors, whereas campaign donations are made to the candidates, who may or may not succeed in the election and thus their promises are less certain from the firm's perspective.

[13]An interpretation of the different result in the two equations is that, while high import penetration triggers initial lobbying, increasingly high levels of imports can actually discourage lobbying because firms may give up their protection strategy and instead adapt to the global economy.

stock return has no effect on either type of political activity.

The last set of control variables (i.e., sales, number of employees, and diversification) only partially validates previous findings. That is, the sales volume without doubt has positive and significant effects in all stages of lobbying and contributing. However, when proxied by the size of employment, the firm size is negatively related to lobbying. Why these two different firm-size proxies yield different results is an open question, but it may be that a large number of employees can form an organizational power within the firm that can constrain the management's inefficient lobbying decisions. The number of business segments has significant and positive effects in lobbying equations, but it is not significant for campaign contributions.

5   Returns to Lobbying

This section aims to serve as a preliminary step toward quantifying the financial returns to lobbying. Empirical studies measuring the returns to the lobbying firms, especially in terms of the financial returns, seem scarce, and there are few formal theories that can guide the selection of appropriate empirical counterparts. Although the literature is ripe with research on how lobbying changes voting behavior in the legislature, how such changes in the political arena feed back into the lobbying firm's performance has yet to undergo extensive empirical scrutiny. As this paper was being written, Chen et al. (2008) were independently studying the effects of lobbying on a firm's accounting profits as well as stock returns.[14]

The approach of this section is of an exploratory nature, which sheds some light on this issue. The main hypothesis is that lobbying has a positive effect on a firm's financial performance. The most commonly used measure of firm performance is its stock returns. Hence, I use the firms' equity returns as the dependent variable and the lobbying expenditures as the main explanatory variable of interest, together with a set of control variables. The premise here is that a firm would make an investment only if that investment yields higher returns than alternative investment opportunities. Thus, an investment in lobbying ought to be associated with positive returns; otherwise, it would be a puzzle why firms would make such investments.

---

[14]The difference is that they find significant effects of lobbying on stock returns without instrumenting the lobbying expenditures. However, they also show the positive returns to lobbying by comparing the portfolio returns of firms with high lobbying intensities versus non-lobbying firms.

To begin with, pooled OLS regressions result in insignificant correlation between the amount of lobbying and the firms' equity returns, which is a robust finding for various OLS specifications. Given that equity prices follow something like a random walk, it seems difficult indeed to show that lobbying can explain some of the stock price movement. OLS estimates, however, suffer from such problems as attenuation bias and simultaneity bias, so the insignificance result might be misleading. Attenuation bias is something to worry about in this dataset if the firms' lobbying expenditures were not reported accurately. This could cause a downward bias in the OLS estimates, which could make the coefficients spuriously insignificant.

More importantly, a misspecification may arise due to the endogeneity problem in the following sense. If more profitable firms tend to lobby more, then lobbying expenditures is an endogenous variable (i.e., lobbying is correlated with unobserved heterogeneity), and the coefficients cannot be consistently estimated by OLS. In such cases, an instrumental variable technique would yield consistent estimates through plausible exclusion restrictions. Thus, I use two instruments for lobbying expenditures. The first instrument is the average lobbying expenditures of all the other firms in the same sector excluding each firm one at a time. This is a valid instrument if stock returns are not highly correlated across firms, which seems reasonable for the sample firms.

The second instrument is a set of campaign contributions measures: contributions to the Democratic party, its interaction term with the Clinton administration dummy, contributions to the Republican party, and its interaction term with the Bush administration dummy. This choice of instruments is based on the recent theoretical development of the complementary roles of multiple political strategies (e.g., Hillman and Hitt 1999). Schuler et al. (2002) show that firms tend to combine campaign contributions and lobbying to gain access to politicians. One such view on the complementarity between the two primary political tactics is that contributions buy access so that lobbying can influence the policies.

That is, the access-influence hypothesis says that contributing and lobbying are complementary activities in that contributions can only buy access to the legislator's door and lobbying is aimed at bringing in policy changes (e.g., Wright 1990, Austen-Smith 1995, Tripathi et al. 2002). Politicians have limited time to meet lobbyists, so the lobbyists might be able to signal the importance of their case by making campaign contributions. Humphries (1991) and Langbein (1986) provide some empirical evidence that contributions are indeed used to buy more contacts with politicians. As Thomas Downey (D-

New York) said, "Money doesn't buy . . . a position. But it will definitely buy you some access so you can make your case."

If indeed lobbying is ultimately responsible for delivering information to politicians and benefiting in exchange from policy concessions, then contributions are purely access oriented. That is, contributions do not have a direct effect on the firm's performance, but only make the firm more eligible for lobbying. In this way, contributions may not be correlated with the error term in the equation for the firm's stock market performance. This fits well into the instrument selection guide—an instrument is a variable that in loose terms affects the endogenous variable but does not directly affect the dependent variable other than through its effect on the endogenous variable in consideration.[15]

Another important issue in the empirical specification is which measure of equity returns should be used as the dependent variable. This is related to the nature of the political returns, and it would affect the interpretation of the results in a subtle way. Individual firm returns are the most straightforward benchmark, but the estimation would then answer how lobbying pays off to individual firms without any regard to other firms in the same or different industries. That is, a positive coefficient on lobbying would mean that lobbying increases the firms' equity returns in a noncompetitive way—all firms in the market can benefit from lobbying, perhaps at the expense of the smaller firms or the consumers.

On the other hand, individual firms' equity returns can be adjusted relative to the market or industry averages. I therefore consider two additional measures. One is the individual firm's returns minus the S&P 500 Index returns, and the other is the individual firm's returns minus industry portfolio returns.[16] In the former case, a positive coefficient on lobbying would mean that a lobbying firm can outperform the average firm in the entire market. Compared to an unadjusted benchmark, this case introduces the possibility of competition for government resources between different industries in the market. That is, lobbying can benefit an industry at the expense of another, although it may still benefit all firms in the same industry.

In the latter case, each firm's returns are adjusted relative to the industry

---

[15] It is legitimate to still question why this is a good instrument. However, given that there is no obvious alternative or quasi-experiments in the real world, the benefit here seems to outweigh the cost.

[16] In this section, industry refers to the French and Fama's 49-industry classification. I match the sample firms each year with one of the 49 industry portfolios created by French and Fama. The 49 industry value-weighted portfolio returns are then subtracted from the individual firm returns.

	GLS			EC2SLS		
	ret	ret-mkt	ret-ind	ret	ret-mkt	ret-ind
log(1+lobby)	.004587	.002961	.002316	.025365**	.024233**	.013131*
	(.004380)	(.004257)	(.003684)	(.007853)	(.007637)	(.006580)
four-firm concentration	-.000914	-.000471	.000064	-.001117	-.000679	-.000042
	(.000568)	(.000552)	(.000478)	(.000575)	(.000560)	(.000482)
corporate governance	-.015999**	-.012135**	-.013433**	-.017845**	-.014024**	-.014394**
	(.004444)	(.004319)	(.003737)	(.004507)	(.004384)	(.003777)
log(sales)	-.031774**	-.023311*	-.040840**	-.059235**	-.051424**	-.055134**
	(.010959)	(.010652)	(.009217)	(.013976)	(.013593)	(.011712)

Table. 4: Returns to Lobbying. Standard errors are in the parentheses. N=1883. **1%, *5% significance level. See the Appendix for the first-stage estimation.

portfolio to which it belongs. This case can address the strongest competition element among the three dependent variables considered here because a positive coefficient on lobbying would mean that a lobbying firm can outperform the average peer in the same industry. Such a view on lobbying as a private good or arms race is consistent with Lichtenberg (1989) and Gray and Lowery (1997), who argue that, rather than being an industry public good, lobbying can yield firm-specific returns about which other firms in the same industry are indifferent or which they may oppose. Thus, the three dependent variables can shed light on the public versus private nature of lobbying.

Since lobbying efforts continue over the Congressional sessions and the goals of the lobbyists are most likely to be achieved before the elections, I use the election-year samples only (i.e., 1998, 2000, 2002, 2004) in the following analysis.[17] As a first step of the regression with a panel data model, Generalized Least Squares estimates are presented in the first three columns of Table 4 for later comparison. Then I employ Baltagi's (1981) Error Components Two-Stage Least Squares model (EC2SLS) to control for the endogeneity of lobbying expenditures by using an IV method as explained above. I also include sales, corporate governance, and concentration as control variables.[18]

Table 4 shows the GLS and EC2SLS estimates at the same time in which the three different dependent variables are used in each column, that is,

---

[17]Using both on- and off-election year samples indeed yields weaker returns to lobbying.

[18]It is well documented that smaller firms tend to have higher equity returns (e.g., Banz 1981). Recent findings also suggest that corporate governance and concentration ratios may also affect equity returns (Gompers et al. 2003, Hou and Robinson 2006).

unadjusted, market-adjusted, and industry-adjusted stock returns. The GLS estimates of the coefficients on lobbying are all positive but insignificant. The coefficients are highest for unadjusted returns and lowest for industry-adjusted returns. Thus, it appears that returns to lobbying are the weakest in the sense that they would realize private benefits at the expense of the rivals in the same industry. Rather, the payoffs seem to come from mainly distinguishing one industry from another or promoting some common business interest as a whole.

The IV estimates show a similar pattern, but interestingly the coefficient estimate increases fivefold in magnitude for unadjusted returns, eightfold for market-adjusted returns, and sixfold for industry-adjusted returns, all of which now become significant. These are huge jumps and may uncover the financial returns to lobbying that OLS estimates are unable to capture because of the reverse causality problem discussed above. The estimates are quasi-elasticities of lobbying expenditures on equity returns. For example, it means that doubling expenditures on lobbying can increase the firm's equity returns by 2.5 percent unadjusted, 2.4 percent relative to the market, and 1.3 percent relative to the industry.

Sometimes it is useful to test whether a theoretically endogenous variable is statistically also endogenous. The Hausman test provides a well-known test of the exogeneity of the variable, but this test does not directly apply to EC2SLS. Thus, I instead use regular IV estimation without error components and test the null hypothesis of exogeneity of the lobbying expenditure variable. This null is rejected in the market-adjusted returns case, but the null is not rejected in the other two cases.[19] This suggests that the instruments used here may not be perfect and caution must be exercised in using these estimates. In other words, both GLS and EC2SLS results should be considered, and the finding appears inconclusive.

6   Conclusion

This paper examines the determinants of lobbying expenditures and campaign contributions and presents some preliminary findings on the financial returns to lobbying. Firms in concentrated and regulated industries tend to engage more in both types of political activities. Highly paid CEOs and a declining sales trend additionally seem to facilitate lobbying, but not campaign contributions. This suggests that lobbying is more responsible for gaining political

---

[19]p-value (market-adj.)=0.01, p-value (unadj.)=0.16, and p-value (industry-adj.)=0.28.

favors than are campaign contributions. In terms of equity returns, lobbying firms tend to outperform the market average and, to a lesser degree, the average peer in the same industry. This suggests that lobbying has both public and private good nature, but the former effect is larger than the latter.

7   Appendix

7.1   Basic Panel Dataset (1998-2004)

Concentration. The four-firm concentration ratio of the assigned industry as discussed in the text (Census Bureau).

Regulation. An indicator variable for 13 regulated industries out of the 49 French-Fama industry classification (expert opinion).

Government purchase. The share of the government consumption expenditures and gross investment in the total industry output (Census Bureau).

CEO compensation. The sum of salary, bonus, and all other, inflation-adjusted, *in log* (Compustat and SEC).

CEO incentive pay. The share of the sum of restricted stock, stock option, and long-term incentive payouts in the total salary and bonus (Compustat).

Governance. Corporate Governance Index, where a larger value indicates stronger management (Andrew Metrick).

Sale growth. Last three year's least squares sales growth rate, using quarterly or monthly data (Compustat).

Import share. The ratio of import value to the total industry output (Bureau of Economic Analysis)

Sales. Net sales, inflation-adjusted, *in log* (Compustat).

Employees. Number of employees, *in log* (Compustat).

Business Segments. Number of product/service lines, operation and geographic segments (Compustat and Hoover's).

Lobby. Annual lobbying expenditures, inflation-adjusted, *in logs* (U.S. Senate).

PAC contributions. Contributions from a PAC to federal candidates over two-year election cycles (1997–2004), inflation-adjusted, *in logs* (Center for Responsive Politics).

Soft money. Soft money contributions from a company, its subsidiaries, and its affiliated groups and individuals, inflation-adjusted, *in logs* (Center for Responsive Politics).

Individual returns. Firm-level annual stock returns, monthly-compounded stock returns over a year (CRSP).

Industry returns. Annual value-weighted industry portfolio returns of the 49 industry portfolios (Kenneth French).

Market returns. S&P 500 Index returns (Compustat)

7.2 Notes on Data Collection

Although the Lobbying Disclosure Act provides a useful dataset, the data are not without shortcomings. It applies only to the federal level, and disclosure at the state level is subject to varying state laws. Focusing on federal lobbying may be sensible for the sample firms because they operate at a national level. Some critics say that the disclosure is not properly audited, and I do not use 1996 and 1997 data partly because the initial compliance rate was not stable until the 1998 Technical Amendment. Occasionally, there are a few missing files, which seems to be due to a change in personnel. Since the dataset is relatively small, I chose to fill in 14 missing cases when it was obvious that the amount must be the same as the previous six months' spending.

A firm can just indicate that it has spent "less than $10,000." I recorded it as $0 when the "no lobbying activity" box was checked or no lobbying issues were reported, otherwise, I recorded it as $10,000. Most sample firms file their disclosure as a registrant, which includes payments to contract lobbyists. However, some firms do not file themselves, in which case I added up the income of all the contract lobbying firms to estimate the firm's expenditure. Company profiles such as name changes and mergers must be followed up when searching the disclosure files, which is also the case with campaign contributions. The general rule is to trace the corporation that matches the share identification number of the S&P Index.

7.3 First-stage Estimation

	coefficient	std. err.
contributions to Dem (within)	0.041988	0.039859
contributions to Rep (within)	-0.002149	0.033548
contributions to Dem x Clinton (within)	0.023848	0.041642
contributions to Rep x Bush (within)	0.015144	0.037729
lobby_all_others (within)	0.987487*	0.404901
contributions to Dem (between)	0.275051**	0.064777
contributions to Rep (between)	0.065031	0.044723
contributions to Dem x Clinton (between)	-0.078070	0.101763
contributions to Rep x Bush (between)	0.083406	0.092450
lobby_all_others (between)	0.378011**	0.114259
four-firm concentration (within)	0.021026	0.014740
corporate governance (within)	-0.018328	0.073852
sales (within)	0.648202**	0.176770
four-firm concentration (between)	0.006720**	0.002536
corporate governance (between)	0.016072	0.020641
sales (between)	0.560378**	0.051194
χ^2	2010**	

Table. 5: First-stage Estimation of EC2SLS in Table 4.

References

[1] Austen-Smith, David (1995). "Campaign Contributions and Access." *American Political Science Review* 89: 566–581.

[2] Baltagi, Badi (1981). "Simultaneous Equations with Error Components." *Journal of Econometrics* 17: 189–200.

[3] Banz, Rolf (1981). "The Relationship between Return and Market Value of Common Stocks." *Journal of Financial Economics* 9: 3–18.

[4] Baron, David (2002). *Business and Its Environment.* 3rd ed. Prentice-Hall.

[5] Boies, John (1989). "Money, Business, and the State: Material Interests, Fortune 500 Companies, and the Size of PACs." *American Sociological Review* 54: 821–33.

[6] Bonardi, Jean-Philippe, Amy Hillman, and Gerald Keim (2005). "The Attractiveness of Political Markets: Implication for Firm Strategies." *Academy of Management Review* 30: 397–413.

[7] ———, Guy Holburn, and Richard Vanden Bergh (2006). "Nonmarket Performance: Evidence from U.S. Electric Utilities." *Academy of Management Journal* 49: 1209–1228.

[8] Brainard, Lael, and Thierry Verdier (1997). "The Political Economy of Declining Industries: Senescent Industry Collapse Revisited." *Journal of International Economics* 42: 221–237.

[9] Brasher, Holly, and David Lowery (2006). "The Corporate Context of Lobbying Activity." *Business and Politics* Vol. 8: Iss. 1, Article 1.

[10] Chen, Hui, David Parsley, and Ya-Wen Yang (2008). "Corporate Lobbying and Financial Performance." mimeo.

[11] de Figueiredo, John, and Brian Silverman (2006). "Academic Earmarks and the Returns to Lobbying." *Journal of Law and Economics* 49: 597–625.

[12] de Figueiredo, John, and Emerson Tiller (2001). "The Structure and Conduct of Corporate Lobbying: An Empirical Analysis of Corporate Lobbying at the Federal Communications Commission." *Journal of Economics and Management Strategy* 10: 91–122.

[13] Drope, Jeffrey, and Wendy Hansen (2006). "Does Firm Size Matter? Analysing Business Lobbying in the United States." *Business and Politics* Vol. 8: Iss. 2, Article 4.

[14] El-Agraa, Ali (1987). *Protection, Cooperation, Development and Integration.* Macmillan.

[15] Fisman, Raymond (2001). "Estimating the Value of Political Connections." *American Economic Review* 91: 1095–1102.

[16] Goldberg, Pinelopi, and Giovanni Maggi (1999). "Protection for Sale: An Empirical Investigation." *American Economic Review* 89: 1135–1155.

[17] Gompers, Paul, Joy Ishii, and Andrew Metrick (2003). "Corporate Governance and Equity Prices." *Quarterly Journal of Economics* 118: 107–155.

[18] Gordon, Sanford and Catherine Hafer (2005). "Flexing Muscle: Corporate Political Expenditures as Signals to the Bureaucracy." *American Political Science Review*, Volume 99: 245–261.

[19] ———, ———, and Dimitri Landa (2007). "Consumption or Investment? On Motivations for Political Giving." *Journal of Politics* 69: 1057–1072.

[20] Gray, Virginia, and David Lowery (1997). "Reconceptualizing PAC Formation: It's Not a Collective Action Problem and It May Be an Arms Race." *American Politics Quarterly* 25: 319–46.

[21] Grier, Kevin, Michael Munger, and Brian Roberts (1991). "The Industrial Organization of Corporate Political Participation." *Southern Economic Journal* 57: 727–738.

[22] ———, ———, and ——— (1994). "The Determinants of Industry Political Activity, 1978-1986." *American Political Science Review* 88: 911–926

[23] Grossman, Gene, and Elhanan Helpman (1996). "Rent Dissipation, Free Riding, and Trade Policy." *European Economic Review* 40: 795–803.

[24] Hansen, Wendy, and Neil Mitchell (2000). "Disaggregating and Explaining Corporate Political Activity: Domestic and Foreign Corporations in National Politics." *American Political Science Review* 94: 891–903.

[25] ———, ———, and Jeffrey Drope (2005). "The Logic of Private and Collective Action." *American Journal of Political Science* 49: 150–167.

[26] Hart, David (2001). "Why Do Some Firms Give? Why Do Some Give a Lot?: High-Tech PACs, 1977–1996." *Journal of Politics* 63: 1230–1249.

[27] Hillman, Amy, and Michael Hitt (1999). "Corporate Political Strategy Formulation: A Model of Approach, Participation, and Strategy Decisions." *Academy of Management Review* 24: 825–842.

[28] ———, Gerald Keim, and Douglas Schuler (2004). "Corporate Political Activity: A Review and Research Agenda." *Journal of Management* 30: 837–857.

[29] Hillman, Arye (1982). "Declining Industries and Political-Support Protectionist Motives." *American Economic Review* 72: 1180–1187.

[30] Hou, Kewei, and David Robinson (2006). "Industry Concentration and Average Stock Returns." *Journal of Finance* 61: 1927–1956.

[31] Humphries, Craig (1991). "Corporations, PACs and the Strategic Link Between Contributions and Lobbying Activities." *Political Research Quarterly* 44: 353–372.

[32] Jayachandran, Seema (2006). "The Jeffords Effect." *Journal of Law and Economics* 49: 397–425.

[33] Knight, Brian (2006). "Are Policy Platforms Capitalized into Equity Prices: Evidence from Equity Markets during the Bush/Gore 2000 Presidential Election." *Journal of Public Economics* 90: 751–773.

[34] Kroszner, Randall, and Thomas Stratmann (1998). "Interest-Group Competition and the Organization of Congress: Theory and Evidence from Financial Services' Political Action Committees." *American Economic Review* 88: 1163–1187.

[35] Langbein, Laura (1986). "Money and Access: Some Empirical Evidence." *Journal of Politics* 48: 1052–1062.

[36] Milyo, Jeffrey, David Primo, and Timothy Groseclsoe (2000). "Corporate PAC Campaign Contributions in Perspective." *Business and Politics* Vol. 2: Iss. 1, Article 5.

[37] Olson, Mancur (1965). *The Logic of Collective Action*. Harvard University Press.

[38] Potters, Jan, and Randolph Sloof (1996). "Interest Groups: A Survey of Empirical Models That Try to Assess Their Influence." *European Journal of Political Economy* 12: 403–442.

[39] Sabato, Larry (1984). *PAC Power: Inside the World of Political Action Committees*. Norton.

[40] Schuler, Douglas (1996). "Corporate Political Strategy and Foreign Competition: The Case of the Steel Industry." *Academy of Management Journal* 39: 720–737.

[41] ———, Kathleen Rehbein, and Roxy Cramer (2002). "Pursuing Strategic Advantage through Political Means: A Multivariate Approach." *Academy of Management Journal* 45: 659–672.

[42] Tripathi, Micky, Steven Ansolabehere, and James Snyder (2002). "Are PAC Contributions and Lobbying Linked? New Evidence from the 1995 Lobby Disclosure Act." *Business and Politics* Vol. 4: Iss. 2, Article 2.

[43] Tullock, Gordon (1967). "The Welfare Costs of Tariffs, Monopolies, and Theft." *Western Economic Journal* 5: 224–232.

[44] Wright, John (1990). "Contributions, Lobbying, and Committee Voting in the U.S. House of Representatives." *American Political Science Review* 84: 417–438.

[45] Zardkoohi, Asghar (1985). "On the Political Participation of the Firm in the Electoral Process." *Southern Economic Journal* 51: 804–817.