THE VALUE OF CONNECTIONS IN LOBBYING

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Abstract. Using unique data on lobbying contacts from reports mandated by the Foreign Agent Registration Act, we study how access to politicians in the United States is allocated in the lobbying market. We document that politicians grant a disproportionately large degree of access to the lobbyists who have prior connections to them as ex-staffers or ex-members of Congress, in terms of the likelihood and intensity of lobbying contacts. We show that lobbyists receive a larger monetary premium for contacting politicians with whom they have connections compared to those without. Based on a revealed-preference framework, we find evidence that connections increase the value of communications with a politician when the connected politician is in a position of the leadership in Congress or serves on committees that have jurisdiction over the issue being lobbied. However, we do not find evidence that the electoral circumstances of a politician affect the extent to which connections matter during an election year.

1. Introduction

Access to policymakers is one of the scarcest and most important resources sought after during the lobbying process (Langbein, 1986; Hansen, 1991; Austen-Smith, 1995; Lohmann, 1995; Wright, 1996; Austen-Smith, 1998; Cotton, 2012; Powell and Grimmer, 2016). Scholars have relied on interviews with legislators and lobbyists to acquire information on lobbying contacts (Wright, 1990; Hojnacki and Kimball, 2001; Hall and

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Houweling, 2012). Alternatively, they have indirectly measured lobbyists' political access using revolving-door career history or campaign contributions (Blanes i Vidal, Draca and Fons-Rosen, 2012; Bertrand, Bombardini and Trebbi, 2014). However, there are shortcomings to measuring access using surveys such as non-randomness in response rates, and surveys as well as the other existing methods cannot systematically measure the intensity of lobbying contacts (de Figueiredo and Richter, 2014). As a result, the lack of comprehensive information on lobbying contacts has been one of the significant barriers to a better understanding of how politicians allocate access.

We address this issue by utilizing lobbying filings mandated by the Foreign Agent Registration Act of 1938 (FARA). Most empirical studies in the United States on lobbying are based on domestic lobbying reports under the Lobbying Disclosure Act of 1995, which does not include information on lobbying contacts. FARA, on the other hand, requires that lobbyists representing foreign entities submit a semi-annual report detailing all lobbying contacts, including information on who, when, why, and how those contacts were made. Because many prominent lobbying firms representing domestic clients also represent foreign entities under FARA, the conclusions of our study could have general implications for the US lobbying industry. To our knowledge, this is the most comprehensive empirical analysis of the market for political access.

Using over 20,000 lobbying contact records made between 2007 through 2010, we find that politicians disproportionately grant access to lobbyists who are their ex-staffers or who are ex-colleagues of the same political party in Congress. Not only are these lobbyists more likely to contact their connected politicians, but they also tend to have more frequent contacts with the politicians directly, as opposed to with their staffers. Put differently, political access is not a binary state (e.g., whether a congressman picks up a phone or not), but rather a continuous one (e.g., how many minutes that congressman spends on phone calls and follow-up calls), concentrated on those with connections. These observed patterns are consistent with politicians benefiting more from communicating with lobbyists with whom they are already connected than with other lobbyists.

We also find that lobbying clients are willing to pay a larger premium for contacting the connected politicians than for the non-connected ones. Our results indicate that contacting one more member of Congress is associated with a 0.8 to 1 percent increase in the lobbying fee, but if that additional member is connected to a lobbyist in the firm, then the lobbying fee increase is 5.4 to 5.6 percent. The difference in the lobbying fees associated with contacting a politician with and without connections,

4.6 percent, is both statistically significant and large in its extent. Given that an average semiannual lobbying fee is $279,335, this 4.6 percent premium amounts to $12,849 every six months.

This finding implies that a large part of the lobbyists' role is relation-specific: the effectiveness of a lobbyist's contact varies significantly by his relationship with the contacted politician. Well-connected lobbyists may have more access to politicians than other lobbyists, but they tend to have better communication skills or expertise on lobbying issues and the legislative process. As a result, we cannot separately identify the value of connections from that of other attributes of lobbyists. However, using actual contact data, we show that the market premiums of lobbyists' observed connections in contacting a politician depend on the relationship with the politician. This is consistent with Blanes i Vidal, Draca and Fons-Rosen (2012), who find a substantial drop in lobbying revenues for staffer-turned lobbyists when their previous employers leave Congress. Whereas they show an extensive margin of having connections to an additional politician, we show an intensive margin in terms of *utilizing* the connections in contacting a politician on behalf of a lobbying client.

Note that making contacts with or without connections is endogenously determined in the market. To understand how changes in the demand for and supply of political access affect the value of connections while explicitly accounting for this endogeneity, we introduce a model of a two-sided market between foreign governments and lobbying firms, and estimate the parameters of the total value function of a lobbying contact. Unlike the literature on estimating the returns to lobbying (de Figueiredo and Silverman, 2006; Kang, 2016; Goldstein and You, 2017) and the literature on estimating the value of political connections (Fisman, 2001; Khawaja and Mian, 2005; Faccio, 2006; Ferguson and Voth, 2008), our approach cannot back out the dollar value of lobbying contacts to clients. We can, however, infer how lobbying contacts are valued by the client and the firm from their choices.

We find that having more lobbyists with connections increases the total value of a firm's contacts, especially when these connections are to those in the Congressional leadership or any of the committees that have jurisdiction over foreign relations or budget/appropriations. This value is partly reflected in the associated lobbying fees as well, in that contacting a connected politician in the Congressional leadership or relevant committees is associated with a 12–13 percent increase in the fee. These findings are potentially related to the distribution of power in Congress, where these

members have a disproportionately influential role in setting the agenda and promoting legislation (Shepsle and Weingast, 1987; Cox and McCubbins, 2005; Knight, 2005).

Our estimation results do not indicate that the electoral circumstances of a politician affect how connections matter in contacts during an election year. This finding is interesting given lobbyists' role in "bundling" campaign contributions and funneling them towards campaigns. According to the *Washington Post*, for example, there are nearly 160 registered lobbyists who have raised at least $9 million for political parties and federal candidates in 2009, one year before the 2010 election year when an average House race cost about $2.5 million in total.[1] Our results suggest that electoral support through fundraising may not be a driving mechanism through which connections are valued in the lobbying industry.

The remainder of the paper proceeds as follows. We first provide background on FARA and describe the data in Section 2. Section 3 shows key patterns in the data regarding the relationship between contacts, connections, and lobbying fees. In Section 4 we describe our model, and the estimates of the model are presented in Section 5. We conclude in Section 6.

2. Data

2.1. **Foreign Agent Registration Act.** The Foreign Agent Registration Act (FARA) regulates lobbying activities of foreign entities in the United States. FARA was enacted in 1938 in an attempt to prevent the influence of Nazi propaganda on US public opinion (Waters, 1988). Under FARA, any person who represents the interests of a foreign entity or principal by "engaging in political activities, acting as public relations counsel, soliciting money for the foreign principal, dispensing contributions, and representing the principal before any agency or official of the government" is defined as a "foreign agent" (Atieh, 2010). These foreign agents are mandated to be registered and to submit semi-annual lobbying disclosure reports.

We study the lobbying activities in the FARA reports, as opposed to the more recently-enacted Lobbying Disclosure Act (LDA) reports, for the following two reasons. First, LDA requires that lobbyists disclose the names of the government bodies they contact, but it does not require them to specify any further details about their lobbying contacts. Unlike the LDA, the reports under FARA list detailed information on lobbying contacts. Each contact record specifies (i) the name of the contacted

[1]See a *Washington Post* article on March 31, 2010, "New Records Show Some Lobbyists are Top Fundraisers for Political Candidates."

individual, (ii) the method by which the individual was contacted (phone call, email, in-person meeting, etc.), and (iii) the issues discussed with the contact. Second, noncompliance–such as missing reports or false statements on reports–is punished more stringently by FARA than the LDA. While a violation of the LDA is considered a civil offense, violations of FARA are criminal. The penalties for noncompliance for the latter are up to five years' imprisonment and a $5,000-$10,000 fine (Atieh, 2010).

The Justice Department has made the FARA reports public online as image files, and ProPublica and the Sunlight Foundation have transcribed some of the lobbying reports into text files. We transcribed additional lobbying reports to expand the period of study.[2] In doing so, we manually extracted all contact records from the image files of the FARA reports, and for each contact, we identified the contacted individuals and the lobbying issue based on the written description of the contact.

2.2. **Legislative Lobbying by Foreign Governments.** We study the lobbying activities of foreign governments, as opposed to foreign businesses.[3] We focus on lobbying firms' activities around legislative issues during 2007 through 2010, covering two Congresses (the 110th and the 111th Congresses).[4] To do so, we analyze all lobbying reports that include congressional contacts via phone calls or in-person meetings.[5] In these reports, we identify 20,606 contact records between lobbying firms and others, consisting of contacts to members of Congress (73.5 percent), the executive branches of the federal government (18.8 percent), the media (2.9 percent), and others (4.8 percent) such as think tanks, labor unions, firms, universities, and non-profit organizations. We do not consider emails or social encounters, which are most likely to be

[2]The lobbying reports can be found at `http://www.fara.gov`, and the FARA data project by ProPublica and the Sunlight Foundation is currently discontinued. Initially, they transcribed the foreign lobbying reports from August 2007 through December 2010. We complemented their dataset by adding all reports submitted between January 2007 and July 2007 and some missing reports in the ProPublica-Sunlight Foundation dataset. We identified these missing reports by comparing them with the FARA website reports.

[3]After Congress passed the LDA in 1995, foreign businesses that have subsidiaries in the US have been allowed to report their lobbying activities via the LDA, instead of through FARA. As a result, most of the foreign entities that submitted reports under FARA since 1995 are foreign governments.

[4]Although some foreign governments hire in-house lobbyists, their activities seem relatively limited regarding lobbying contacts. In our dataset, 94.3 percent of lobbying contacts were made by lobbying firms, while the remainder were by in-house lobbyists.

[5]In our study, we focus on legislative lobbying; therefore, lobbying firms exclusively focused on media and/or executive contacts or legal advice are not included in the analysis.

Table 1. Foreign Governments

Variables	Hired lobbying firms		Did not hire lobbying firms	
	Mean	SD	Mean	SD
Lobbying spending ($million)	2.57	3.52	0	-
Number of firms hired	3.03	2.65	0	-
Number of members contacted	54.36	75.29	0	-
Lobbying issues[a]				
Security/military	0.74	-	-	-
Trade/budget	0.82	-	-	-
Administrative/other	0.90	-	-	-
NYTimes articles on foreign relations[b]	207	355	96	173
2005 Polity IV score[c]	3.04	6.62	3.87	6.49
2005 Per capita GDP ($thousand)	8.41	12.6	10.44	16.8
2005 USAID recipient	0.74	-	0.69	-

Notes: We restrict our attention to the 162 countries for which 2005 GDP information is available. Within those countries, there are 70 countries that hired a lobbying firm to contact members of Congress and 92 countries with no congressional lobbying records, based on the lobbying filings of 2007 through 2010. a. We categorize lobbying issues into security, trade/budget, and administrative/other based on the written description of lobbying issues for each contact. b. We count the number of all news articles on the international relations of a given country in the *New York Times* per year, based on the LexisNexis database. c. A Polity IV score of 10 reflects a perfect democracy and a score of -10 reflects a perfect autocracy (Marshall, Jaggers and Gurr, 2010).

one-sided, as contacts. In total, there are 676 reports of lobbying activities reported by 98 lobbying firms on behalf of 70 foreign governments in the data.[6]

As can be seen in Table 1, a foreign government that hired a lobbying firm to contact members of Congress during the period of study spent on average $2.57 million over the four years, or roughly over half a million dollars per year. This amount does not include the fees to other lobbying firms for legal advices, exclusively media or executive lobbying or the in-house lobbying expenditures.[7] On average, the foreign governments which engaged in legislative lobbying hired 3 lobbying firms to contact 54 members of Congress during the period of study. Frequent lobbying subjects include security or military-related issues such as US military deployment, arms sales, and nuclear nonproliferation; trade issues, especially regarding a variety of tariff and trade

[6]Lobbying firms submit one semi-annual report for all foreign clients. The number of physical reports for our sample is 427, but by dividing the reports at the client level, we end up with 676 reports.
[7]The foreign governments in our dataset paid their lobbying firms $184 million in total during the four years from 2007 through 2010. The total lobbying expenditure by all foreign governments during the same period, including expenditures by in-house lobbyists, is $821.5 million.

pacts; and foreign aid. The information on the lobbying issues was retrieved from the descriptions on each lobbying contact in the reports.[8]

Compared to the foreign countries whose governments did not hire a lobbyist to contact members of Congress, the governments in our dataset tended to receive more US media attention as measured by the number of *New York Times* articles on international relations, have a lower 2005 Polity IV score (or be less democratic), exhibit a lower per capita GDP, and be a US foreign aid recipient.

2.3. **Lobbying Firms and Connections.** Among the 93 lobbying firms in our data, 61 firms represented domestic clients in addition to their foreign clients (i.e., they were registered by both the LDA and FARA). Table 2 shows that compared to firms registered by FARA only, these firms tended to reap larger yearly revenues, have more foreign clients, contact a larger set of politicians, employ more lobbyists in number, and employ more high-profile lobbyists, such as former members of Congress or those who worked in the legislative and/or executive branches. Out of 27 domestic lobbying firms that reaped at least $10 million per year during the period in question, 12 had at least one foreign government as a client. This suggests that the conclusions of our study could have general implications for the US lobbying industry.

We define a lobbying firm as having *connections* to a politician if one of the lobbyists in the firm satisfies either of the following conditions: (i) he/she was a staffer of the politician; or (ii) he/she was a same-party colleague of that politician in Congress *and* he/she made campaign contributions to that politician. Our definition can be considered an extension of its counterpart in Blanes i Vidal, Draca and Fons-Rosen (2012). In that paper, the authors focused on condition (i) of our definition only. Condition (ii) of the definition is necessary to account for the data feature in our paper that out of 1,013 lobbyists who appeared in the FARA reports that we studied, 51 had served Congress as a member before becoming a lobbyist. Because the reelection rate is high in Congress, a significant number of the previous same-party colleagues of some of these politician-turned-lobbyists were still in Congress during the period of study. For example, some lobbyists in our data are same-party ex-colleagues of as many as 298 of the sitting members of Congress. To focus our analysis, we restrict the

[8]The descriptions of contact issues was not always very specific. Furthermore, some contacts were related to dealing with the invitations and protocols of banquets and country visits.

Table 2. Lobbying Firms Representing Foreign Governments

Variables	LDA & FARA		FARA Only	
	Mean	SD	Mean	SD
Annual revenue[a] ($)	739,966	933,901	597,851	864,244
Number of government clients[a]	2.72	2.48	1.43	0.87
Number of contacted members	53.09	64.46	38.15	44.74
Number of connected members[b]	6.43	14.87	0.69	1.51
FARA registration year	2002.3	8.87	2004.9	5.51
Number of lobbyists				
All	9.48	8.30	3.75	4.24
With identified career history[c]	4.44	3.78	1.56	2.14
Former member of Congress	0.51	0.94	0.21	0.55
Executive branch experience	1.54	1.46	0.44	0.79
Congress experience	2.39	2.35	0.86	1.55

Notes: In our data, there are 61 lobbying firms that registered in both lobbying acts and 32 firms that registered in FARA only. As for the variables related to lobbyists (number of connected members and number of lobbyists), the summary statistics are over the average value of each variable across multiple filings for each lobbying firm. a. For these variables, we consider the lobbying contracts considered in this paper only. The total annual revenues and the total number of foreign government clients are larger than the counterparts considered here. b. Connections are measured by previous work relationships in Congress as a member or a staffer. c. For each lobbyist hired by a firm, we match the career history records available at www.lobbyists.info.

definition of connections for these lobbyists by using campaign contributions.[9] Lobbyists, like other individual donors, follow partisan lines when they donate (Drutman, 2010), and interviews with lobbyists indicate that they give campaign contributions to politicians whom they have known for a long time or whom they consider a "friend" (Leech, 2013).[10]

To retrieve the information on the career history of lobbyists, we rely on data from Lobbyists.info, which is maintained by Columbia Books and Information Services.

[9]We considered two alternative methods besides campaign contributions to define connections between a politician-turned-lobbyist and a current member of Congress: committee membership and bill co-sponsorship. These alternatives were not appropriate for our data because some of these 51 politician-turned-lobbyists had taken leadership positions: Dick Gephardt (House Majority Leader in 1989–1995 and House Minority Leader in 1995-2003), Dick Armey (House Majority Leader in 1995–2003), and Dennis Hastert (House Speaker, 1999-2007) to name a few. Those in the leadership rarely (co)sponsor bills (Volden and Wiseman, 2014) and they are, by definition, not in a committee.
[10]The average amount that all employees of a lobbying firm collectively contributed to a member of the 111th Congress during the period of our study, conditional on nonzero contribution, is $2,190. See Bertrand, Bombardini and Trebbi (2014) for their arguments on using campaign contributions as a proxy for connections.

As for campaign contributions, we use contribution records included in the FARA reports, instead of those collected by the Federal Election Commission. Using the latter records requires name matching between donors and lobbyists, leading to potential mismatches. Given our definition of *connections*, Table 2 shows that a lobbying firm registered in both the LDA and FARA has connections with 6.4 members of Congress on average, while a firm registered only with FARA has 0.7 connections.

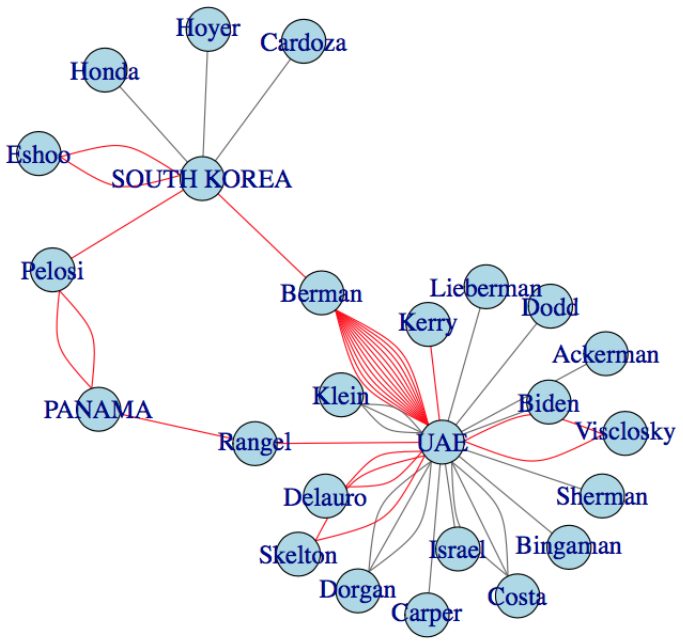
3. Contacts and Connections

3.1. **Contact Probability and Connections.** To begin with, we provide an example of the lobbying contacts made by a prominent lobbying firm, Akin, Gump, Strauss, Hauer & Feld, during the second half of 2008 on behalf of its foreign clients: Panama, South Korea, and the United Arab Emirates. In Figure 1, each line indicates a phone call to or a meeting with a politician or his/her staff, and the red color indicates that the politician is connected to one of the lobbyists in the firm, as a ex-staffer or as an ex-colleague in Congress.

We find two notable features in the data on contacts. First, the fraction of connected politicians among the contacted ones, 7 (32 percent) out of 22, is higher than the fraction of all politicians who were connected to the firm in Congress, 76 (14 percent) out of 535. In terms of contact frequency, the fraction of contacts with connections, 27 (52 percent) out of 47 total contacts, is even much higher. Second, the politicians who were contacted for multiple foreign clients, i.e., Howard Berman (the chairman of the House Committee on Foreign Affairs), Nancy Pelosi (the House Speaker), and Charles Rangel (the chairman of House Ways and Means Committee), were all connected to the firm, while the politicians who were contacted for a single foreign client were most likely not connected. These features suggest that connections are systematically related to contacts.

To investigate these patterns, we statistically test if the contacts are made disproportionately to the connected members, while taking the distribution of members by leadership/committee membership, electoral circumstances, and connections into account. In the second column of Table 3 (*Data*), we show the ratio of the firm-client-year pairs for which the firm made contacts to its connected politicians on behalf of the client. Out of 355 firm-client-year pairs with any congressional contacts, we find that 33.2 percent of them had contacts to connected politicians, 24.5 percent had contacts to those in leadership positions or key committees with connections, and 4.2 percent had contacts to connected politicians who ran a tight race for reelection

FIGURE 1. Lobbying Contacts by Akin, Gump, Strauss, Hauer & Feld



Note: This figure shows the last names of the politicians who were contacted by Akin, Gump, Strauss, Hauer & Feld on behalf of its three foreign clients, Panama, South Korea, and the United Arab Emirates (UAE) during the six-month period from July through December 2008. Each line indicates a phone call to or a meeting with a politician or his/her staff, and the red color indicates that the politician is connected to one of the firm's lobbyists, as a ex-staffer or as an ex-colleague in Congress.

during the year. By *key* committees, we refer to the committees that cover issues relevant to foreign governments, such as the House Foreign Affairs and Senate Foreign Relations Committees.[11]

In comparison, the third column of Table 3 (*Hypothetical*) presents the hypothetical probability that at least one connected politician is contacted conditional on the observed total number of contacted politicians. When calculating this probability, we assume that that each politician is equally likely to be contacted. Specifically, suppose a lobbying firm with connections to N_c politicians contacts M politicians out of N members in Congress. Under our assumption, the probability that at least one connected politician is contacted is $1 - {}_{(N-N_c)}C_M / {}_N C_M$ if $M \leq N - N_c$, or 1 otherwise.

[11]The leadership positions include House Speaker, Majority/Minority Leaders, and Majority/Minority Whips. *Key committees* refers to House committees on Appropriations, Armed Services, Budget, Foreign Affairs, and Ways and Means, and Senate committees on Appropriations, Budget, Finance, and Foreign Relations.

TABLE 3. Probability of Contacting Members with Connections

	Data[a]	Hypothetical[b]	Difference
All	0.332	0.164	0.169***
	(0.025)	(0.015)	(0.029)
Leadership or key committees	0.245	0.125	0.120***
	(0.023)	(0.013)	(0.026)
Running for reelection with the vote share ≤ 0.6	0.042	0.016	0.026**
	(0.011)	(0.005)	(0.012)

Notes: Numbers in parentheses are standard errors. Asterisk marks are provided for the last column only to indicate statistical significance at the 1 percent (***) and 5 percent (**) levels. The unit of observation is an observed contractual relation between a firm and its foreign government client given a year, with the total number of observations being 355. a. We calculate the ratio of firm-client-year pairs where the firm made contacts to its connected politicians on behalf of the client. b. Assuming that the probability of contacting each politician is equal across all politicians, we calculate the probability that at least one connected politician is contacted given the total number of the contacted politicians.

We find that the differences in the probabilities in the two columns are both large and statistically significant at the 1 or 5 percent level. While contact to a connected politician was made for 33.2 percent of the firm-client-year pairs in the data, the hypothetical probability for contacting a connected politician is 16.4 percent. This trend persists when we focus on specific members, such as those who were running a tight race for reelection or those in the Congressional leadership or the key committees. Note that if the assumption that the probability of contacting each politician is equal regardless of connections is true, the differences in the probabilities in the two columns must be statistically insignificant. Therefore, our finding suggests that lobbying firms are more likely to contact connected politicians, as opposed to non-connected politicians. This is consistent with the idea that connected politicians are the go-to people for lobbyists.

3.2. **Contact Intensity and Connections.** We show that our measure of connections is correlated with an increase in the intensity of lobbying contacts to politicians, as well as the likelihood of contacts. To do so, we consider all possible pairs of a lobbying firm and a member of Congress for each year, and study the attributes of contacts during the year. Table 4 shows that the ratio of the pairs with at least one contact among those with connections is 23.3 percent, while the counterpart among those without connections is 3.5 percent. Thus, the likelihood that a lobbying contact by a firm to a member exists conditional on connections is six times as high as that

Table 4. Contacts and Connections: Mean Differences

	Connected	Not Connected	Difference
A. All			
Probability of contacts	0.232	0.036	0.196***
	(0.011)	(0.001)	(0.005)
Average number of contacts	0.843	0.084	0.759***
	(0.069)	(0.002)	(0.020)
Probability of direct politician contacts	0.097	0.015	0.082***
	(0.008)	(0.0003)	(0.003)
B. Leadership or key committee members			
Probability of contacts	0.301	0.047	0.254***
	(0.020)	(0.001)	(0.009)
Average number of contacts	1.261	0.114	1.147***
	(0.142)	(0.004)	(0.039)
Probability of direct politician contacts	0.143	0.020	0.123***
	(0.015)	(0.001)	(0.006)
C. Running for reelection with the vote share ≤ 0.6			
Probability of contacts	0.187	0.025	0.162***
	(0.041)	(0.001)	(0.017)
Average number of contacts	0.582	0.056	0.526***
	(0.178)	(0.004)	(0.060)
Probability of direct politician contacts	0.099	0.011	0.088***
	(0.031)	(0.001)	(0.011)

Notes: Numbers in parentheses are standard errors. All differences are significant at the 1 percent confidence level, as indicated by the asterisk marks. Each observation is a firm-politician-year pair, with the total number of observations being 140,759. A *contact* is defined as a phone call or meeting with a member of Congress or his/her staffer, while a *direct politician contact* means the contact was made directly with the Congressperson.

conditional on no connections. Note that this pattern is consistent with our findings in Table 3.

We measure the intensity of contacts by the number of lobbying contacts via phone calls or meetings and the ratio of lobbying contacts made directly with a politician, as opposed to with his/her staffer. As can be seen in Table 4, the average annual number of contacts for the pairs with connections is 0.84, which is about ten times as many as that for the pairs without connections, 0.08. The probability of directly contacting the politician conditional on connections, 9.7 percent, is more than six times as high as that conditional on no observed connections, 1.5 percent.

Note that the importance of connections is more pronounced for lobbying contacts to the politicians in the Congressional leadership or the committees that cover foreign relations or budget/appropriations issues. Compared to the other members, those

TABLE 5. Contacts and Connections: Regressions

Dependent Variables	Any Contacts (1)	Number of Contacts (2)	Direct Contacts (3)
Connected	0.074***	0.265***	0.023**
	(0.014)	(0.083)	(0.009)
Leadership/key committees	0.006	0.102	0.013
	(0.020)	(0.111)	(0.017)
Running for tight reelection	-0.010***	-0.024***	-0.005***
	(0.002)	(0.007)	(0.001)
Connected × Leadership/key committees	0.086***	0.600***	0.065***
	(0.031)	(0.216)	(0.020)
Connected × Running for tight reelection	-0.018	-0.134	0.020
	(0.041)	(0.170)	(0.034)
Number of foreign clients	0.003***	0.009**	-0.001**
	(0.001)	(0.004)	(0.0005)
Number of lobbyists	0.004***	0.015***	0.001***
	(0.0003)	(0.001)	(0.0002)
Fixed effects for firm, politician, and year (separately)	Yes	Yes	Yes
Number of observations	130,967	130,967	130,967
R^2	0.105	0.068	0.088

Notes: Standard errors are clustered at the politician level, and are provided in parentheses. Asterisk marks indicate the statistical significance at the 1 percent (***), 5 percent (**) and 10 percent (*) levels. Each observation is a firm-politician-year pair, and some pairs (9,792 out of 140,759 pairs) are dropped because some lobbying firms did not report the list of their lobbyists. The dependent variables in the regressions are (1) a dummy variable which takes one if there was any lobbying contact between a pair, (2) the total number of phone calls and meetings with a politician or his/her staffers, and (3) a dummy variable which takes one if there was any lobbying contact directly made to a politician. When a politician runs for reelection where the most recent vote share was less than 0.6, we refer to him/her as *running for tight reelection*.

in the leadership or the key committees are more likely to be contacted, and the difference in the contact probability with and without connections is much larger. Although we find a decrease in both contact probability and intensity for politicians during the years when they ran for a relatively tough reelection race, lobbyists with connections still have more access to those politicians.

These trends, found in the mean-difference analyses of Table 4, persist even when we control for the time-varying lobbying attributes, such as the number of foreign government clients and the number of lobbyists, as well as politician, firm, and year fixed effects. Table 5 shows the linear regression results where the dependent variables indicate (1) whether there was a contact, (2) the number of contacts, and (3) whether there was a direct contact with a politician. We find that connections are a strong

indicator for contacts, especially for those who are part of the Congressional leadership or in the committees that cover foreign relations or budget/appropriations issues. For example, connections are associated with an increase in the number of contacts by 0.26 with the 95 percent confidence interval being [0.08,0.41] for any given firm-politician-year pair. For a politician in the Congressional leadership or the key committees, such an increase is amplified by 0.6 with the 95 percent confidence interval being [0.19,1.04].

During an election year, about 24 percent of the members of Congress faced a *tight reelection* race, as defined by most recent vote share being less than 0.6. For these members, both the contact frequency and the intensity tend to decrease. For example, for these members, the average number of contacts decreases by 0.02 with the 95 percent confidence interval being [0.01,0.04]. Given that the average number of contacts for a random firm-member pair is 0.09, this decrease is relatively large. However, when a lobbyist is connected to a politician, electoral conditions do not make a significant difference in the correlation between contacts and connections, as is shown by the coefficient of (Connected $\times$ Running a tight race) being insignificant.

3.3. **Lobbying Fee and Connections.** Having shown that lobbying contacts with connections tend to be of a higher intensity in terms of the number of contacts and the direct communications with politicians than those without connections, we further show these two types of contacts command different fees in Table 6. The unit of analysis is a semiannual lobbying report, and the dependent variable is the log of the lobbying fee. All regressions reported in the table include a vector of report filing year dummies, a vector of report filing month dummies, a vector of lobbying issue category dummies, and a vector of foreign government dummies.

Everything else equal, we find that contacting one more member of Congress is associated with a 0.8 to 1 percent increase in the lobbying fee across all specifications. We further find that if the contacted politician is connected to the firm, then the lobbying fee increases by 4.6 percent in addition to the 0.8 percent increase for the contact to that politician, as in specification (2). The difference in the lobbying fee increase with and without connections, 4.6 percent, is both statistically significant and large in its extent. Given that an average semiannual lobbying fee in the sample is \$279,335, an additional premium for contacting a connected member of Congress, as opposed to contacting a member without connections, amounts to \$12,849 every six months. Furthermore, if the connected member is a part of the Congressional leadership or in the committees covering the foreign relations or budget/appropriations

TABLE 6. Lobbying Fee Regression

Dependent var.: (log) lobbying fee	(1)	(2)	(3)	(4)	(5)
Number of contacted politicians	0.010***	0.008***	0.008***	0.009**	0.012*
	(0.002)	(0.002)	(0.002)	(0.004)	(0.007)
Num. of contacted & connected politicians					
All		0.046**			
		(0.022)			
Leadership/key committees			0.120**	0.132**	0.312*
			(0.053)	(0.058)	(0.157)
Not leadership/key committees			-0.033	-0.052	0.171
			(0.048)	(0.058)	(0.446)
Made executive contacts[a]	0.137	0.135	0.128	0.182*	-0.074
	(0.108)	(0.108)	(0.108)	(0.093)	(0.204)
Made media contacts[b]	0.024	0.025	0.024	0.122	0.114
	(0.105)	(0.105)	(0.104)	(0.099)	(0.196)
Number of lobbyists	0.070***	0.069***	0.067***		-0.048
	(0.014)	(0.014)	(0.014)		(0.142)
(Number of lobbyists)^2/100	-0.108***	-0.113***	-0.108***		0.685
	(0.024)	(0.024)	(0.024)		(0.829)
Fixed effects for					
Year of the report	Yes	Yes	Yes	Yes	Yes
Month of the report	Yes	Yes	Yes	Yes	Yes
Issues covered by the report[c]	Yes	Yes	Yes	Yes	Yes
Foreign government	Yes	Yes	Yes	Yes	Yes
Lobbying firm	No	No	No	Yes	No
Number of observations	644	644	644	644	124
R^2	0.416	0.419	0.421	0.640	0.826

Notes: The unit of observation is a semi-annual lobbying report. There are 676 reports in the data, and 32 of them are dropped in the regressions because the lobbying firms did not report the lobbying fee amount (usually because the related lobbying activities were pro bono cases). In column (5), we use the reports from the lobbying firms with one connected lobbyist for a robustness check. Standard errors are clustered at the firm and the report period level, and are presented in parentheses. The asterisk marks indicate the statistical significance at the 1 percent (***), 5 percent (**) and 10 percent (*) levels. a. This variable indicates whether or not there was any contact with the executive branch, including the White House, the federal departments, and government agencies. b. Lobbying firms sometimes make contacts with the media, and this variable indicates if there was at least one such contact. c. We categorize lobbying issues into security, trade/budget, and administrative/other based on the written description of lobbying issues for each contact. The issue fixed effects are indicator variables for each lobbying category.

issues, the additional premium is 12-13 percent, as in specifications (3) and (4), implying a semiannual premium of \$33,520-\$36,872 per politician contacted.[12]

[12]The difference between the two specifications is that in specification (3), we include the number of lobbyists in the firm during the period, while in specification (4), we include the firm fixed effects.

It is hard to distinguish the effects of connections from those of other qualities of lobbyists. Lobbyists with connections to politicians via previous work experience in Congress could be more talented, have more expertise in certain policy issues, or be better informed about the legislative labyrinth. By exploiting our contact data, however, we can compare a scenario in which a lobbyist contacts a politician with whom she has no previous work connections in Congress and an alternative scenario in which the same lobbyist contacts a politician with connections. We find that the latter scenario is associated with a much higher lobbying fee.

This difference in lobbying fees per politician contacted with or without connections does not fully capture how lobbying clients value their lobbyists' connections and other attributes associated with connections.[13] However, this difference does suggest that a large part of the value of connections in lobbying is relation-specific. This finding is consistent with the view that trust and reputation are key assets in the lobbying industry. According to Levin (2009)'s interviews with politicians, when politicians decide whether to interact with a lobbyist, they consider the credibility of the lobbyist's information and potential ethical issues. The additional fee associated with contacting a connected politician, as opposed to a non-connected politician, can be explained by the effectiveness of communication due to the politician's trust in the lobbyist's information being reliable and useful.

One weakness of our data is that lobbying firms provide the list of all lobbyists who worked for their foreign clients, without specifying which lobbyist worked for which clients. This could weaken the validity of comparing the two scenarios if contacting the politicians with connections is simply correlated with the amount of lobbying activity. For this reason, we run specification (3) for the lobbying firms with only one lobbyist who has connections to the members of Congress. The results are presented in column (5) of Table 6, and they are consistent with the findings based on the full sample.

Our findings corroborate and advance the findings of Blanes i Vidal, Draca and Fons-Rosen (2012) and Bertrand, Bombardini and Trebbi (2014). Both papers show the relationship between lobbyists' connections and lobbying fee. The former finds that lobbyists connected to US senators suffer a 24 percent drop in generated revenue on average when their previous employer leaves the Senate. The latter finds a

For specifications (1), (2), and (5), the key results are quantitatively similar when we include the firm fixed effects instead of the number of lobbyists.

[13]For example, connected lobbyists may be paid more regardless of their contacts. This is controlled for by including lobbying firm fixed effects in specification (4).

premium of 8 to 10 percent in the fee when at least one lobbyist has connections to a member in the committees covering the issue. Note that the revenue drop in the former paper includes potential decreases in the number of lobbying clients while our estimate is on the intensive margin only. Our estimate of the lobbying fee premium of contacting a connected politician in a part of the Congressional leadership or in the relevant committees, 12 to 13 percent, is comparable to the counterpart premium found in the latter paper, although our definition of connections is relatively narrower than theirs.

More importantly, our findings are based on the observed lobbying contacts. Without contact data, one implicitly assumes that the observed connections are used all the time. Although lobbyists are more likely to contact their connected politicians than other politicians, they do not necessarily contact the connected politicians for all clients, as we find in our data (Table 3). We show that when the connections are utilized in contacts, there exists a market premium. This is on top of potential market premiums associated with hiring a lobbyist with political connections via previous work experience in Congress, which are incorporated in the firm fixed effects. Furthermore, our findings that lobbyists tend to increase the number of contacts and are more likely to make direct contacts with connected politicians (Tables 4 and 5) provide compelling reasons for this premium associated with connections.

We find that the premium for contacting a connected politician in the Congressional leadership or key committees is much larger than that for contacting a connected politician who does not hold such positions. The estimated premium difference is 15.3 percent in specification (3), significant at the 10 percent level (with the standard error being 9.1 percent), and 18.3 percent in specification (4), also significant at 10 percent (with the standard error being 9.9 percent). This finding is consistent with Blanes i Vidal, Draca and Fons-Rosen (2012), in which the authors find that lobbyists connected to exiting senators who served in the Finance and Appropriations Committees and to exiting representatives who served in the Ways and Means Committee suffer a substantial drop in revenue when the connected politicians leave office.

Note that making contacts with a connected politician, as opposed to contacting a non-connected politician or contacting no one, is endogenously determined in the market by the demand of lobbying clients for political access and the supply of politicians and lobbyists. We investigate how the changes in the demand and supply for political access, which are associated with the observed attributes of lobbying clients, politicians, and lobbying firms, affect the value of connections. To explicitly account

for the endogeneity, we introduce a model whose equilibrium determines whether an interest group, such as a foreign government, hires a lobbying firm to contact politicians, and if so, which lobbyists and which politicians will be engaged. We estimate the model to quantify the total surplus from lobbying contacts, with or without connections, as a function of politician, interest group, and lobbying firm attributes.

4. Model of Lobbying Market

Our model for the lobbying market is a many-to-many two-sided market between interest groups or foreign governments (buyers) and lobbying firms (sellers). Interest groups potentially benefit from contacting politicians. They can contact politicians directly, but hiring a lobbying firm to contact the same politicians can be more cost-effective and/or more beneficial. The cost differential reflects the idea that lobbyists have relatively exclusive access to politicians, so that the cost of contacting a politician is much lower for lobbyists than interest groups. Put differently, a Congressman would be less likely to pick up a phone call from someone he does not know than a call from someone he knows well. The benefit differential is due to the expertise of lobbyists in navigating the legislative process and being more persuasive in communications. Contacting politicians on behalf of a client is costly for lobbying firms, and such costs may vary with the identities of the client and the contacted politicians.

Both buyers and sellers are heterogeneous, and the price of the lobbying service is personalized in that both parties mutually decide with complete information.[14] We allow that lobbying firms can be hired by multiple clients, and that foreign governments can hire multiple lobbying firms. We assume that there is no search friction in this market.[15]

Let us denote the set of all politicians by A, where A is a finite set. A *trade*, ω, is defined by the identities of the buyer, $b(\omega)$, the seller $s(\omega)$, and the set of politicians

[14]An alternative framework is Gomes and Pavan (2016), where intermediaries price-discriminate under incomplete information. In an earlier version of this paper, we found that the data patterns are consistent with the model's predictions when we treat lobbying firms as intermediaries between interest groups and politicians. However, the data patterns can also be generated by alternative models such as the current model. There are two key differences between these two models. One is the information structure: the current model assumes complete information while Gomes and Pavan's model assumes incomplete information. Because the agents are heterogeneous and thus all observed transactions are unique, we cannot test if either of the information structures is more consistent with the data. The other difference is that Gomes and Pavan's model considers a monopolist intermediary, while the current model allows multiple intermediaries or lobbying firms. Because our data incorporates many lobbying firms, we find the current model to be more suitable for estimation.

[15]Given that many foreign governments in our sample have been hiring lobbying firms for more than a few decades, it is reasonable to assume that there is no search friction in this market.

whom the seller contacts on behalf of the buyer, denoted by $a(\omega) \in \mathcal{P}(A)$, where $\mathcal{P}(\cdot)$ is the power set. A *contract* is a pair of a price and a trade, $\{p_\omega, \omega\}$.[16]

Let $(\mathbf{p}, \Omega)$ be the set of all contracts in the market. The payoff for lobbying firm s from that market outcome is defined as:

$$u_s(\mathbf{p}, \Omega) = \sum_{\omega \in \Omega_s} f_s(a(\omega), b(\omega)) + \sum_{\omega \in \Omega_s} p_\omega,$$

where Ω_s denotes all trades associated with seller s. The payoff associated with lobbying firm s contacting politicians $a \in \mathcal{P}(A)$ on behalf of its client b, denoted by $f_s(a, b)$, is allowed to vary by the identities of all parties involved. The payoff, however, is not allowed to vary by the firm's other contacts with the same politicians for other clients, its contacts with other politicians, or other firms' contacts. In other words, we assume that the firm's cost for each client is separable; for example, there are no capacity constraints. We also assume that no externalities exist.[17]

The payoff for foreign government b is:

$$u_b(\mathbf{p}, \Omega) = \sum_{\omega \in \Omega_b} g_b(a(\omega), s(\omega)) - \sum_{\omega \in \Omega_b} p_\omega,$$

where Ω_b denotes all trades associated with buyer b. Similarly, we assume that there are no externalities in the buyer side, and that the benefits from multiple contracts with different lobbying firms are the sum of the benefit from each.

Given our assumptions, there exists a competitive equilibrium and that equilibrium is efficient, as shown by Hatfield et al. (2013). Therefore, firm b contacts a set of politicians, $a \in \mathcal{P}(A)$, on behalf of interest group s in equilibrium if and only if for any $a' \in \mathcal{P}(A)$

$$v_t(s, b, a) \geq v(s, b, a'),$$

where $v(s, b, a) \equiv f_s(a, b) + g_b(a, s)$ is the total value of firm b contacting politicians in set a for client s. Note that the value considered here does not include the social value of lobbying, such as the benefits/costs of the politicians or their constituents.

[16]We borrow the terminologies and the notations from Hatfield et al. (2013), which provides a the model of trading networks with a finite number of agents. Our model is a relatively simple application of their model.

[17]These assumptions are strong, and even if some of them are relaxed, the properties of the equilibrium can be solved and the model primitives can be estimated. Hatfield et al. (2013), for example, allow diminishing marginal utilities of consumption and increasing marginal costs of production for the case of homogeneous goods. Fox (2016) provides and implements an estimator for many-to-many matching games with transfers when the preferences or payoffs are substitutable or complementary.

Nevertheless, lobbyists may partially internalize the payoffs of the politicians, as in Hirsch and Montagnes (2016).

For the estimation, we simplify the problem in two ways. First, we focus on three observed attributes of politicians: (i) whether the politician is in the Congressional leadership or in the key committees on foreign relations and government budget/appropriations; (ii) whether the politician is running for reelection with a relatively tight voting margin; and (iii) whether the politician is connected to the firm via its lobbyists with congressional experience. Based on these three attributes, we can divide the 535 members of Congress into eight groups. Then we assume that the choice that a firm-client pair faces regarding a group of politicians is whether or not to contact at least one of them. This way, we reduce the total number of the choices to $2^8 = 256$, instead of 2^{535}. This simplification not only reduces the computational burden but is also conducive to our focus of studying the conditions under which connected politicians are contacted, as opposed to non-connected politicians, given our data. In the data, conditional on hiring a lobbying firm with connections, the median number of the contacted politicians with whom there exist connections is 0, and the average number is 1.64.

Second, we parameterize $v(s, b, a)$ as a function of both observed attributes of firm s and foreign government b and an unobserved variable. Note that the latter is unobserved only to researchers; it is observed by all agents involved.[18] As for the firm attributes, we consider the number of lobbyists who can contact each group of politicians during period t, denoted by $N_{st} \equiv (N_{st1}, ..., N_{st8})$. For a group of politicians with connections, we count the number of lobbyists with connections to any of the politicians in the group. For the remaining groups, we use the total number of lobbyists. As for the foreign governments, we consider an increase in US media attention on the foreign country, which we denote by X_{bt} for government b during period t. We measure the media attention by the number of the *New York Times* news articles on the foreign relations with the country. Let $d(a)$ represent the 8-dimensional binary vector where each ith element indicates whether at least one politician in the ith group is contacted given the set of contacted politicians, a. For any $a \in \mathcal{P}(A)/\emptyset$,

$$v_t(s, b, a) = \sum_{k=1}^{8} [\beta_k + \gamma_k \log(N_{stk}) + \delta_k X_{bt}] d_k(a) + \phi_{sbt} + \epsilon_{s,b,t,d(a)},$$

[18]Recall that we assume complete information. By allowing an unobservable variable, we explain why observationally equivalent firm-client pairs choose to make different contacts.

and if $a = \emptyset$,

$$v_t(s, b, \emptyset) = \phi_{sbt}.$$

The value of no contract between firm s and government b during period t, ϕ_{sbt}, is allowed to be firm-government-time specific. We assume that $\epsilon_{s,b,t,\mathbf{d}}$ are independent across firms, governments, periods, and all 256 choices, following the Type I extreme distribution. Then the probability that a binary choice vector, $\mathbf{d}$, is chosen for a firm-client pair with $(\mathbf{N}_{st}, X_{bt})$ is:

$$\Pr(\mathbf{D} = \mathbf{d}|\mathbf{N}_{st}, X_{bt}) = \frac{\exp(\sum_k [\beta_k + \gamma_k \log(N_{stk}) + \delta_k X_{bt}] d_k)}{1 + \sum_{\mathbf{d}' \in J(\mathbf{N}_{st})} \exp(\sum_k [\beta_k + \gamma_k \log(N_{stk}) + \delta_k X_{bt}] d'_k)},$$

where $J(\mathbf{N}_{st})$ denotes the set of all possible choices given the lobbyists hired by the firm. Note that firm-client-year fixed effects, ϕ_{sbt}, do not appear in the above formula because they are canceled out. We estimate (β, γ, δ) while controlling for the time-specific firm-client fixed effects.

5. When Do Connections Matter?

Table 7 presents the maximum likelihood estimates of the fixed effects multinomial logit models. We consider two specifications of the model, and they differ by how we define *an increase in news*. In specification (1), we use an indicator variable that takes one if there was an increase of 5 percent or more in the number of foreign relations news articles regarding the country in the *New York Times* compared to the previous year.[19] In specification (2), we take the log of the ratio of the number of news articles in the year and its previous year if the former is greater than the latter. The results in these two specification are similar.

Across both specifications in Table 7, the estimates of β_k are statistically negative, and the β_k values for the contacts with connections is much smaller than those without. These estimates reflect the fact that access to politicians is a scare resource, leading to high costs for making contacts. For an average lobbying firm, the number of politicians with connections is 4.45 (Table 2), which is 0.8 percent of the politicians serving in Congress.

We find that having more lobbyists with connections does increase the total value of contacts, but we do not find strong evidence that such a trend persists when the

[19]The average number of yearly *New York Times* news articles regarding foreign relations with a country is 225, with median being 81. Some countries, however, are rarely mentioned in the *New York Times*. When there are fewer than 10 news articles in the previous year, we do not use the 5 percent cutoff.

Table 7. When Do Connections Matter?: Multinomial Logit Estimates

	(1)		(2)	
	Estimate	SE	Estimate	SE
β_k values:				
Leadership/comm., Running, Connected	-6.126	0.170	-5.892	0.178
Leadership/comm., Not running, Connected	-5.304	0.032	-5.284	0.030
Not in leadership/comm., Running, Connected	-5.419	0.090	-5.290	0.090
Not in leadership/comm., Not running, Connected	-5.682	0.033	-5.671	0.031
Leadership/comm., Running, Not Connected	-5.270	0.037	-5.189	0.036
Leadership/comm., Not running, Not connected	-4.496	0.034	-4.488	0.032
Not in leadership/comm., Running, Not connected	-4.871	0.036	-4.778	0.034
Not in leadership/comm., Not running, Not conn.	-4.386	0.033	-4.404	0.031
Interactions with the log of the number of lobbyists (γ_k values):				
Leadership/comm., Running, Connected	1.032	1.914	1.096	1.859
Leadership/comm., Not running, Connected	1.536	0.387	1.534	0.377
Not leadership/comm., Running, Connected	1.195	0.972	1.195	0.957
Not leadership/comm., Not running, Connected	1.223	0.539	1.223	0.520
Leadership/comm., Running, Not Connected	0.225	3.416	0.226	3.374
Leadership/comm., Not running, Not Connected	0.310	3.040	0.310	2.936
Not in leadership/comm., Running, Not Connected	0.116	5.944	0.116	5.821
Not in leadership/comm., Not running, Not Conn.	0.300	2.739	0.300	2.629
Interactions with an increase in news (δ_k values):				
Leadership/comm., Running, Connected	0.900	1.782	0.709	7.077
Leadership/comm., Not running, Connected	0.207	1.575	0.389	1.358
Not in leadership/comm., Running, Connected	0.726	0.966	1.056	1.213
Not in leadership/comm., Not running, Connected	0.078	4.990	0.112	5.530
Leadership/comm., Running, Not Connected	0.298	1.265	0.150	6.335
Leadership/comm., Not running, Not Connected	0.071	4.742	0.124	5.772
Not in leadership/comm., Running, Not Connected	0.429	0.802	0.474	1.466
Not in leadership/comm., Not running, Not Conn.	-0.090	3.738	-0.056	12.605
Number of observations	15,470		15,470	
Log-likelihood	-4789.93		-4792.12	

Notes: The dependent variable is the choice over the 256 possible combinations of contacts with the eight types of politician groups. Sorting into each group is determined by (i) whether a politician is in the Congressional leadership or the key committees related to foreign relations and budget/appropriations, (ii) whether the politician is running for reelection in a district where he/she received less than 60 percent of the votes in the most recent election, and (iii) whether the politician is connected to one of the lobbyists in the firm via previous career relationships in Congress. We estimate the parameters of the total surplus of lobbying contacts, and our model includes firm-government-year fixed effects. In specification (1), we use an indicator variable that takes one if there was a 5 percent or more increase in the number of the relevant news articles in the *New York Times* compared to the previous year. In specification (2), we take the log of the ratio of the number of news articles in the year and and its previous year if the former is greater than the latter.

The results are based on the all possible pairings between the 93 lobbying firms and the 70 foreign governments which hired a lobbying firm to contact members of Congress during the period of study. The number of observations is less than $70 \times 93 \times 4$ because for a given year, we only consider lobbying firms that were active during the year: on average, about 55 firms had a contract with a foreign government given a year.

connected politicians face electoral challenges. The estimates of γ_k for contacting connected politicians who are not facing a tough reelection battle are statistically positive at the 1 percent level for those in the Congressional leadership or in the key committees, and at the 5 percent level for the others. When politicians are running for reelection, they may be time-constrained by campaigning or face other reelection-oriented limitations, resulting in an increase in the lobbyists' cost of contacting them. At the same time, these politicians' inclusion in the next Congress is not guaranteed and legislative activities tend to decrease during election years, both of which could lead to a decrease in the foreign governments' value of political contacts. These two forces together may decrease the total value of contacts, which is reflected by lower β_k for contacting the politicians running in a tight reelection race. Furthermore, our estimates of γ_k for these contacts do not support the idea that connections necessarily change the contact values in this case.

Lastly, the estimates of δ_k suggest that an increase in US media attention, as measured by the number of international relations articles on a foreign country in the *New York Times* compared to the previous year, tends to increase the total surplus of contacts. However, such an increase and its difference relating to connections are not statistically significant. The media has played an important role in shaping the visibility and the salience of policy issues, and foreign relations issues are no exception (Kuziemko and Werker, 2006; Eisensee and Stromberg, 2007; Durante and Zhuravskaya, 2016). Therefore, an increase in media attention may increase both the demand for and the supply of political access. On the other hand, politicians may suffer a public relations risk of being associated with an unpopular foreign county, and such a risk may increase when there is more public interest in the country.[20] If a connected lobbyist is a trustworthy, politically-savvy conduit for information, their connections may increase the contact value for certain news events but decrease it for others. This is consistent with our results that the differences between the estimates of δ_k with and without connections are not statistically significant. A further study on the nature of news events and their relation with connected contacts could provide valuable insights.[21]

[20]Close ties to certain clients or lobbyists could damage the reputation of a politician and his/her electoral prospects. For example, see a *Richmond Times-Dispatch* article on October 24, 2014, "Warner says Gillespie's firm lobbied for brutal dictator."

[21]We have examined the contents of the *New York Times* news articles on foreign governments to categorize them into positive or negative news, based on some lexicons and dictionaries that tell the sentiment of texts (Grimmer and Stewart, 2013). However, the general tone of the *New York*

6. Conclusion

Using unique lobbying contact data constructed from foreign lobbying reports, we study how access to politicians is allocated in the lobbying market. We find that politicians grant a disproportionately large degree of access to lobbyists who have prior connections to them, and that clients pay more for access through these connected lobbyists. Our estimates suggest that connections increase contact values, and that such an increase is largest when the connected politician is in the leadership of Congress or serves on committees that have jurisdiction over the issue of which the foreign client is lobbying. This increase is more salient when these connected politicians do not face electoral uncertainty.

Our key takeaway is that we provide empirical evidence that connections create value in communications with politicians, and that such values are relation-specific. This is consistent with information from interviews with lobbyists indicating that building trust and relationships is important and takes considerable effort on their part (Levin, 2009; Leech, 2013; McKinley and Groll, 2015). The value of connections could be related to the role of lobbyists as a conduit for quid pro quo (Grossman and Helpman, 1994) or as a messenger for policy-relevant information (Hansen, 1991; Austen-Smith and Wright, 1994; Grossman and Helpman, 2001). An interesting set of follow-up questions would be how and why connections increase the value of lobbying contacts when lobbyists play either or all of these roles. For example, lobbyists may increase the value of information via verification (Ainsworth, 1993; Groll and Ellis, 2014) or screening (Hirsch and Montagnes, 2016), but the mechanism through which connections are associated with better verification or screening is not clear. Further study of the role of connections in the lobbying process could provide an important building block in understanding how the policymaking process works in general.

References

Ainsworth, Scott. 1993. "Regulating Lobbyists and Interest Group Influence." *Journal of Politics*, 55(1): 41–56.

Atieh, Jahad. 2010. "Foreign Agents: Updating FARA to Protect American Democracy." *University of Pennsylvania Journal of International Law*, 31: 1051–1088.

Austen-Smith, David. 1995. "Campaign Contributions and Access." *American Political Science Review*, 89(3): 566–581.

Times articles on foreign governments does not fit into either category because most news content is plainly descriptive.

Austen-Smith, David. 1998. "Allocating Access for Information and Contributions." *Journal of Law, Economics, and Organization*, 14(2): 277–303.

Austen-Smith, David, and John Wright. 1994. "Counteractive Lobbying." *American Journal of Political Science*, 38(1): 25–44.

Bertrand, Marianne, Matilde Bombardini, and Francesco Trebbi. 2014. "Is It Whom You Know or What You Know? An Empirical Assessment of the Lobbying Process." *American Economic Review*, 104(12): 3885–3920.

Blanes i Vidal, Jordi, Mirko Draca, and Christian Fons-Rosen. 2012. "Rovolving Door Lobbyists." *American Economic Review*, 102(7): 3731–3748.

Cotton, Christopher. 2012. "Pay-to-Pay Politics: Informational Lobbying and Contribution Limits when Money Buy Access." *Journal of Public Economics*, 96(3): 369–386.

Cox, Gary, and Mathew McCubbins. 2005. *Setting the Agenda: Responsible Party Government in the U.S. House of Representatives.* New York: Cambridge University Press.

de Figueiredo, John M., and Brian Kelleher Richter. 2014. "Advancing the Empirical Research on Lobbying." *Annual Review of Political Science*, 17: 163–185.

de Figueiredo, John M., and Brian S. Silverman. 2006. "Academic Earmarks and the Returns to Lobbying." *Journal of Law and Economics*, 49(2): 597–625.

Drutman, Lee. 2010. "The Complexities of Lobbying: Toward a Deeper Understanding of the Profession." *PS: Political Science & Politics*, 43(4): 834–837.

Durante, Ruben, and Ekaterina Zhuravskaya. 2016. "Attack When the World Is Not Watching? U.S. News and the Israel-Palestinian Conflict." *Working paper.*

Eisensee, Thomas, and David Stromberg. 2007. "News Droughts, News Floods, and U.S. Disaster Relief." *Quarterly Journal of Economics*, 122(2): 693–728.

Faccio, Mara. 2006. "Politically Connected Frims." *American Economic Review*, 96(1): 369–386.

Ferguson, Thomas, and Hans-Joachim Voth. 2008. "Betting on Hitler - The Value of Political Connections in Nazi Germany." *Quarterly Journal of Economics*, 123(1): 101–137.

Fisman, Raymond. 2001. "Estimating the Value of Political Connection." *American Economic Review*, 91(4): 1095–1102.

Fox, Jeremy T. 2016. "Estimating Matching Games with Transfers." *National Bureau of Economic Research*, Working Paper No. 14382.

Goldstein, Rebecca, and Hye Young You. 2017. "Cities as Lobbyists." *American*

Journal of Political Science, Forthcoming.

Gomes, Renato, and Alessandro Pavan. 2016. "Many-to-Many Matching and Price Discrimination." *Theoretical Economics*, 11(3): 1005–1052.

Grimmer, Justin, and Brandon Stewart. 2013. "Text as Data: The Promise and Pitfalls of Automatic Content Analysis Methods for Political Texts." *Political Analysis*, 1: 1–31.

Groll, Thomas, and Christopher J. Ellis. 2014. "A Simple Model of the Commercial Lobbying Industry." *European Economic Review*, 79: 299–316.

Grossman, Gene, and Elhanan Helpman. 1994. "Protection for Sale." *American Economic Review*, 84: 833–850.

Grossman, Gene, and Elhanan Helpman. 2001. *Special Interest Politics.* Cambridge: MIT Press.

Hall, Richard L., and Robert Van Houweling. 2012. "Lobbying Without Buying Time." *UC Berkeley Working Paper.*

Hansen, John Mark. 1991. *Gaining Access: Congress and the Farm Lobby, 1919-1981.* Chicago: University of Chicago Press.

Hatfield, John William, Scott Duke Kominers, Alexandru Nichifor, Michael Ostrovsky, and Alexander Westkamp. 2013. "Stability and Competitive Equilibrium in Trading Networks." *Journal of Political Economy*, 121(5): 966–1005.

Hirsch, Alexander V., and B. Pablo Montagnes. 2016. "The Lobbyist's Dilemma: Gatekeeping and the Profit Motive." *Working Paper.*

Hojnacki, Marie, and David Kimball. 2001. "PAC Contributions and Lobbying Contacts in Congressional Committees." *Political Research Quarterly*, 54(1): 161–180.

Kang, Karam. 2016. "Policy Influence and Private Returns from Lobbying in the Energy Sector." *The Review of Economic Studies*, 83(1): 269–305.

Khawaja, Asim Ijaz, and Atif Mian. 2005. "Do Lenders Favor Politically Connected Firms? Rent Provision in an Emerging Financial Market." *Quarterly Journal of Economics*, 120(4): 1371–1411.

Knight, Brian. 2005. "Estimating the Value of Proposal Power." *American Economic Review*, 95(5): 1639–1652.

Kuziemko, Ilyana, and Eric Werker. 2006. "How Much Is a Seat on the Security Council Worth? Foreign Aid and Bribery at the United Nations." *Journal of Political Economy*, 114(5): 905–930.

Langbein, Laura. 1986. "Money and Access: Some Empirical Evidence." *Journal of Politics*, 48(4): 1052–1062.

Leech, Beth. 2013. *Lobbyists at Work.* New York: APress.

Levin, Bertram. 2009. *The Art of Lobbying: Building Trust and Selling Policy.* Washington D.C.: CQ Press.

Lohmann, Susanne. 1995. "Information, Access, and Contributions: A Signaling Model of Lobbying." *Public Choice*, 85(3/4): 267–284.

Marshall, Monty G., Keith Jaggers, and Ted Robert Gurr. 2010. "Polity IV Data Series Version 2010." *College Park, MD: University of Maryland. Retrieved from http://www. systemicpeace. org/polity/polity4. htm.*

McKinley, Maggie, and Thomas Groll. 2015. "The Relationship Market: How Modern Lobbying Gets Done." *The Edmond J. Safra Center for Ethics.*

Powell, Eleanor, and Justin Grimmer. 2016. "Money in Exile: Campaign Contributions and Committee Access." *Journal of Politics*, 78(4): 974–988.

Shepsle, Kenneth, and Bary Weingast. 1987. "The Institutional Foundations of Committee Power." *American Political Science Review*, 81(1): 85–104.

Volden, Craig, and Alan Wiseman. 2014. *Legislative Effectiveness in the United States Congress.* Cambridge University Press.

Waters, Robert. 1988. "Foreign Agents Registration Act: How Open Should the Marketplace of Ideas Be?" *Missouri Law Review*, 53(4): 1–12.

Wright, John. 1990. "Contributions, Lobbying, and Committee Voting in the U.S. House of Representatives." *American Political Science Review*, 84(2): 417–438.

Wright, John. 1996. *Interest Groups and Congress: Lobbying, Contributions, and Influence.* New York: Longman.