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Revolving Door Lobbyists

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Abstract

Washington's 'revolving door' - the movement from government service into the lobbying industry- is regarded as a major concern for policy-making. We study how ex-government staffers benefit from the personal connections acquired during their public service. Lobbyists with experience in the office of a US Senator suffer a 24% drop in generated revenue when that Senator leaves office. The effect is immediate, discontinuous around the exit period and long-lasting. Consistent with the notion that lobbyists sell access to powerful politicians, the drop in revenue is increasing in the seniority of and committee assignments power held by the exiting politician.

Keywords: Lobbying, revolving door, US Congress, political connections, political elites
JEL Classifications: H11, J24, J45

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1 Introduction

Lobbyists play an increasingly important role in the political system of the US and many modern democracies. In 2008, for instance, \$3.97 billion was spent in lobbying US federal officials, an amount more than twice as high as that of ten years earlier (Figure 1). This increasing importance has generated considerable attention among scholars of political institutions and policy outcomes¹. Outside academia, lobbyists' role is the subject of growing controversy. The influence that lobbyists seem to hold over policy decisions has been linked to decreasing public confidence in American political institutions². Reflecting this, various legislative efforts have in the last years both constrained the activities of lobbyists and increased the transparency in the way in which they operate (e.g. Lobbying Disclosure Act of 1995, Legislative Transparency and Accountability Act of 2006, Honest Leadership and Open Government Act of 2007).

One of the most frequently criticized aspects of the lobbying profession is the so-called Revolving Door, whereby individuals move from serving in public office to being employed as lobbyists. According to conventional wisdom, experience in government allows former officials to develop a network of friends and colleagues that they can later exploit on behalf of their clients (Revolving Door Working Group 2005, Burger 2006, Zeleny 2006). The fact that lobbying salaries are typically several times higher than public sector salaries is regarded as evidence that former officials are effectively 'cashing in on their government connections' (Public Citizen 2005).

The existence of the Revolving Door raises several concerns. Firstly, career concerns in the lobbying industry can potentially affect the actions taken by serving government officials (Leaver 2009). Secondly,

¹For instance, Wright (1990), Kollman (1997), Baumgartner and Leech (1998), Hojnack and Kimball (1998), Grossman and Helpman (2001), Ansolaberre et al. (2002), Prat (2002), de Figueiredo and Silverman (2006), Hall and Deardoff (2006), Baumgartner et al. (2009).

²For instance, a 2004 CBS News/New York Times poll found that 56% of US citizens trust the government to do what is right only some of the time. The same poll found that 64% believed that 'government is pretty much run by a few big interests looking out for themselves'. A CNN poll found that 'corruption' was the most important issue for voters in the 2006 Congress midterm elections. A Gallup poll found that lobbyists and Congressmen are among the four least well rated professions for honesty and ethics. The link between lobbying and the crisis of democratic legitimacy is regularly made by public intellectuals (see, e.g. Lessig [2010]), journalists (Bai 2010), presidential candidates (Obama 2006, McCain 2007), political economists (Johnson 2010), and even the Congressional Research Service (Maskell 2007)

the prospect of post-government monetary windfalls can change the type of people that are attracted to public service (Casselli and Morelli 2004, Besley 2005, Keane and Merlo 2007, Matozzi and Merlo 2007, Kaiser 2009). Thirdly, the existence of a disparity of access and influence over elected representatives creates ethical issues and perpetuates the impression that Washington is controlled by a tightly knit elite, thus undermining popular support for democratic institutions³.

While there is no scarcity of anecdotal evidence, direct econometric evidence on the extent to which previous officials are able to convert political contacts into lobbying revenue remains, to the best of our knowledge, non-existent. In this paper we provide such evidence. In particular, we study how the lobbying revenue of congressional staffers turned lobbyists depends on the power of the congressional politicians for whom they have worked in the past.

We focus our analysis on ex-congressional staffers for several reasons. Firstly, their main connections are easy to identify and measure. In general, we would expect previous government officials to have developed a wide range of relationships of varying nature with serving representatives, which makes measuring connections fraught with difficulty. For an ex-staffer, however, we can concentrate on the connection to the Congressional politician in whose office he or she has served in the past, since we would expect this particular connection to have a disproportionate influence on his or her ability to generate revenue as lobbyist (Salisbury and Shepsle 1981a, 1981b). Relatedly, the fact that ex-staffers are particularly dependent on individual politicians provides us with a plausible identification strategy. Our main independent variable captures the *changes* in the political power held by the politician for whom a lobbyist worked in the past, which we would expect should be orthogonal to the time-invariant individual ability of that lobbyist⁴. Lastly, much of the popular discussion regarding the Revolving

³The Executive Order by President Obama on January 20th, 2009 explicitly links ethics reform and the Revolving Door (available at <http://www.whitehouse.gov/issues/Ethics>). Watchdog groups devoted to increase the ethical standing of Congress include, among others, Center for Responsive Politics, Citizens for Responsibility and Ethics in Washington, Public Citizen Congress Watch, Democracy 21 and Change Congress. For the link between perceived corruption and citizens' disengagement, see Lessig (2010). For a speech of a Vice Presidential candidate referring to the 'Washington elite', see Palin (2008). For economic analyses of elites and political power see Acemoglu and Robinson (2006, 2008) and Dal Bó et al. (2009).

⁴After doing this, our main remaining concern is that changes in the power held by the connected politician may be correlated with other changes to the lobbyist ability in generating revenue. Among other things, we control for party-chamber-time effects to alleviate this concern. We also confirm our main findings using a small subsample of unexpected

Door has centered around the role of ex-staffers (Burger 2006, Eisler 2007, Sunlight Foundation 2009).

Our main finding is that lobbyists connected to US Senators suffer an average 24% drop in generated revenue when their previous employer leaves the Senate. The decrease in revenue is out of line with pre-existing trends, it is discontinuous around the period in which the connected Senator exits Congress and it persists in the long-term. The sharp decrease in revenue is also present when we study separately a small subsample of unexpected and idiosyncratic Senator exits. Measured in terms of median revenues per ex-staffer turned lobbyist, this estimate indicates that the exit of a Senator leads to approximately a \$177,000 per year fall in revenues for each affiliated lobbyist. The equivalent estimated drop for lobbyists connected to US Representatives leaving Congress is a weakly statistically significant 10% of generated revenue. We also find evidence that ex-staffers are more likely to leave the lobbying industry after their connected Senator or Representative exits Congress.

We interpret our main finding as evidence that the existence of a powerful politician to whom the lobbyist is connected is a key determinant of the revenue that he or she is able to generate. We argue, in other words, that lobbyists are able to 'cash in on their connections', since connections are an asset with a separate value to their experience, human capital or general knowledge of how government works.

If our interpretation is correct, we would expect the decrease in revenue to be higher when the exiting politician holds more power immediately prior to leaving Congress. To examine this, we split exiting Senators by their level of political power. Firstly, we divide exiting Senators by their level of seniority (i.e. tenure in Senate). Consistent with our interpretation, we find that lobbyists connected to the most senior exiting Senators suffer a 24% decrease in revenue respectively, while lobbyists connected to exiting junior Senators are statistically unaffected by such exit.

We repeat this exercise for lobbyists connected to exiting Representatives. While the average effect was not statistically different from zero, we find a statistically significant 24% decrease for lobbyists connected to exiting Representatives in the top tier of the seniority distribution.

An alternative way to study whether lobbyists are more affected by the departure of more powerful politicians is to use the Congressmen committee assignments. The 'Appropriations' and 'Ways and Means' Committees in the House and the 'Appropriations' and 'Finance' Committees in the Senate are regarded as particularly powerful by observers and scholars of Congress (Groseclose and Stewart 1998,

 Senator exits. We discuss the identification strategy in detail in Section 4.

Stewart and Groseclose 1999). Consistent with our hypothesis that it is the power of the connected politician that matters, we find that lobbyists connected to exiting politicians serving in these committees suffer a drop in revenue around the exit date that is significantly higher than the one suffered by lobbyists connected to politicians serving in other committees.

Taken together, our findings provide support for the notion that being connected to a powerful politician is a key determinant of the demand for a lobbyist's services. It is probably appropriate to think of this revenue premium as a rent associated with (post-)government employment (Krueger, 1974), since it does not reflect human capital but instead a privileged connection to an elected representative.

Studies on the Congressional Revolving Door are scarce, a surprising fact given the popular interest and policy relevance. Salisbury et al. (1989) use a survey to argue that policy and process knowledge is regarded by lobbyists as more important than personal connections. Butler and Sovey (2009) find that previous committee assignments and ideological moderation are predictors of whether former Congressmen become lobbyists. Lastly, Eggers (2010) shows that Revolving Door lobbyists benefit from additional business when their affiliated party has control of the House or the Senate. None of these papers attempts to establish a causal link between political connections and lobbying revenue.

Our paper is related to a relatively recent but rapidly expanding literature arguing that political connections matter for firm value (Fisman 2001, Johnson and Mitton 2003, Khwaja and Mian 2005, Knight 2006, Faccio 2006, Ferguson and Voth 2008). We add to this literature in two significant ways. Firstly, by looking at the value of political connections in the context of the Congressional Revolving Door this paper creates a bridge with the literature on political selection (Casselli and Morelli 2004, Besley 2005, Keane and Merlo 2007, Matozzi and Merlo 2008). So far this literature has focused exclusively on the incentives facing elected politicians. By focusing on Congressional staffers our work opens up a new section of the US political class to analysis and quantifies a major channel of post-political earnings for this group. Secondly, a remaining issue in the current literature on political connections is whether such connections can be traded. In other words, if connections to serving politicians are valuable assets, is there a market for them? Our findings suggest that the relation between clients and connected lobbyists in the US federal lobbying industry can be regarded as a market for political connections (arguably the largest in the world) in which companies or interest groups can acquire indirect links to serving politicians by hiring their previous employees. Furthermore,

this market appears to react quite rapidly to changing circumstances. For instance, we find that the lobbying revenue generated by ex-staffers drops by 50% *one single semester* after their ex-employers have left Congress.

Finally, much has been written about the impact of money on politics (Ansolabehere et al. 2003, Stratmann 2005). A large share of this effort has been devoted to the effects of PAC contributions on politicians behavior. While there is no consensus that contributions buy votes, political scientists have argued that contributions do provide 'access' (Langbein 1986, Snyder 1990, Stratmann 1995). We provide evidence on a complementary channel through which access to politicians can be bought and sold.

The remainder of the paper is structured as follows. In Section 2 we discuss a few important features of the institutional setting in which our study is based. In Section 3 we present our data. In Section 4 we discuss our empirical strategy. In Section 5 we discuss our main results. Section 6 studies a small subsample of unexpected and idiosyncratic exits. We also study in Section 6 ex-staffers' exits from the lobbying industry. Lastly, we conclude.

2 Institutional Setting

US federal lobbying has expanded dramatically in the last decade. Figure 1 displays the evolution of lobbying revenue since the Lobbying Disclosure Act of 1995 was implemented. From less than \$2 billion in 1998, lobbying revenue increased to almost \$4 billion in 2008. In parallel with increasing size, the industry also employs a higher number of people. The number of registered lobbyists has gone in the same period from little more than 15,000 to almost 25,000.

Plenty of anecdotal evidence suggests that previous government experience is regarded as an extremely valuable asset in the lobbying industry. It is commonplace, for instance, for active lobbyists to advertise in their web pages their past appointments in government⁵. Lobbyists' press profiles frequently mention their government experience. The *Washingtonian Magazine* 2007 list of 50 Top Lobbyists in Washington provides a good case in point (Eisler 2007). Under each name in the list a short paragraph

⁵For a couple of examples, see the website of Kenneth Kies at <http://www.fpgdc.com/directors.html#kies> and the website of Florence Prioleau at <http://www.crowell.com/Professionals/Florence-Prioleau>.

explains the importance of each of the selected individuals. Out of the 50 top lobbyists, 13 are explicitly identified as being previous Congressmen, 21 are said to be ex-Congressional or ex-agency staffers, 3 are identified as being family members of serving Congressmen, and for the remaining 13 no government ex-affiliation is explicitly mentioned. Needless to say, emphasis on a lobbyist's government experience could reflect the value that potential clients give to his accumulated knowledge of how government operates, rather than to the value of the connections created while in public service. As we discussed earlier, lobbyists themselves argued in a survey that the 'what you know' is more important than the 'who you know' (Salisbury et al. [1989], see also Boggs [2003], Birnbaum [2008]). Alternatively, government experience could be regarded by clients as a signal of the underlying ability or preferences of a lobbyist (Matozzi and Merlo 2008). While human capital and natural ability are undoubtedly important, there are indications that personal connections established while in public service are valuable to clients in their own right. Consider, for instance, the profile of Nancy Taylor, number 33 in the aforementioned *Washingtonian* 50 top lobbyists list.

Taylor is a onetime health-policy director on Senator Orrin Hatch's Labor and Human Resources Committee, which had jurisdiction over much drug-patent legislation and food-and-drug laws . In 1993 Taylor took her expertise and connections to Greenberg Traurig, where she has built a \$1-million-a-year-practice representing HMOs and other health organizations. Colleagues say as long as Hatch is in the Senate, Taylor will continue to bring in business (Eisler, 2007).

This profile summarizes quite well the view of the lobbying industry that we aim to test in this paper. Firstly, 'connections' are regarded as an asset which is separate from 'expertise' (which we take as meaning 'human capital' or 'knowledge about the way that government operates'). Secondly, 'connections' are concentrated, for an ex-congressional staffer, on the Congressman who was his direct employer while in government. Thirdly, the value of such connection is strongly dependent on that particular Congressman remaining in office. Lastly, the value of the connection increases with the power held by the serving politician.

3 Data

The data set used for this study is a lobbyist-level panel constructed from two main parts - a database of lobbying reports released under the Lobbying Disclosure Act of 1995 (LDA) and a database of political employment that we construct from two new sources⁶.

3.1 Lobbying Database

The 1995 LDA required organizations to register and report information on their lobbying activities to the Senate Office of Public Records (SOPR). According to the Act, lobbying activity is defined as follows:

Lobbying contacts or effort in support of such contacts, including background work that is intended, at the time it was performed, for use in contacts, and coordination with the lobbying activities of others' (Section 3(10)).

Two types of registrants are obliged to report under the LDA - lobbying firms and 'self-filing' organizations that conduct in-house lobbying activities. The lobbying firm sector is comprised of private sector firms who take on work for a number of different corporate and non-corporate clients. Leading examples here include general professional services firms such as Patton Boggs or Ernst and Young, as well as specialist political lobbying firms (for example, Van Scoyoc Associates). Self-filing organizations declare their spending on in-house lobbying efforts. Examples include corporations such as Wal-Mart - who have established their own dedicated lobbying 'shop' in Washington - as well as peak industry groups and non-profit single issue organizations⁷. Both types of registrants are required to report good-faith estimates of lobbying expenditures (for self-filing organizations) or lobbying revenue (for lobbying firms) every 6 months.

In this paper we focus on lobbyists working at lobbying firms⁸. Under the LDA, lobbying firms are required to file a separate report for each of their clients. The report must specify the revenue generated

⁶We also use information on the service and characteristics of politicians. The data used is Stewart and Woon's (2009) compilation and details for this are given in the Appendix.

⁷Examples of leading peak industry groups include the US Chamber of Commerce and the American Medical Association.

⁸The LDA defines a person as a 'lobbyist' if they spend 20% or more of their time engaged in lobbying activities.

from that client, the issues for which the firm was engaged in lobbying, the House(s) of Congress and federal agencies contacted and the names of the individual lobbyists serving that particular client during that period. We display one of these reports in the Appendix. This report refers to the lobbying services provided by Greenberg Traurig LLP to the American Healthcare Association during the second semester of 2005. Note that lobbying took place in two issues: Health Issues (HCR) and Medicare/Medicaid (MMM). The income generated was \$40,000 and four individual lobbyists were engaged, including Nancy Taylor - number 33 in the aforementioned *Washingtonian* 50 top lobbyists list.

We use the version of the data compiled by the Center for Responsive Politics (CRP), a Washington-based non-profit organization for the promotion of political transparency. Further details on how CRP has processed and compiled the SOPR informations are displayed in the Appendix.

3.2 Political Employment

Our study utilizes two databases on the political employment and career histories of lobbyists. The first database is a major directory of lobbyists published by Columbia Books under its suite of *Lobbyist.info* products. This is an extensive lobbyist directory that contains contact information as well as career histories, biographical information, educational background and areas of expertise. We extract information on lobbyists who have had periods of political employment (that is, working as Congressional Staffers, in government agencies or as part of Presidential administrations) and match by lobbyist name into the lobbying reports database outlined in Section 3.1.

The second political employment database that we use is the LegiStorm *Congressional Staffer Salaries* (CSS) database. The CSS database that we use is obtained by LegiStorm - a political information company - from published reports by the Secretary of the Senate and the Clerk of the House of Representatives. The main information provided is: staffer name; start and end dates for a given employment spell; office of employment within the Congress; the job title or position; and the total salary amount for a given job spell. LegiStorm's database contains information from late 2000 onwards and the Appendix gives more details on how the data is compiled.

3.3 Matching of Databases

The name matching of the databases occurs at the lobbyist level. In the first step, names from the database *Lobbyist.info* are matched with the CRP lobbying reports data. This results in a concordance between the *Lobbyist.info* and CRP lobbyist identifiers. In a separate procedure, names from the LegiStorm CSS database are also matched with the CRP lobbying reports data, resulting in another concordance between the staffer and CRP lobbyist identifiers. The two sets of matches are then pooled and consolidated. The name-matching is implemented using a string-based algorithm outlined in the Appendix.

3.4 Descriptive Statistics

Some descriptive statistics for our overall database are given in Table 1. The data is reported at both the firm/organization and lobbyist level. We split by the lobbying firm and in-house sectors. As Table 1 shows, the lobbying firm sector accounts for approximately 55% of all organizations reporting lobbying activities. Per period, firms employ an average of 2.8 lobbyists and generate almost \$700,000 in revenue.

Table 1 also reports information on the prevalence of former political employees across the lobbying industry. Lobbying firms are the focal point of the activity of these former employees and in total they represent 44.7% of all lobbyist-year observations here compared to 19% in the in-house sector. Over half of the group of former political employees is made up of former congressional staffers (23.1% of the total lobbying firm sample) while the remainder is comprised of former employees of government agencies, executive bodies or Presidential administrations. The focus of our study is the sub-group of former congressional staffers who were employed in the offices of politicians who are still serving in office for some time in the 1998-2008 period covered by the LDA data. We define this sub-group of lobbyists as being linked to 'currently serving politicians'.

Finally, some other points from Table 1 are worth noting. We calculate revenue per lobbyist in two alternative ways by summing what we call 'unweighted' and 'weighted' revenues across lobbying contracts. For example, consider the contract between the American Healthcare Association and the firm Greenberg Traurig LLP that is reported in the Appendix. This contract is serviced by four lobbyists with a total value of \$40,000. The unweighted measure we define allocates each lobbyist an equal \$40,000 in revenues from this contract. The weighted measure allocates \$10,000 to each lobbyist.

These revenues are then added up across all the contracts a lobbyist works on in a given period.

The two measures of revenue capture complementary aspects of the individual lobbyist generated revenue. The unweighted measure essentially captures the revenue value of the 'practice' with which each lobbyist is associated, since it aggregates the value of all the contracts in which an individual lobbyist is involved. Note that the revenue of a practice will typically be a subset of a lobbying firm revenue, especially if the firm is large. For instance, we saw in our quote of Section 2 that Nancy Taylor was credited with building a '1-million-a-year-practice' *inside* her lobbying firm Greenberg Traurig. The weighted measure divides the value of each contract by the number of workers in it. It therefore captures captures the *revenue per worker of the practice* associated with an individual lobbyist.

The average annual weighted revenue per lobbyist ranges around \$319,000 for the sub-group of congressional staffers we consider. This figure is closely in line with the reported salaries of lobbyists in this group. For example, The Washington Post reported in 2005 that 'Starting salaries have risen to about \$300,000 a year for the best-connected aides eager to 'move downtown from Capitol Hill'. Industry news reports such as Brush (2010) also regularly use average revenue figures as a credible proxy for salary trends among Washington lobbyists. The average annual unweighted revenue per lobbyist takes much higher values. This is unsurprising since the full dollar value of a contract is assigned to each of the lobbyists involved in it.

4 Empirical Strategy

4.1 Naïve Model

Our objective is to relate a measure of period-by-period revenues associated with each lobbyist to the number of distinct, *currently serving* politicians that the lobbyist has worked for prior to his entry into the lobbying industry. A naïve attempt to estimate this relation would be as follows:

$$R_{it} = \beta P_{it} + \mathbf{X}'_{it} \cdot \theta + \gamma_t + \epsilon_{it} \quad (1)$$

where R_{it} is the (log) dollar revenue per individual lobbyist i in time period t . The vector \mathbf{X}'_{it} represents time-varying characteristics measured at the individual level and the term γ_t is a time period fixed effect. The time periods used are the 6-month periods required for reporting under the LDA giving us

22 periods from 1998-2008 inclusive. The key variable of interest is P_{it} , the count of currently serving politicians the lobbyist is linked to through his previous employment experience⁹.

There are two points worth highlighting in the initial discussion of P_{it} . Firstly, P_{it} measures observable links with former political employers. While any given lobbyist will have an unobserved political network comprised of various politicians and staffers, the P_{it} variable is measuring the specific connection to a former employer. In effect, P_{it} posits that the relationship developed with a particular politician is an asset for a lobbyist that is separate from both his human capital and his general political skills. Secondly, P_{it} is time-varying, as it goes down in value when a connected politician leaves office. The underlying hypothesis here of course is that politicians in office are particularly relevant for contemporary legislative outcomes. Serving politicians are able to vote on and influence the development of current legislation and this will be of interest to potential lobbying clients. The access that a lobbyist has with respect to his connected politician is therefore made obsolete when that politician is no longer in office.

Finally it should be noted that measurement error has the potential to attenuate our estimates in two ways. Firstly, there is the potential measurement error related to the name matching of lobbyists between our political employment and lobbying reports databases¹⁰. Secondly, there is measurement error related to R_{it} , arising from the fact that the size of the team serving a client is potentially an endogenous variable. For example, in a single-person firm it is straightforward to attribute revenues from clients to an individual lobbyist but this becomes more complicated as the size of a firm increases, since as this happens team size becomes a firm choice variable. To minimize this problem our regressions below use the 'unweighted' measure of lobbyist revenues where we count the full value of contracts where a lobbyist is named and do not divide by team size before summing across a lobbyist contracts. However, we have estimated the full range of models reported in Section 5 using our weighted revenue

⁹While most connected lobbyists have one single connection, a small number of lobbyists worked in the past for two Senators or Representatives.

¹⁰That is, lobbyists may have been falsely matched to a politician they did not work for or the matching may have missed assigning spells of political employment to some lobbyists. This measurement error is not classical insofar as it is based on a binary explanatory variable. However, it can be shown that this type of measurement error imparts a downward bias to β leading us to underestimate the impact of political connections on revenue (Aigner 1973, Khwaja and Mian 2005).

measure and this produces very similar results (we report some of these in the Appendix and the rest are available upon request).

4.2 Identification Strategy

Accounting for time-invariant lobbyist characteristics

The estimation of equation (1) by OLS is undermined by several problems. Firstly, the presence of unobserved individual ability is likely to impart an upward bias to the estimate of β . It seems reasonable to think that high ability individuals will be more likely to obtain the positions as political staffers. This differential ability will then underpin the revenue premium between lobbyists with and without experience as political staffers¹¹. Secondly, β may capture the value of the general skills, information and experience acquired on-the-job as a political staffer as well as the value of a connection to a specific politician¹². In other words, equation (1) is not well-designed to separate the 'what you know' from the 'who you know'.

The first step in our identification strategy therefore focuses on accounting for an individual specific dummy, which we can introduce since we observe lobbyists across multiple time periods:

$$R_{it} = \alpha_i + \beta P_{it} + \mathbf{X}'_{it} \cdot \theta + \gamma_t + \epsilon_{it} \quad (2)$$

where α_i has been added as the lobbyist fixed effect. Accounting for α_i makes our identification strategy reliant on shifts in the count of P_{it} . In essence we are considering how events in the politician's career affect the revenues of their former staffers working in the lobbying industry.

Naturally, the most common transitions in our sample are exits from politics. As argued earlier, an exit should render the lobbyist's political connections obsolete since the politician in question no longer has legislative influence. On the other hand, the 'what you know' should be unaffected by the politician's exit and therefore part of the time-invariant individual fixed effect.

¹¹Even amongst the group of ex-political staffers there may be sorting according to ability. That is, high ability individuals may find employment with the most successful politicians. We return to this point in our later discussion of shared trends between politicians and their affiliated lobbyists.

¹²Remember that in our sample we do not observe individuals' lobbying revenue *before* they acquire government experience.

Figures 2a and 2b show the number of lobbyists in the sample affected by the exit of a connected politician¹³. In total there are 233 lobbyists affected by these exits (88 for Senate exits, 145 for House exits), representing 20.9% of all ex-staffer lobbyists. Approximately 50% of Senate exits and 60% of House exits are due to voluntary retirement of politicians. The next largest group of exits occurs as a result of defeats at re-election. The remainder of the exits is made up variously of lobbyists affected by politicians who die, leave due to a scandal or run for another office (either successfully or unsuccessfully)¹⁴.

Identifying a comparison group

Equation (2) identifies the effect of P_{it} by testing whether lobbyists who experience a loss of a connection to a serving politician at time t also experience a shift in their revenues in comparison to lobbyists whose P_{it} does not vary at time t . This latter group of lobbyists whose personal connections do not vary at t represent a de facto comparison group in this regression and can be classified into two sub-groups. These are firstly other ex-staffers (who have previous experience of political employment but are not exposed to a change in P_{it}) and secondly the 'never-connected' lobbyists with no recorded experience of political employment and a P_{it} that is always set at zero.

Since most lobbyists do not have a recorded connection, the second group accounts for most of the sample. One potential problem in estimating β from equation (2) is that the revenues of lobbyists who never have an active connection may have different trends than the revenues of ex-staffers. This could happen, for instance, if political connections become more important over time. Figure 4 shows that this is indeed the case for our sample. Revenues for the group of ex-staffers grow strongly compared to those lobbyists with no history of employment in Congress. Practically, the presence of these differential group trends is likely to impart a negative bias to our estimate of β ¹⁵. We therefore allow the time

¹³Unfortunately, we do not have enough scope to use a Regression Discontinuity Design(RDD) which exploits the quasi-randomness of winning or losing elections by close margins. While there are number of Senate and House members who win or lose re-election by close margins the density of affiliated lobbyist observations is insufficient to support an RDD approach.

¹⁴Figures 3a and 3b break down exits by the number of politicians rather than by the number of affected lobbyists. In total, 38 Senators and 104 Representatives exit Congress. This indicates that the exit variation among lobbyists is spread out across a range of politicians rather than being concentrated in a few major political figures.

¹⁵This is because not accounting for these group trends will imply that changes in P_{it} are associated with the overall

effects to be different for ex-staffers and the 'never connected' group of lobbyists. This leads to the following specification:

$$R_{it} = \alpha_i + \beta P_{it} + \mathbf{X}'_{it} \cdot \theta + \gamma_t^g + \epsilon_{it} \quad (3)$$

where γ_t^g is a period dummy for group g -i.e. ex-staffers versus lobbyists with no recorded history of Congressional employment. In practice, accounting for such group specific time dummies is equivalent to running equation (2) only on ex-staffers. This last approach is the one that we take in our main specifications¹⁶. Since the main focus of the paper will be specifications conditioned on the sample of ex-political staffers we suppress γ_t^g in further equations.

Nationwide political shocks are also an issue when considering the choice of a comparison group. Congressmen exits are likely to be correlated with shifts in party influence that can have an independent effect on the ability to generate revenue. For example, the revenue of a Republican lobbyist whose connected politician exits Congress could be independently affected by the fact that Republicans in general may hold less influence as a result of the same nationwide shock that contributed to the exit. To identify the causal effect of the connection to a particular politician, we need to ensure that the variation associated with politician exits is independent of the variation over time associated with party or chamber affiliations. To account for this we introduce party-chamber time dummies, to make our specification look as follows:

$$R_{it} = \alpha_i + \beta P_{it} + \mathbf{X}'_{it} \cdot \theta + \gamma_t^{pc} + \epsilon_{it} \quad (4)$$

where the new term γ_t^{pc} is a time effect by the group of the lobbyist, p indexes the party that the lobbyist is affiliated (Democrat or Republican) with, and c indexes the Chamber where the lobbyist's former political employer serves (either the House or the Senate). The inclusion of these effects means that our comparisons of revenue are being made on a within-party and within-chamber basis. Hence, the identifying assumption in equation (4) is that the revenue of lobbyists suffering a loss in connection would have evolved similarly to the revenue of lobbyists connected to non-exiting politicians in the same party and chamber combination.

upward trend in revenues for lobbyists who are former Congressional staffers. Since these changes in P_{it} are based on exits, the loss of a personal connection is conflated with the positive group trend - hence the negative bias to our estimate of β .

¹⁶However, we have checked that the results are essentially identical and are available upon request if we use the full sample of lobbyists and include group specific time dummies.

Timing Effects

Equation (4) captures the average effect over time of being connected to a serving politician. We may want however to study how lobbyists' revenues evolve in the individual periods before and after the change in P_{it} . To do this we can estimate:

$$R_{it} = \alpha_i + \sum_{l=-L}^L \beta_l P_{i(t_0+l)} + \mathbf{X}'_{it} \cdot \theta + \gamma_t^{pc} + \epsilon_{it} \quad (5)$$

where t_0 represents the transition period (i.e. when a politician exited Congress) and l flags the periods either before or after this period. This provides a set of time effects leading up to and following the transition period. We can use these, for instance, to study how long any estimated drop in revenue lasts.

As well as being interesting in their own right, the estimated time effects can allow us to examine the presence of shared trends between lobbyist and politician. While we are accounting for flexible party-chamber time effects, a potential threat to identification in equation (4) is that the average effect we observe could be the result of a trend shared between a politician and their affiliated lobbyists. This could happen, for instance, if politicians and lobbyists sort together according to shared levels of ability and this affects trends as well as levels. For example, the revenues for a lobbyist linked to a low ability politician could already be trending down even before that politician exits. Hence in equation (4) the changes in P_{it} could be picking up the presence of these shared trends rather than the direct impact of a politician's exit. An absence of observed pre-existing trends would instead be evidence in favor of our identification strategy in equation (4).

A related issue that equation (5) allows us to examine is the existence of abnormal levels of revenue in the periods leading up to a politician's exit from Congress. If a departure from Congress is anticipated, a connected lobbyist could exert more effort in the few remaining periods in which the connection is still valuable. The average effect estimated in equation (4) could therefore reflect some of these anticipation effects. Empirically, this can be examined in a period-by-period analysis following the model outlined in equation (5).

Politician behavior could also give rise to the existence of abnormal levels of revenue just before an exit. However, the direction of this type of 'swansong effect' is a priori not clear. For example, a politician interested in leaving a public policy legacy in his final periods of office may be a less

attractive target for lobbying and this could reduce the demand for the services of his affiliated lobbyists. Alternatively, exiting politicians could become a more attractive target for lobbying since they no longer face decision-making incentives arising from re-election¹⁷. Again, we can test for this by examining the pattern of time effects nested in the equation (5) specification.

Equation (5) also allows us to study the possibility of reverse causality between lobbyists' revenue and politicians' exits. Potentially, our identification could be compromised if lobbyists' actions or characteristics correlated with the revenue that they generate have a direct effect on the likelihood of the connected politician remaining in office. This could be a case, for instance, if politicians rely on campaign contributions or political activism by their affiliated lobbyists to achieve reelection. Estimating equation (5) will allow us to understand whether there is evidence that, in the periods before a politician's exit, the revenue by connected lobbyists was already decreasing and therefore directly or indirectly affecting the politician chances of reelection¹⁸.

Comparative Statics: The Power of the Connected Politician

Our interpretation of β is that it represents the causal effect on a lobbyist's revenue of being connected to an individual holding political power. If this interpretation is correct, we should expect individuals connected to more powerful politicians to suffer a larger drop in lobbying revenue when those politicians leave Congress. To examine this, we estimate the following equation:

$$R_{it} = \alpha_i + \beta_1 P_{it}^1 + \beta_2 P_{it}^2 + \mathbf{X}'_{it} \cdot \theta + \gamma_t^{pc} + \epsilon_{it} \quad (6)$$

where P_{it}^1 and P_{it}^2 capture links to currently serving *not very powerful* and *very powerful* politicians respectively. Our prediction is therefore that $\beta_1 < \beta_2$, since connections to more powerful politicians should translate into higher lobbying revenue than connections to less powerful politicians.

¹⁷See Besley (2004) for a model describing how politicians' legislative choices may be affected by the prospect of re-election.

¹⁸We also study in Section 6 a small number of unexpected and idiosyncratic exits which are unlikely to be affected by this reverse causality concern.

5 Main Results

We now discuss the results of estimating the models outlined in the previous Section.

5.1 Average Effects of Revolving Door Connections

Table 2 displays the estimates of empirical models (1), (3) and (4). In the first column we have the estimates for the naïve model implemented using the full sample of active lobbyists (i.e. both ex-staffers and non ex-staffers). As expected, we find that lobbyists connected to serving politicians generate significantly higher revenue. In particular, ex-staffers for serving Senators are associated with 63% higher revenues than lobbyists not connected to serving Senators. Similarly, lobbyists connected to serving Representatives are associated with 56% higher revenues. Clearly, these estimates do not capture the casual effect of connections to serving politicians but instead represent a combination of ability premia, human capital and connection effects.

In the second column we restrict our estimation to a sample of former congressional staffers and we add individual lobbyist dummies. As we mentioned earlier, this is equivalent to keeping the full sample and introducing different time dummies for ex-staffers and non-ex-staffers. In this regression, the comparison group for a lobbyist connected to a politician exiting Congress is other ex-staffers not suffering such loss, instead of other lobbyists more generally. Since the time-invariant ability premia and accumulated human capital are now included in the individual specific dummies, it is unsurprising to find that the coefficients for the Senator and Representatives variables become smaller. Being connected to a serving Senator is now associated with 23% higher revenue, whereas the point estimate for a connection to a serving Representative is a only marginally significant 10%. The difference in the estimated effects across the two chambers is consistent with the notion that it is the political power of the connected serving politician what determines a lobbyist's ability to generate revenue. Senators are typically more powerful than Representatives. For example, there are four times fewer Senators than Representatives and Senators are uniquely able to wield filibuster powers that can slow down or completely block legislation.

As discussed earlier, other ex-staffers may not represent a valid control group for a lobbyist connected to an exiting politician. In the next three columns we successively narrow the control groups and we

also control for lobbyist experience effects. In the third column we add a full set a party-time dummies which allow demand shocks to differ across former Republican and Democratic ex-staffers. In other words, we compare the revenues of lobbyists exposed to a change in P_{it} against non-exposed lobbyists on a within-party basis. Similarly, the inclusion of chamber-party-time effects in the fourth column means that lobbyists are being compared on a like-for-like basis according to both the chamber and the party of the connected politician. In the fifth column we also control for lobbyist experience and its square. In this last and most comprehensive regression the exit of a connected Senator is associated with 24% lower revenue.

Remarkably, the inclusion of extra controls only translates into very minor shifts in the coefficients for the Senators and Representatives variables. Since our data is non-experimental, a lingering source of concern is always the possibility of lobbying demand shocks correlated with the exit of connected politicians. We find, however, that accounting flexibly for the most likely candidates in this respect (i.e. shocks that affect differently lobbyists connected to politicians in different party-chamber combinations) only seems to have a negligible effect on our estimates. This suggests that politician exits are in practice a source of variation which is separate from party and chamber-related revenue shifts. This fact, together with the evidence presented below, reinforces our belief that we are estimating the causal effects of political connections on lobbying revenue.

Our estimate for connections to serving Senators is economically as well as statistically significant. Evaluated at the average value of the revenue generated by an ex-staffer during an average year in our sample (\$1,396,400 from Table 1), our estimate suggests that an active Senate connection translates into approximately \$335,000 per year. However, we believe that the median, rather than the mean, value of revenue represents a better measure for the typical ex-staffer. The reasoning is that, as Figure 5 shows, the distribution of unweighted revenue has a very long right tail, with the median value being \$740,000, slightly more than half of the mean value. Evaluated at the median, our estimate suggests that an active Senate connection translates into approximately \$177,000 per year higher revenue for the value of an ex-staffer ‘practice’¹⁹.

¹⁹What share of these \$177,000 reverts in terms of salary to the ex-staffer holding the connection is of course difficult to tell. Under the assumption that each of the lobbyists included in a contract gets rewarded according to the value of the assets that he contributes to the team, there would be a proportional loss in earnings for the individual ex-staffer.

5.2 Timing Effects

In Table 2 we have presented evidence on the effect of political transitions on lobbyist revenue *averaged over time*. In essence, we were comparing lobbyists revenues in the average period before and average period after a given change in P_{it} . In Figure 6 we plot the results of estimating equation (5) for connections to serving Senators. We use a window of twelve time periods (i.e. 6 years) around the time at which a politician transition takes place²⁰. We have normalised the baseline to be period t_0 , the last period in which a Senator was still serving in Congress. The estimates should therefore be interpreted as relative to period t_0 .

Several conclusions emerge from Figure 6. Firstly, there is no evidence of either an upward or a downward trend in the periods leading up to a connected politician's exit. We therefore find no evidence to suggest that our estimated average effects are due to the presence of shared trends between the fortunes of lobbyists and the politicians that they are connected to. Secondly, Figure 6 also seems inconsistent with the notion that abnormally high revenues occur prior to a politician's exit. It appears therefore that anticipation effects do not seem important, either because most exits are unanticipated or because lobbyists are unable or unwilling to extract higher revenue while a connection is still valuable²¹. Thirdly, there is also no evidence of reverse causality from lobbying revenue into the connected politician's exit. Note that period t_0 captures the last semester in which a politician served in Congress. For politicians leaving at the end of their term, perhaps due to a reelection defeat, this comprises the period between July and December which includes the November election date. We find that lobbying revenue during that semester, which could have potentially affected the politician reelection chances, is very similar to that of previous semesters. It is only in the following semester, *once the Senator has already left office*, that the connected lobbyist revenue collapses. Thus, the timing of the drop in revenues relative to the timing of the politician's exit is inconsistent with the existence of reverse causality.

Our last conclusion from Figure 6 is that the negative effect of a connected politician's exit is highly persistent. There is evidence of a drop of around 50% in the period immediately after a politician's

²⁰Lobbyists appear in the sample for an average of 7 periods or 3.5 years in total. Small sample sizes therefore prevent us from widening the 6-year window further.

²¹The absence of such anticipation effects is perhaps not completely surprising if we regard the revenue premium associated with the political connection as a rent that is a byproduct of years of past government employment. By its own nature, a rent of this kind is difficult to substitute once it is lost.

exit followed by some reversion. However, lobbyists are still subject to a 20% drop in revenues even 6 semesters after a politician’s exit. This suggests both that a lobbyist’s link to their former employer is a major component of their overall political network and revenue-raising abilities and that lobbyists are not able to compensate the loss of such valuable connection using unobserved margins of adjustment²².

5.3 Effects Disaggregated by Political Power

Our interpretation of the average effects in Table 2 is that being connected to an individual holding political power allows a lobbyist to generate higher revenue. If our interpretation is correct we should expect individuals connected to more powerful politicians to suffer a larger drop in lobbying revenue when those politicians leave Congress. To examine this, we now split connections to serving Senators and Representatives by variables that are arguably good proxies for the power that politicians hold.

Firstly, we split politicians by their level of seniority in the Chamber where they serve. Given the way that Congress is organized, higher seniority is associated with more important implicit and explicit leadership responsibilities. Higher seniority may of course be also correlated with the ability of a politician, which again is associated with higher political power. We use the 12 and 20 years cutoff points to separate exiting Representatives into three different groups of approximately equal sample size. Similarly, we use the 12 and 22 years cutoff points to separate connections to serving Senators into three different groups²³.

We display the results disaggregated by politician seniority in Table 3. We find that only those lobbyists connected to Senators in the top two tiers of seniority suffer a drop in revenue when that Senator leaves office. The estimated effects are 24% and 32% for the top and middle groups respectively,

²²One last -perhaps not very plausible- hypothesis that we can rule out on the basis of Figure 6 is the possibility of lobbyist revenue as a form of ‘payback’ that ex-staffers turned lobbyists may receive from clients to reward favors granted while in public service. There is no reason that such payback should change discontinuously around the period in which the lobbyist previous employer exits Congress.

²³Note that we allocate a politician to a seniority group depending on his years of service. This implies that our connections variables are time-invariant while a politician is serving and only change when the politician leaves Congress. Secondly, the slight variation in cut-off points across Senators and Representatives is due to the different distributions of tenure for each category of politicians *immediately prior to leaving Congress*.

and only 10% for the most junior Senators²⁴.

Remember that in Table 2 we found that the average effect for Representatives is small and statistically insignificant. We find in Table 3 that lobbyists connected to the most senior Representatives do suffer a 24% statistically significant drop in revenue when those Representatives leave Congress. By contrast, lobbyists connected to Representatives in the bottom two tiers of the seniority distribution are unaffected by such exits²⁵.

Another way to examine the hypothesis that it is political power what matters is to split politicians by their committee responsibilities. Ideally we would like to create a different variable for connections to politicians in each of the different committees in the House and Senate. Unfortunately, our sample sizes do not allow for such level of disaggregation. We therefore decided to concentrate on the two most important committees in House and Senate. The 'Finance' and 'Appropriations' committees in the Senate and the 'Ways and Means' and 'Appropriations' committees in the House are widely regarded as among the most (if not the most) important committees (Grosseclose and Stewart 1998, Stewart and Grosseclose 1999). Secondly, these are committees with budget responsibilities and therefore particularly prone to be lobbied. These are also committees where a reasonably high number of politicians in our sample serve, which allows us to have sufficiently big sample sizes to study these committees separately from the rest. We split exiting Senators by whether they serve in the 'Finance' committee, in the 'Appropriations' committee or in neither of these. We split exiting Representatives by whether they serve in the 'Ways and Means' committee, in the 'Appropriations' Committee or in neither of these.

Table 4 displays the estimated results. We find that lobbyists connected to Senators serving in the 'Finance' and 'Appropriations' committee suffer a loss in revenue when those Senators leave office. Similarly, we find that lobbyists connected to Representatives serving in the 'Ways and Means' committee suffer a loss in revenue when those Representatives leave office. On the other hand, politicians serving in neither of these committees do not affect their affiliated lobbyists' revenue when they leave Congress²⁶. Note that the estimates in Tables 3 and 4 are remarkably consistent across specifications.

²⁴However, given the large standard errors the estimated effects are not statistically different from each other.

²⁵The top tier is statistically different from the middle and bottom tiers at the 10% level.

²⁶In the Senate, the 'neither' group is statistically different from the 'Finance' and 'Appropriations' groups at the 1% and 10% levels respectively. In the House, the 'neither' group is statistically different from the 'Ways and Means' group at the 1% level.

As discussed earlier, this fact reinforces our belief in the identification strategy behind this regression.

Overall, we find that both across chambers and within chambers there is support for the notion that being connected to a more powerful politician leads to higher lobbyist revenue²⁷.

6 Additional Evidence

6.1 Effects of Unexpected Exits from Congress

The estimated effects from Section 5 rely on the identifying assumption that the revenue of a lobbyist suffering a loss of connection would have evolved similarly to the revenue of a lobbyist not suffering such a loss. Identification is therefore compromised if changes in the lobbyists' ability to generate revenue are correlated with the likelihood of exits from Congress by the connected politicians. In Table 2 we have shown that accounting flexibly for the main source of concern in this respect -nationwide shocks that affect differently lobbyists affiliated to politicians in different party/chamber combinations- produces virtually identical results. Secondly, Figure 6 has shown that the revenue of lobbyists connected to exiting politicians does not display differential trends or takes abnormal values in the periods prior to the exit. Nevertheless, we see some value in confirming our main findings using a subsample of exits that can be argued to be both idiosyncratic and unexpected.

In Figures 2a and 2b we have divided exits into different categories, depending on the reasons that caused the exit. The biggest category is 'Retirements' and, other than 'Defeats in Re-election', most categories contain a relatively low number of exits. Table 5 shows that exits due to retirement have a very similar effect on affiliated lobbyists compared to exits due to other reasons.

Focusing exclusively on the reason for exit, however, is not necessarily very informative regarding how unexpected or idiosyncratic an exit was. For instance, some Senators may retire strategically when faced with opinion polls indicating likely defeat in a reelection battle, while other Senators may leave unexpectedly due to sudden shocks in personal circumstances. To evaluate this, we studied the biographies of the 38 individuals who exited the Senate during our sample period. We identified six Senators

²⁷We do not regard Tables 3 and 4 as independent pieces of evidence. Seniority and committee assignments are strongly correlated, which prevents us from including both of them in the regression at the same time. Our main conclusion is that whether we measure political power in one way or another we obtain very similar findings.

who left the Senate unexpectedly and for completely idiosyncratic reasons (deaths, deaths of relatives, political scandals, etc.). In the Appendix, we summarize the biographies of these Senators, especially in relation to the circumstances surrounding their exits from Senate. The common characteristic among these politicians is that their exit from Congress was unrelated to nationwide political shocks and could not have been reasonably expected by their affiliated lobbyists. In two cases (Senators Chaffee and Coverdell) the exits were caused by sudden illnesses that unfortunately ended in death within a few days. In the other four cases (Senators Thomas, Thompson, Torricelli and Lott) each politician had clearly announced their intention to continue serving before making an abrupt change in their decision. Our contention therefore is that there was no scope for affiliated lobbyists to anticipate or prepare for these exits.

We proceed similarly with Representatives, although given that our results are much weaker for this group of politicians we do not expect to find very strong effects for unexpected exits from the House.

In Table 6, we study these unexpected exits separately from the other exits. Several conclusions emerge from this table. Firstly, even for the small subsample of unexpected and idiosyncratic exits, our main findings are confirmed: being connected to a serving Senator is associated with significantly higher lobbying revenue. Secondly, the coefficients associated with Other Exits are very similar to the average effects from Table 2. This suggests that our core findings were not driven by the small subsample of Unexpected Exits. Thirdly, the point estimate for the Unexpected Exits variable is more than twice the size of the estimate for the Other Exits variable. This difference is consistent with the notion that lobbyists' decrease in revenue may be larger when they do not have time to anticipate the connected politician's exit from Congress. However, the coefficients associated with both types of exits are not statistically different from each other (given the large standard errors), so evidence in favor of this notion is suggestive at best. Furthermore, remember that we failed to find any evidence of anticipation effects in Section 5.2.

Overall, our conclusion is that the main findings in Section 5 are unlikely to be due to correlations between the likelihood of exit from Congress by the connected politicians, and unobserved shocks to the lobbyist ability to generate revenue.

6.2 Exits from the Lobbying Industry

The models and estimates presented above show a strong effect of changes in political connections on lobbyist revenues. As a result of this revenue effect, changes in political connections could also affect an ex-staffer’s decision to stop working in the lobbying industry. To study whether this is the case, we model lobbyist exits from the industry using a Cox semi-parametric proportional hazard model. In the Cox model, the covariates shift the baseline hazard proportionally, through the function:

$$\phi_{it} = \rho P_{it} + \mathbf{X}'_{it} \cdot \delta + \gamma_t^{pc} + \zeta_{it} \quad (7)$$

where P_{it} indicates a current political connection to a Senator or Representative; X_{it} is a vector of controls; and γ_t^{pc} is the set of party-chamber time effects.

Exit from the lobbying industry is defined in terms of a lobbyist’s last appearance in our panel. Specifically, we classify lobbyists as having exited the industry if they do not appear in the last three periods of our data (that is, they are inactive as working, registered lobbyists for at least 18 months). In order to implement this definition of exit we therefore need to truncate these last 3 periods from our analysis and base our work on the 19 periods between the first semester of 1998 and the first semester of 2007. Overall, 36.7% of the politically connected lobbyists exit over the 1998-2007 period and the average time spent working in the industry is 7.6 semesters.

Table 7 reports the results of estimating equation (7) using as before our main sample of ex-staffers. Across all models we observe that the likelihood of exiting the industry is significantly lower for lobbyists connected to serving Congressmen. For example, column (1) indicates that the hazard rate for a lobbyist with an active Senate connection is just 13% of the hazard rate for lobbyists without such connection. We find very similar effects for lobbyists with an active House connection. In columns (2) and (3) we add different time effects for different party and chamber combinations and again find very similar results.

As an additional check, in column (4) we only consider a sample of ex-staffers entering the lobbying industry after 1998. That is, we drop all those lobbyists who were already active in 1998 and may therefore be left-censored. This specification again shows similar effects for both Senate and House connections with hazard ratios of 18% and 4% respectively.

Taken overall, our evidence on exits from the industry is consistent with our earlier findings for lobbyist revenues. It also suggests that those estimates may be affected by some downward bias since lobbyists suffering a particular high drop in revenue may be more likely to exit the industry and therefore will fail to contribute towards our estimated revenue effect.

7 Concluding Remarks

In this paper we show that ex-government officials extract monetary rents in terms of generated lobbying revenue from their personal connections to elected representatives. In particular, we find that lobbyists with past working experience in the office of a US Senator suffer a 24% drop in revenue -around \$177,000- when their ex-employers leaves office. The effect is immediate, it is discontinuous around the exit period and it persists in the long-term. We show that our findings are not consistent with the existence of shared trends between politician and lobbyist, 'swansong effects' or reverse causality. Consistent with the notion that lobbyists sell access to powerful elected officials, the drop in revenue increases with the seniority of and committee assignments power held by the Senator immediately prior to leaving office. For lobbyists connected to US Representatives we find similar if weaker effects. Overall, our findings suggest that access to serving officials is a scarce asset that commands a premium in the market for lobbying services.

We believe that, if anything, we are undercounting the value of the political connections that revolving door lobbyists acquire while in public service. In general, we would expect staffers to develop a wide range of relationships with both elected representatives and other staffers. Our study focuses, however, only on the relationships with direct employers, an important if only partial measure of the full set of connections held by revolving door lobbyists.

While we provide no direct evidence on the existence of a 'payback' for lobbying clients, we believe that it is unlikely that the rents extracted by ex-staffers are politically neutral. The fact that corporate or interest group clients are eager to hire the services of individuals with a past history of working for powerful politicians suggests that they must believe that they are getting a return in terms of favorable legislative outcomes.

Our findings have implications in terms of staffers career incentives. The finding that a large portion

of what makes revolving door lobbyists particularly attractive is perishable has the implication that staffers may have relatively short careers. Once a connection to a powerful Senator has been established, a staffer may want to move into lobbying and cash in this unique asset while it is still valuable.

In terms of the selection of public servants, we have established the existence of rents associated with (post-)government employment. Our findings suggest that it may be a particular type of individual who may be attracted to public service: not necessarily somebody particularly able or ideology-minded, but somebody adept at the creation and maintenance of good relations with employers that can be later converted into revenue.

Lastly, our findings have the potential to inform policy. As discussed, our findings indicate that staffer political connections are a perishable asset. In other words, they last only as long as the connected politicians remain holding office. As a result, legislation requiring 'cooling off' periods when moving from public office to lobbying has the potential to significantly decrease the attractiveness of this second career for government officials.

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Appendix

In this appendix we provide additional information on various segments of the data used to construct the lobbyist-level panel used in the paper. We also provide more details on the name matching procedure used to link the databases on lobbying reports and political employment.

Lobbying Reports

We use the LDA data sourced from the Senate Office of Public Records (SOPR) and compiled by the Centre for Responsive Politics (CRP) as part of their 'Open Secrets' database. The CRP is a non-profit and non-partisan organization with a stated mission of collating information on all types of politically related expenditures (i.e. campaign contributions, lobbying expenditures, member personal finances, etc.) and facilitating the availability of this data. We use the lobbying reports provided as part of their bulk data facility. This is the full universe of available LDA-sourced reports (approximately 35,000 per year) that CRP has formatted, cleaned and modified. For example, the CRP reconciles different types of reports (taking account of amendments to original mid-year and end-of-year reports) and constructs lobbyist, firm and client identifiers. We conduct further cleaning and consolidation of the CRP identifiers in cases where the same individuals are split across different identifier codes. The LDA requires the reporting of lobbying spending above a \$10,000 threshold and rounded to the nearest \$20,000. In the case of self-filing organizations, the LDA requires the reporting of all expenses made on lobbying activities, including payments to outside entities as well as in-house employees.

Political Employment Database

Columbia Books Lobbyist Directory

Columbia Books publishes a comprehensive directory of Federal lobbyists under its suite of *Lobbyists.info* products. This directory initially began as a hard copy directory (titled *Washington Representatives*) containing contact information on lobbyists and potential clients published in the late 1970s. Since this time Columbia Books has expanded the directory with further information on career histories, biographical information, educational background and areas of expertise. The publisher then consolidated

this directory in electronic form in 2006 as *Lobbyists.info* with daily updates and related supplementary databases.

This online version of the directory contains records on approximately 15,000 lobbyists. The career history information in *Lobbyists.info* includes the employer, job title and period of tenure for lobbyists' current and previous jobs, inclusive of private and public sector positions. We extract information on lobbyists who have had periods of political employment (that is, working as congressional staffers, in government agencies or as part of Presidential administrations) which is then matched by name into the CRP Lobbying Reports data.

LegiStorm *Congressional Staffer Salaries*

The second political employment database that we use is the LegiStorm *Congressional Staffer Salaries* (CSS) database. Based on Capitol Hill, LegiStorm is a company that aims to improve the availability of political information on the operations of the US Congress. For example, it provides easy-to-use versions of public data on Congressional remuneration; privately financed travel for Congress members and staff; financial disclosures; foreign gifts to members; and spending earmarks attached to bills.

The CSS database that we use is obtained by LegiStorm from published reports by the Secretary of the Senate and the Clerk of the House of Representatives. These reports are not actually made available in electronic form and LegiStorm takes this step of transferring the information from hard copy into an electronic format. As part of this process, LegiStorm also creates consistent set of identifiers for the staffers, offices and politicians that appear in the database.

LegiStorm's database contains information from late 2000 onwards. The main information provided is: staffer name; start and end dates for a given employment spell; office of employment within Congress; the job title or position; and the total salary amount for a given job spell. The full staffers database contains information on approximately 90,000 staffers over a nine-year period. This large number of staff is due to the inclusion of non-partisan institutional staff such as Capital Police. Our analysis focuses on the pool of approximately 40,000 staffers working in political or policy related offices over the 2000-2008 period.

Name Matching of Lobbyists

The full list of lobbyists represented in the CRP lobbying reports database is matched with people appearing in our two political employment databases, *Lobbyists.info* from Columbia Books and *Congressional Staffer Salaries* from LegiStorm. The name matching is implemented using a string-based algorithm which cleans the raw names for punctuation and shortened names (for example, "JIM" becomes "JAMES" and so on). The same algorithm is applied to each set of names and each political employment database is separately matched with the CRP lobbying reports list. The subsequent matches are then compiled into one list of political employees-turn-lobbyists. Middle names or initials are used as part of the name matching procedure where available.

We then score matches on their accuracy according to two criteria. Firstly, each match receives a 1-4 score based on how often a particular first or last name appears. We call this a 'name frequency' score. Commonly occurring names such as 'SMITH' are given a score of 4 while the least common names are given a score of 1. This process is repeated separately for first and last names to produce a 2-8 score. For example, a name such as 'JOHN SMITH' is given an overall score of 8 since it is comprised of two common names while 'MILLICENT SMITH' receives a score of 5 (+4 for the common last name but +1 for the relatively uncommon first name).

Secondly, we score the matches according to how well the timing of employment transitions links up across the data. Staffers leaving employment in the Congress should appear in the lobbying reports data within 1-2 years of their final employment spell. We construct a 0-1 flag for whether the timing of the transitions is consistent across the data. In the final stage of the matching we then manually check the accuracy of the matches characterised by very common names and/or inconsistent timing. We do this by manually cross-referencing names with online CVs and biographies. This final step of manual checks is done for all names with a name frequency score above 5.

Congressional Politicians

Our final major dataset contains information on the service and characteristics of politicians in the House and Congress since the beginning of the available lobbying reports in 1998. The specific data used is Stewart and Woon's (2009) compilation focusing on committee membership and updated periodically from the Congressional Record. This membership data here contains periods of service and reasons

for exit (retirement, defeat for re-election etc) where applicable. The politicians appearing in the data have been allocated the ICSPR 'member id' that is common across political science studies in this area. We have name matched the list of politicians given in the political employment databases against the Stewart and Woon (2009) list using the same string-based algorithm developed for the lobbyist-level matching.

Choice of Unexpected Exits - Senators

John Chaffee

John Lester Hubbard Chaffee was a Republican politician. He became a United States Senator from Rhode Island in 1976. He served during four terms. He was diagnosed with an incipient heart condition in late 1998, a fact that only a few intimates learnt about. On 23 October, 1999 Coverdell had to cancel a trip to Boston as he felt unexpectedly unwell. The following day he died of a congestive heart failure. His death was described by the media as 'sudden'²⁸ and 'unexpected'²⁹.

Paul Coverdell

Paul Douglas Coverdell was a Republican politician. He became a United States Senator from Georgia in 1992. On July 15, 2000 Coverdell complained of a severe headache. He was admitted to a hospital that same day, and a cerebral hemorrhage was diagnosed. He underwent surgery on July 17 and passed away the following day. His death was also regarded as unexpected³⁰.

Graig Thomas

Graig Lyle Thomas was a Republican politician. He became a United States Senator from Wyoming in 1995. He was treated for pneumonia shortly before his reelection in November 2006. Right after the election it was announced that he instead suffered of leukemia. He immediately underwent treatment, and soon felt well enough to go back to work. However, a second bout caused his death seven months

²⁸<http://www.projo.com/words/stor1229.htm>

²⁹<http://www.washingtonpost.com/wp-srv/onpolitics/elections/gop2000guide/states/ri.htm>

³⁰<http://abcnews.go.com/Politics/story?id=123321&page=1>

later on June 4, 2007 ³¹.

Fred Thompson

Fred Dalton Thompson was a Republican politician. He became a United States Senator from Tennessee in 1994. He stated his willingness to run for reelection in 2002 shortly after the attacks of September 11, 2001. In late January 2002 his daughter died suddenly of a heart attack. According to sources close to him, he was devastated. In March 2002 he stated that he would not seek reelection the following November³². He left office nine months later. In the final months of his Senate term, he joined the cast of *Law & Order*, a popular television series. Other post-Senate activities included being the Chair of the International Security Advisory Board, being a radio analyst and talk host, and being a presidential candidate³³.

Robert Torricelli

Robert Guy Torricelli was a Democratic politician. He became a United States Senator from New Jersey in 1997. Allegations were made in 2000 that Torricelli had received expensive gifts from businessman David Chang -a businessman linked to North Korea- in exchange for political favors, including arranging a meeting with the South Korean Prime Minister³⁴. A long-running federal criminal investigation concluding in early 2002 declined to prosecute, on the basis that Mr. Chang would not have been a reliable witness. Feeling vindicated, Senator Torricelli started to prepare for his reelection campaign. For months, Torricelli was well ahead in the polls of his Republican rivals. However, in late July a Senate Ethics Committee severely admonished his behavior³⁵. The result of this inquiry was widely credited with the subsequent decline in electoral prospects of the serving Senator. Faced with all but certain rejection by voters, Torricelli quit the reelection bid in late September, five weeks before the election. He was replaced in the ballot by another Democrat, Frank Lautenberg, who eventually won the election. Torricelli left office in December 2002.

³¹http://www.nytimes.com/2007/06/05/washington/05cnd-thomas.html?_r=1&hp

³²<http://abcnews.go.com/Politics/story?id=121191&page=1>

³³<http://www.weeklystandard.com/Content/Public/Articles/000/000/013/528aylls.asp>

³⁴<http://www.washingtonpost.com/ac2/wp-dyn/A20602-2001May12>

³⁵<http://www.nytimes.com/2002/07/31/politics/31INQU.html>

Trent Lott

Chester Trent Lott was a Republican politician. He became a United States Senator from Mississippi in 1989. He served as Senate Majority Leader between 1996 and 2001, and as Senate Minority Leader between 2001 and 2003. In 2006 Lott was reelected with 64% of the vote. In late November 2007, Lott unexpectedly announced that he would resign by the end of the year³⁶. Media sources reported that the resignation had been partly due to the fact that on January 1, 2008, new rules would require a two-year cooling off period for lawmakers who wish to become lobbyist. It was alleged that by resigning before 2008, Lott would ensure being subject to a one-year cooling off period³⁷.

Among the six Senators selected Trent Lott's exit is probably the least 'exogenous', since he left voluntarily to become a lobbyist. We decided to include him because his resignation was completely unanticipated and he left Congress very shortly afterwards. Reassuringly, we find very similar qualitative results if we exclude him from the subsample of Unexpected Senators Exits.

Choice of Unexpected Exits - Representatives

Frank Ballance

Frank Winston Ballance Jr was a Democratic politician who represented North Carolina's 1st District and served briefly for one term between 2003 and 2004. On June 9th 2004 he resigned from Congress stating that a neuromuscular disorder prevented him from carrying out his duties. This followed an initial diagnosis of myasthenia gravis (a muscle weakness condition) in February 2004³⁸.

Richard Baker

Richard Hugh Baker was a Republican politician who represented Louisiana's 6th District for 11 terms between 1987 and 2008. On January 5th 2008 Baker announced that he would resign and take up a position with the Managed Funds Association lobby group. Baker was obliged to disclose his negotiations with the group under newly introduced ethics rules and stated that the first contact with the

³⁶<http://www.nytimes.com/2007/11/26/us/politics/26cnd-lott.html>

³⁷Note that Lott was allowed to become a lobbyist in 2009, outside our sample period

³⁸<http://www.nytimes.com/2004/06/09/us/national-briefing-south-north-carolina-first-term-congressman-resigns.html?scp=7&sq=frank20ballance&st=cse>

group was in December 2007. Baker exited the Congress on February 2nd 2008³⁹. Similar to the case of Trent Lott above, the inclusion or exclusion of Baker from the sample of unexpected House exits does not affect our qualitative results.

Pat Danner

Patsy Ann Danner was a Democratic politician who represented Missouri's 6th District and served for 4 terms between 1993 and 2001. Danner intended to run for a fifth term but in late May of 2000 she quit the race 22 minutes before the withdrawal deadline citing her breast cancer treatment as a concern. She had earlier announced her prognosis as 'excellent' and made clear her intentions to run in the 2000 elections⁴⁰.

Julian Dixon

Julian Carey Dixon was a Democratic politician who represented California's 28th and 32nd Congressional Districts at different times. He served in the House for 11 terms between 1979 and 2000. He won a 12th term in November 2000 but died of a heart attack on December 8th 2000⁴¹.

Paul Gillmor

Paul Eugene Gillmor was a Republican politician who represented Ohio's 5th Congressional District. He served for 10 terms between 1989 and 2007. He was found dead in his Virginia townhouse on September 5th 2007 after failing to attend a House Financial Services Committee meeting and not responding to repeated telephone calls and e-mails. Medical examiners found evidence of blunt head and neck trauma associated with a fall down stairs. Investigating police ruled out foul play⁴².

³⁹<http://www.washingtonpost.com/wp-dyn/content/article/2008/01/04/AR2008010403519.html>

⁴⁰<http://www.nytimes.com/2000/05/24/us/campaign-briefing.html?scp=3&sq=pat20danner&st=cse>

⁴¹<http://www.nytimes.com/2000/12/09/us/julian-c-dixon-is-dead-at-66-longtime-member-of-congress.html>

⁴²<http://www.washingtonpost.com/wpdyn/content/article/2007/09/05/AR2007090501072.html?hpid=sec-politics>

Tom Lantos

Thomas Peter Lantos was Democratic politician who represented California's 11th and 12th Congressional Districts at different times. He served for 14 terms between 1981 and 2008. Towards the end of his 14th term a routine medical examination uncovered cancer of the esophagus and on January 2nd 2008 Lantos announced he would not run for another term. However, he died on February 11th 2008 and was not able to finish his term as planned.⁴³.

Robert Livingstone

Robert Linlithgow Livingstone was a Republican politician who represented Louisiana's 1st District for 12 terms between 1977 and 1999. After winning re-election in November 1998 he achieved the position of Speaker-elect as the Republican successor to the departing Newt Gingrich. On December 19th 2008 publicly acknowledged extra-marital affairs and relinquished the position of Speaker-elect. This period in late 1998 was characterised by a political campaign by adult magazine publisher Larry Flynt to uncover evidence of personal hypocrisy among Republican politicians in the wake of the Clinton-Lewinsky scandal. Livingstone then formally resigned his seat in the House shortly after on February 28 1999⁴⁴.

Martin Meehan

Martin (Marty) Thomas Meehan was a Democratic politician who represented Massachusetts's 5th District for 8 terms between 1993 and 2007. A few months after winning his 8th term in November 2006 it was confirmed on March 14th 2007 that Meehan was to be offered the post of Chancellor at the University of Massachusetts (Lovell). Meehan formally exited the Congress on July 1st⁴⁵.

Juanita Millender-McDonald

Juanita Millender-McDonald was a Democratic politician who represented California's 37th Congressional District for 6 terms between 1996 and 2007. Five months after winning re-election, she requested

⁴³http://www.nytimes.com/2008/01/03/washington/03lantos.html?_r=1&ref=tom_lantos

⁴⁴http://www.nytimes.com/1999/01/28/us/livingston-to-quit-feb-28.html?ref=robert_l_livingston

⁴⁵http://www.nytimes.com/cq/2007/03/14/cq_2411.html?scp=1&sq=marty20meehan&st=cse

a leave of absence in to deal with her colon cancer and died within a week on April 22nd 2007⁴⁶.

Patsy Mink

Patsy Matsu Takemoto Mink was a Democratic Politician who represented Hawaii's 1st and 2nd Districts at different times. She served for a total of 12 terms between 1965 and 2002 as well as serving in the Carter Administration as an Assistant Secretary of State. She was hospitalized in Honolulu on August 30th 2002 with complications associated with chickenpox. She eventually died from viral pneumonia on September 28th 2002. Her death came too late for her name to be formally removed from 2002 general election ballot ⁴⁷.

Edward Schrock

Edward Lee Schrock was a Republican politician who represented Virginia's 2nd District for 2 terms between 2001 and 2005. On August 30th 2004 he announced that he would not go forward with his attempt at re-election in the forthcoming Congressional contest. This announcement came after claims from a gay rights blog that it had recordings of Schrock soliciting gay prostitutes despite his record as a vocal campaigner against same-sex marriage and gays in the military ⁴⁸.

Finally, it should be also be noted here that we also considered the case of Mark A Foley who exited the House in September 2006 after a sex-related scandal involving explicit text messages and Congressional page boys. However, we considered Foley's case to be extreme since he was said to have a ten-year history of this type of behavior. Any affiliated former staffer could well anticipate a problem. Nevertheless, the inclusion or exclusion of Foley from our sample of unexpected House exits does not qualitatively affect our results.

⁴⁶<http://www.nytimes.com/2007/04/23/us/23millender.html?scp=2&sq=Juanita20McDonald&st=cse>

⁴⁷http://www.nytimes.com/2002/09/30/us/patsy-mink-veteran-hawaii-congresswoman-dies-at-74.html?ref=patsy_t_mink

⁴⁸<http://query.nytimes.com/gst/fullpage.html?res=9F04E0DC1131F936A3575AC0A9629C8B63>

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Clerk of the House of Representatives Legislative Resource Center B-106 Cannon Building Washington, DC 20515	Secretary of the Senate Office of Public Records 232 Hart Building Washington, DC 20510
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SECRETARY OF THE SENATE
PUBLIC RECORDS

LOBBYING REPORT

Lobbying Disclosure Act of 1995 (Section 5) - All Filers Are Required to Complete This Page

1. Registrant name Greenberg Traurig, LLP	
2. Address <input type="checkbox"/> Check if different than previously reported 800 Connecticut Avenue, NW Suite 500 Washington DC 20006 USA	
3. Principal place of business (if different than line 2) City: _____ State/Zip or Country: _____	
4a. Contact Name Ms. Nancy E. Taylor	b. Telephone number 202-331-3133
c. E-mail taylor@gtlaw.com	5. Senate ID # 16896-51
7. Client Name <input type="checkbox"/> Self American Healthcare Association	6. House ID # 31595018

TYPE OF REPORT 8. Year 2005 Midyear (January 1-June 30) OR Year End (July 1-December 31)

9. Check if this filing amends a previously filed version of this report

10. Check if this is a Termination Report ⇒ Termination Date _____ 11. No Lobbying Activity

INCOME OR EXPENSES - Complete Either Line 12 OR Line 13	
<p>12. Lobbying Firms</p> <p>INCOME relating to lobbying activities for this reporting period was:</p> <p>Less than \$10,000 <input type="checkbox"/></p> <p>\$10,000 or more <input checked="" type="checkbox"/> ⇒ \$ <u>40,000</u></p> <p>Provide a good faith estimate, rounded to the nearest \$20,000, of all lobbying related income from the client (including all payments to the registrant by any other entity for lobbying activities on behalf of the client).</p>	<p>13. Organizations</p> <p>EXPENSES relating to lobbying activities for this reporting period were:</p> <p>Less than \$10,000 <input type="checkbox"/></p> <p>\$10,000 or more <input type="checkbox"/> ⇒ \$ _____</p> <p>14. REPORTING METHOD. Check box to indicate expense accounting method. See instructions for description of options.</p> <p><input type="checkbox"/> Method A. Reporting amounts using LDA definitions only</p> <p><input type="checkbox"/> Method B. Reporting amounts under section 6033(b)(8) of the Internal Revenue Code</p> <p><input type="checkbox"/> Method C. Reporting amounts under section 162(e) of the Internal Revenue Code</p>

Edit Form >

Signature *Christine Schaut* Date 2/14/2006

Printed Name and Title Christine Schaut - Business Director

LD-2DS (Rev. 4.06)

Page 1 of 3

00000082168

Registrant Name Greenberg Traurig, LLP Client Name American Healthcare Association

LOBBYING ACTIVITY. Select as many codes as necessary to reflect the general issue areas in which the registrant engaged in lobbying on behalf of the client during the reporting period. **Using a separate page for each code,** provide information as requested. Attach additional page(s) as needed.

15. General issue area code HCR - Health Issues (one per page)

16. Specific lobbying issues

Labor/staffing Issues Tort Reform Medicaid
--

17. House(s) of Congress and Federal agencies contacted Check if None

Department of Health & Human Services House of Representatives Senate

18. Name of each individual who acted as a lobbyist in this issue area

Name	Covered Official Position (if applicable)	New
Nancy E. Taylor		<input type="checkbox"/>
Eleanor Kolton		<input type="checkbox"/>
Gregory J. McDonald		<input type="checkbox"/>
Holly Rocco		<input type="checkbox"/>
		<input type="checkbox"/>
		<input type="checkbox"/>
		<input type="checkbox"/>
		<input type="checkbox"/>

19. Interest of each foreign entity in the specific issues listed on line 16 above Check if None

Signature _____ Date _____

Printed Name and Title Christine Schaut - Business Director

00000082169

Registrant Name Greenberg Traurig, LLP Client Name American Healthcare Association

LOBBYING ACTIVITY. Select as many codes as necessary to reflect the general issue areas in which the registrant engaged in lobbying on behalf of the client during the reporting period. **Using a separate page for each code,** provide information as requested. Attach additional page(s) as needed.

15. General issue area code MMM - Medicare/Medicaid (one per page)

16. Specific lobbying issues

Medicare SNF Proposals
 Medicaid Reform
 Medicare
 Medicare Issues

17. House(s) of Congress and Federal agencies contacted Check if None

Department of Health & Human Services
 House of Representatives
 Senate

18. Name of each individual who acted as a lobbyist in this issue area

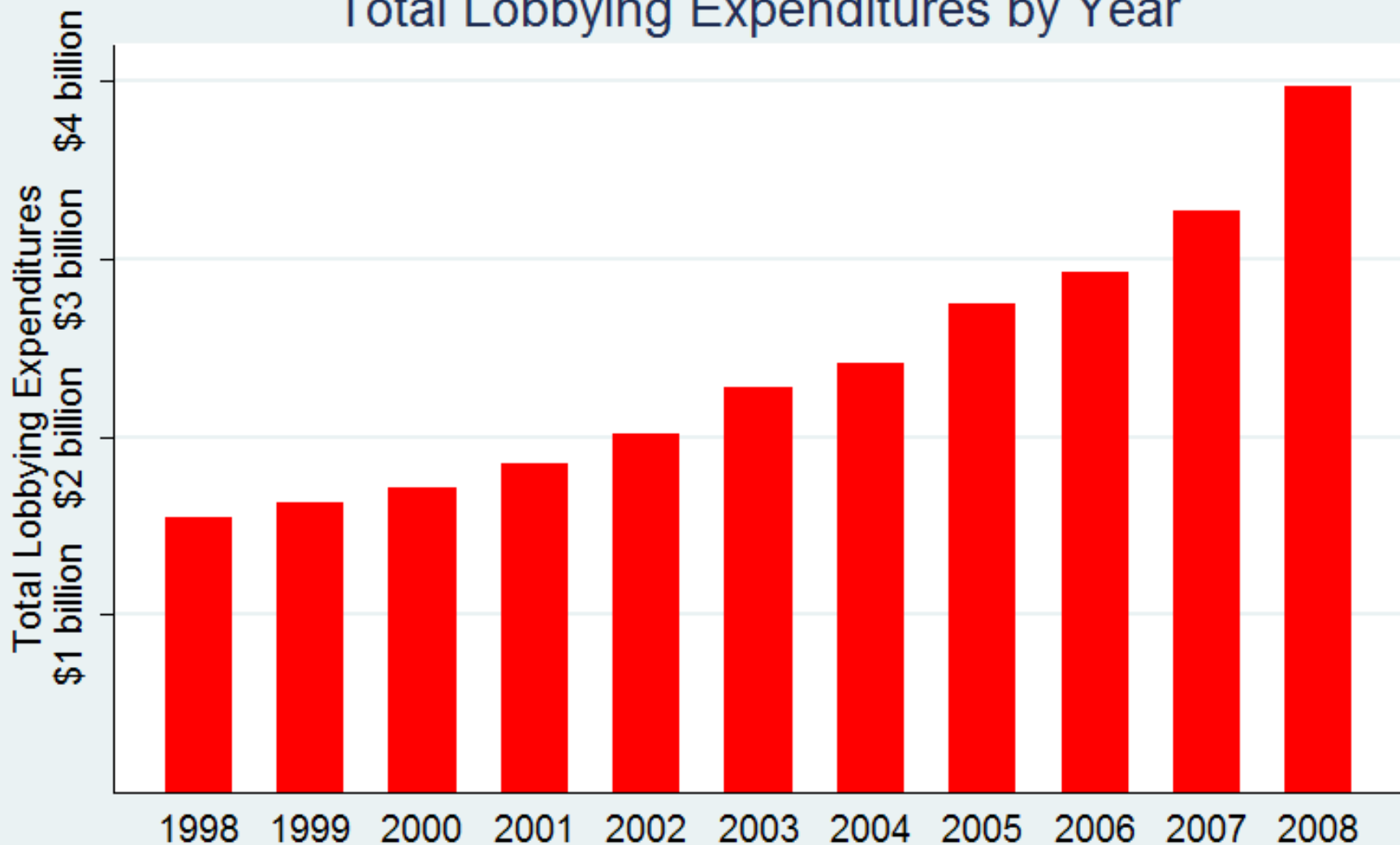
Name	Covered Official Position (if applicable)	New
Nancy E. Taylor		<input type="checkbox"/>
Eleanor Kolton		<input type="checkbox"/>
Gregory J. McDonald		<input type="checkbox"/>
Holly Rocco		<input type="checkbox"/>
		<input type="checkbox"/>
		<input type="checkbox"/>
		<input type="checkbox"/>
		<input type="checkbox"/>

19. Interest of each foreign entity in the specific issues listed on line 16 above Check if None

000000082170

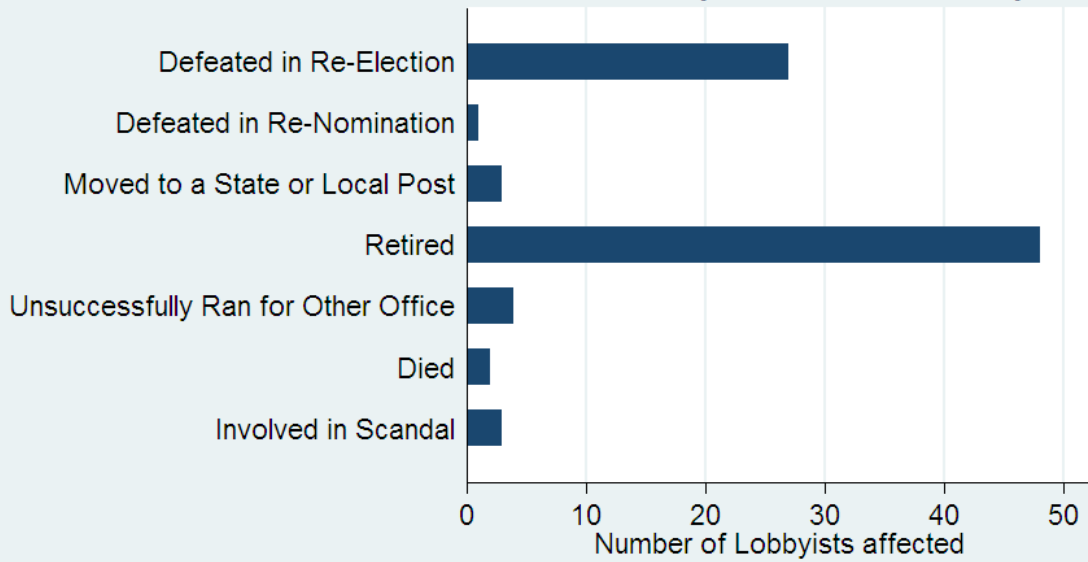
Printed Name and Title Christine Schaut - Business Manager

Figure 1
Total Lobbying Expenditures by Year



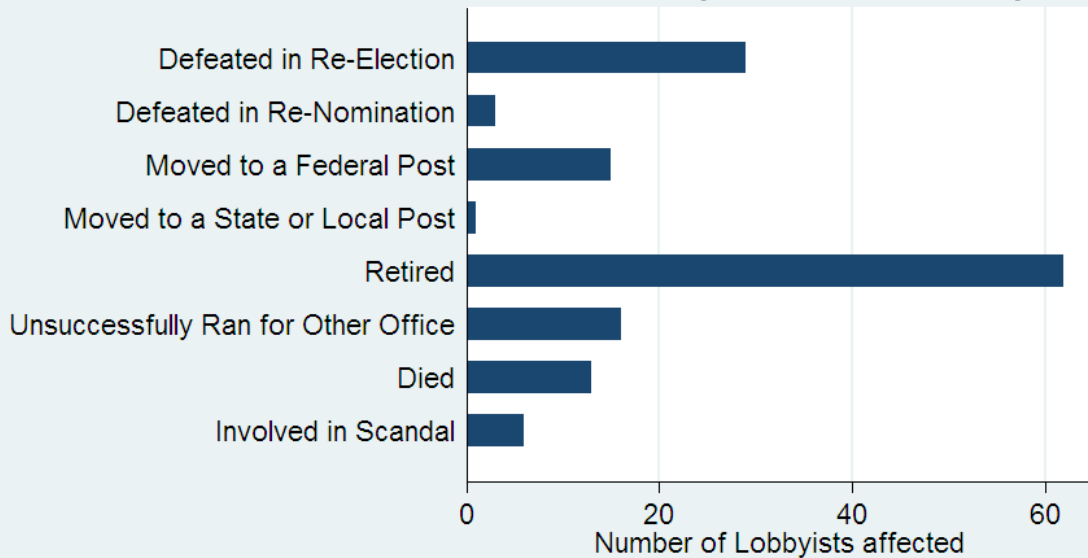
Note: Total amounts reported under the Lobbying Disclosure Act of 1995.
Calculations from the authors using data provided by the Center for Responsive Politics.

Figure 2a
Reasons for Loss of Senate
Connection, by Number of Lobbyists



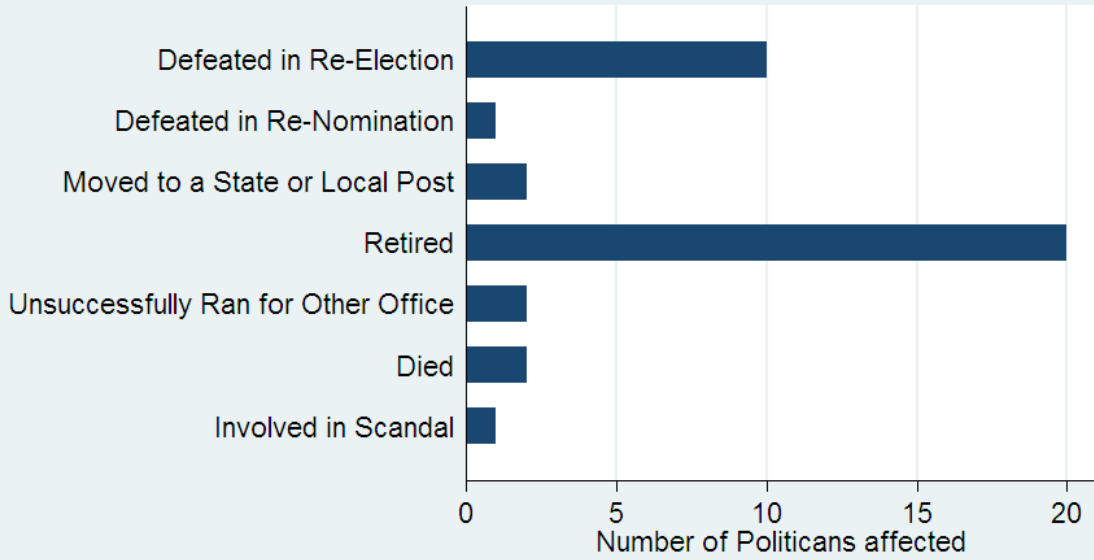
This Figure presents the lobbyists affected by the exit of a connected Senator, disaggregated by the reasons for exit.
Total number of lobbyists affected by a Senator exit = 88.

Figure 2b
Reasons for Loss of House
Connection, by Number of Lobbyists



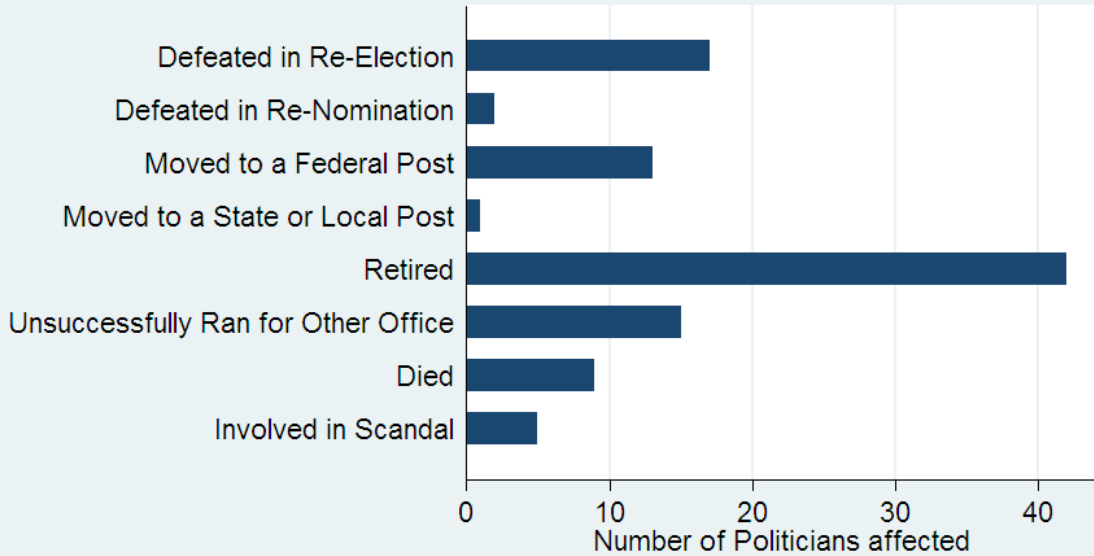
This Figure presents the lobbyists affected by the exit of a connected Representative, disaggregated by the reasons for exit.
Total number of lobbyists affected by a Representative exit = 145.

Figure 3a
Reasons for Loss of Senate
Connection, by Number of Politicians



This Figure presents the number of connected Senators exiting Congress, disaggregated by the reasons for exit.
Total number of Senators exiting = 38.

Figure 3b
Reasons for Loss of House
Connection, by Number of Politicians



This Figure presents the number of connected Representatives exiting Congress, disaggregated by the reasons for exit.
Total number of Representatives exiting = 104.

Figure 4
Evolution of Revenue over Time



Note: Graphic displays the estimated time and group effects of a regression where lobbyist (log) revenue is the left-hand side variable and the right-hand side comprises individual lobbyist dummies and time (semester) dummies. Separate time dummies are included for ex-staffers and non ex-staffers.

Figure 5
Distribution of Revenue per Lobbyist

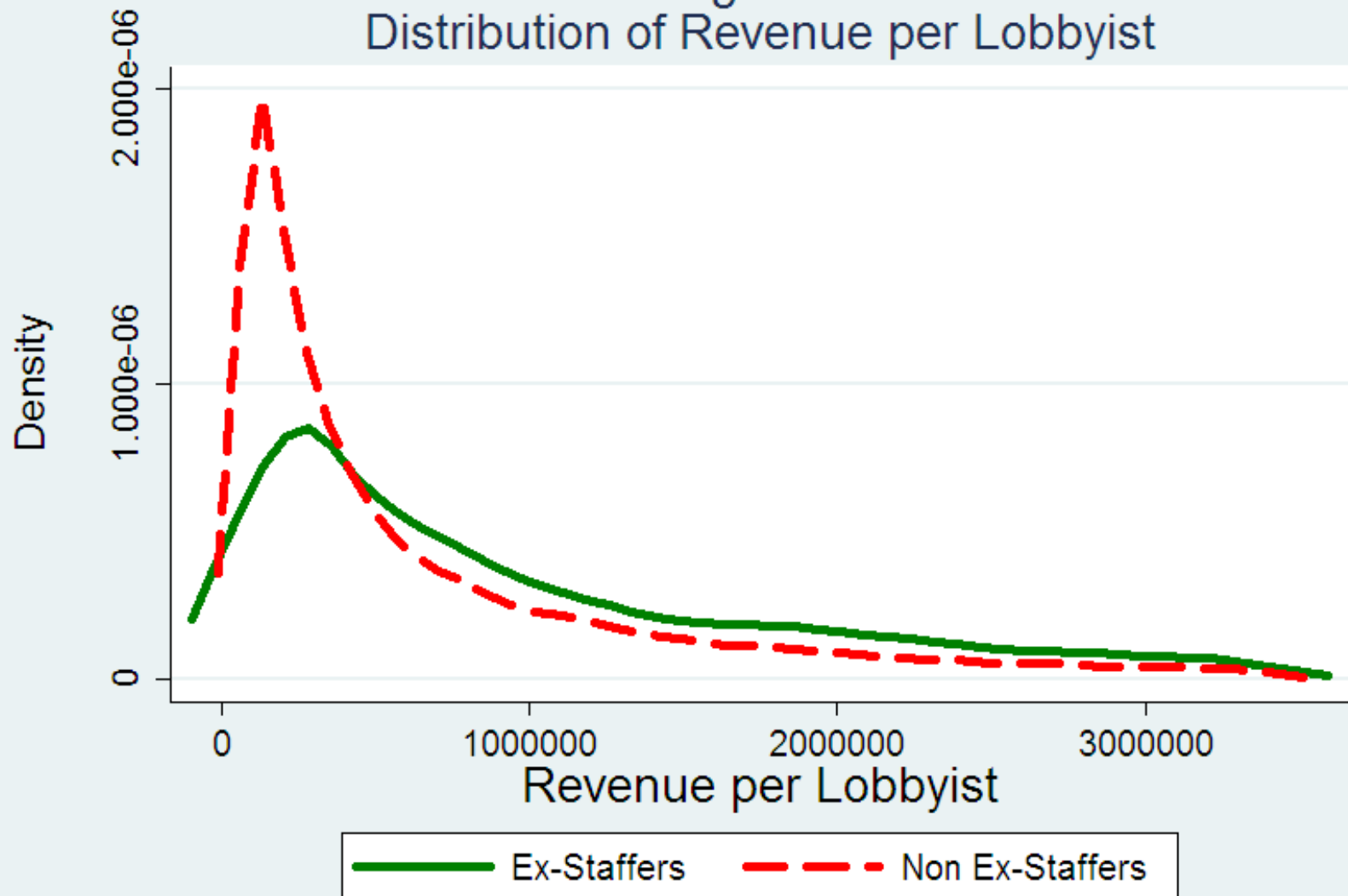
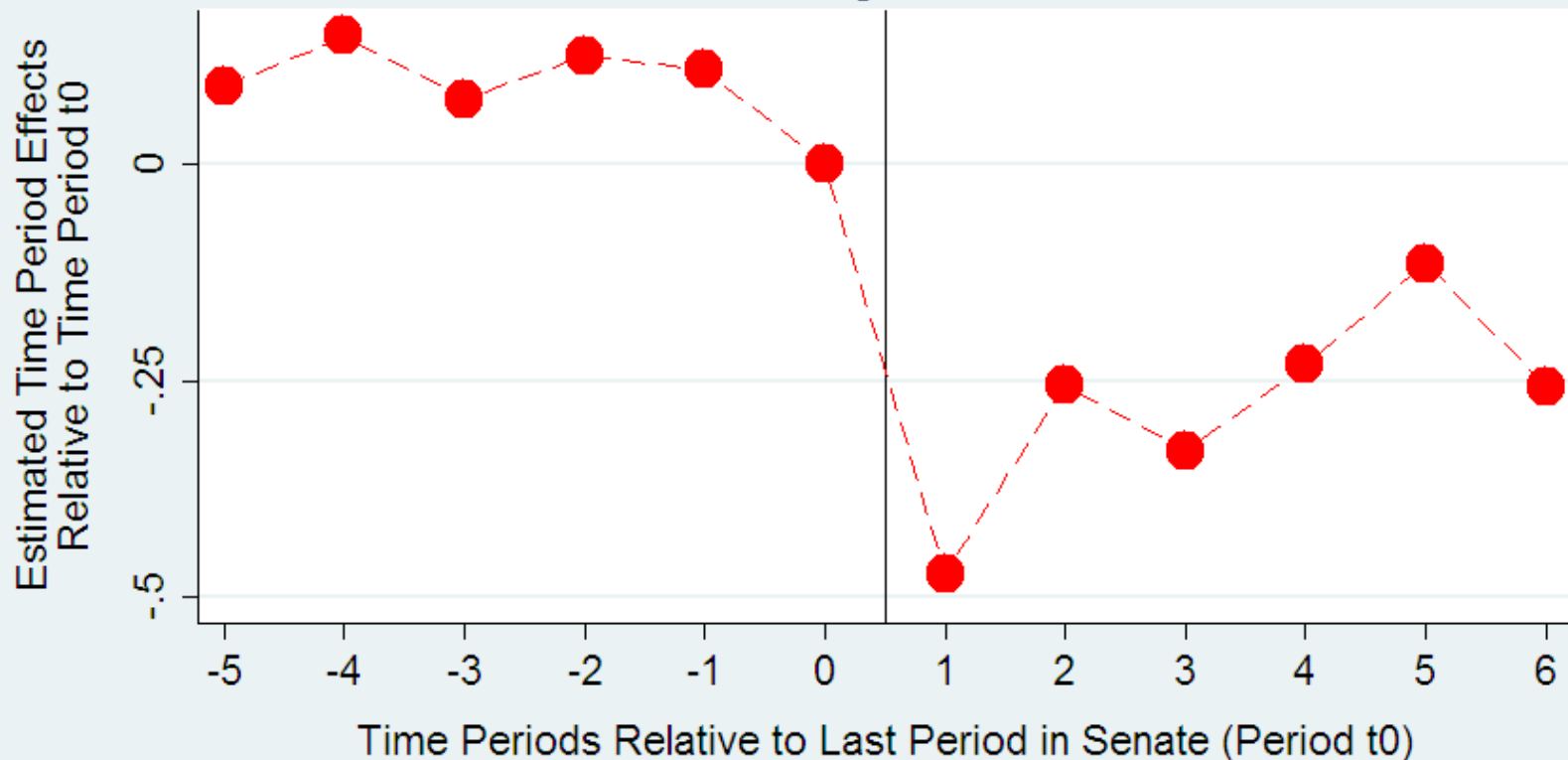


Figure 6
Timing Effects



Note: Figure 6 displays the estimated time period effects leading up to and following the transition (exit from Senate) period from equation (5) in Section 4.2. Each period comprises 6 months. The left-hand side variable is lobbyist (log) revenue as in Table 2. Right-hand side variables include individual lobbyist dummies and party-chamber time dummies, as well as estimated period effects. Every estimated effect is relative to period t0 - the last period in which a Senator is still serving in Congress. Since period t0 is the omitted group, there is no estimated effect for this group. We however display an 'effect' of 0 at t0 to aid visual analysis.

Table 1: Descriptive Statistics - US Federal Lobbying, 1998-2008

Panel (A) Organizational Level			
	Lobbying Firms	In-House	All
Number of Lobbyists	2.8	1.5	2.1
Revenue (\$1000s USD)	687.8	786.1	740
Number of Firms-Organizations (total)	3960	3233	7193
Panel (B) Lobbyist Level			
Connected to:	.447	.190	.301
Congressional Politicians	.231	.123	.169
Previously Serving	.064	.017	.038
Currently Serving	.164	.105	.131
- Democrats	.069	.046	.056
- Republicans	.094	.058	.074
Revenue Measures (Unweighted-Annual \$1000s USD)			
Revenue per Lobbyist	962.4	1857.2	1467.6
Revenue per Lobbyist - unconnected	614.9	1744.1	1353.7
Revenue per Lobbyist - connected	1396.4	2340.8	1732.5
Revenue per Lobbyist - currently connected	1645.6	2301.8	1943.1
Revenue per Lobbyist - current Democrats	1535.8	2114.8	1805.2
Revenue per Lobbyist - current Republicans	1724.7	2461.3	2053
Revenue Measures (Weighted-Annual \$1000s USD)			
Revenue per Lobbyist	228.2	221.1	224.2
Revenue per Lobbyist - unconnected	155.5	203.4	186.8
Revenue per Lobbyist - connected	318.9	297.2	311.2
Revenue per Lobbyist - currently connected	366.9	283.1	328.9
Revenue per Lobbyist - current Democrats	323.4	253.4	290.8
Revenue per Lobbyist - current Republicans	399.1	307.8	358.4
Number of Periods	7.1	6.5	6.7
Number of Lobbyists (total)	15315	21374	33776
Number of Lobbyist-Period Observations (total)	98705	127960	226665

Note: Panel (A) based on 1998-2008 panel of firms/organizations by period; Panel (B) based on 1998-2008 lobbyist-period panel. Means displayed unless otherwise indicated. Length of each period is 6 months. "Connected to" represents the proportion of lobbyist-period observations where lobbyist has prior experience of political employment. "Congressional Politicians" represents lobbyists who worked for a Congressional Politician with "Currently Serving" denoting lobbyists connected to a politician who is serving in Congress. To calculate weighted revenues, lobbyists are allocated an equal share of revenue on contracts serviced by multiple lobbyists, see section 3.4 for further details. Revenue figures are presented as the average of yearly revenues per lobbyist. Number of Periods is the number of semesters a lobbyist appears in the sample.

Table 2: Average Effects of Revolving Door Connections on Lobbying Revenue

Dependent Variable: (Log) Revenue per Lobbyist					
	Full Sample		Baseline Sample		
	(1)	(2)	(3) plus Party	(4) plus Chamber	(5) plus Experience
# of Senators:	.63*** (.05)	.23*** (.07)	.23*** (.07)	.21*** (.07)	.24*** (.07)
# of Representatives:	.56*** (.04)	.08* (.05)	.07 (.05)	.08 (.05)	.10* (.05)
Individual Dummies	No	Yes	Yes	Yes	Yes
Time	Yes	Yes	No	No	No
TimeXParty	No	No	Yes	No	No
TimeXPartyXChamber	No	No	No	Yes	Yes
Lobbyist Experience	No	No	No	No	Yes
Individuals	15315	1113	1113	1113	1113
Observations	98705	10418	10418	10418	10418

Note: This table presents the average effects of political connections on ex-staffers lobbying revenue. The dependent variable is the log of the revenue generated from all the clients that an individual lobbyist serves in a time (semester) period. The two main independent variables are the number of Senators and Representatives that an individual lobbyist worked for previously to entering the lobbying industry *and are serving in Congress in that time period*. All regressions include time effects (i.e. semester dummies). Column (1) is an OLS regression using a sample containing all active individual lobbyists. Columns (2)-(5) use a sample containing only ex-staffers turned lobbyists and include individual lobbyist dummies. Column (3) allows for different time effects for lobbyists connected to politicians in different parties (i.e. Democrats versus Republicans). Columns (4) and (5) allow for different time effects for lobbyists connected to politicians in different party/chamber combinations (i.e. Democrats in the Senate, etc.). Column (5) includes lobbyist experience (i.e. number of periods that a lobbyist appears in the sample) in quadratic form. Standard errors are clustered by lobbyist.

Table 3: Effects Disaggregated by Politician Seniority

Dependent Variable: (Log) Revenue per Lobbyist				
	(1)	(2) plus Party	(3) plus Chamber	(4) plus Experience
# of Senators:				
with Top Tenure	.27** (.11)	.27** (.11)	.25** (.11)	.24** (.11)
with Middle Tenure	.28** (.11)	.29** (.11)	.27** (.12)	.32*** (.12)
with Low Tenure	.10 (.11)	.07 (.11)	.05 (.11)	.10 (.11)
# of Representatives:				
with Top Tenure	.27*** (.09)	.26*** (.09)	.28*** (.09)	.24*** (.09)
with Middle Tenure	-.02 (.08)	-.03 (.08)	0 (.08)	.02 (.08)
with Low Tenure	.02 (.08)	0 (.08)	-.02 (.08)	.04 (.08)
Individual Dummies	Yes	Yes	Yes	Yes
Time	Yes	No	No	No
TimeXParty	No	Yes	No	No
TimeXPartyXChamber	No	No	Yes	Yes
Lobbyist Experience	No	No	No	Yes
Individuals	1113	1113	1113	1113
Observations	10418	10418	10418	10418

Note: This table presents the effects of Table 2 separately for different levels of politicians seniority. The dependent variable is as in Table 2. The main independent variables are as in Table 2, with the exception that connections to Senators and Representatives are disaggregated by the level of the politician's seniority **at the time of leaving Congress**. The cutoff points to allocate politicians to seniority groups are 12 and 22 years of seniority for Representatives and 12 and 20 years of seniority for Senators. These cutoff points are chosen to leave approximately one third of departing Senators and Representatives in each seniority category. All regressions use a sample containing only ex-staffers turned lobbyists and include individual lobbyists dummies and time effects (i.e. semester effects). Column (2) allows for different time effects for lobbyists connected to politicians in different parties (i.e. Democrats versus Republicans). Columns (3) and (4) allow for different time effects for lobbyists connected to politicians in different party/chamber combinations (i.e. Democrats in the Senate, etc.). Column (4) includes lobbyist experience (i.e. number of periods that a lobbyist appears in the sample) in quadratic form. Standard errors are clustered by lobbyist.

Table 4: Effects Disaggregated by Politician Committee Assignments

Dependent Variable: (Log) Revenue per Lobbyist				
	(1)	(2) plus Party	(3) plus Chamber	(4) plus Experience
# of Senators:				
in Finance	.36*** (.09)	.36*** (.09)	.33*** (.09)	.36*** (.09)
in Appropriations	.27* (.15)	.25 (.15)	.26* (.15)	.31** (.15)
in neither	-.04 (.12)	-.04 (.12)	-.07 (.12)	-.03 (.12)
# of Representatives:				
in Ways & Means	.38*** (.10)	.36*** (.10)	.38*** (.10)	.35*** (.11)
in Appropriations	.07 (.11)	.04 (.11)	.06 (.11)	.06 (.11)
in neither	-.01 (.06)	-.02 (.06)	-.02 (.06)	.02 (.06)
Individual Dummies	Yes	Yes	Yes	Yes
TimeXParty	No	Yes	No	No
TimeXPartyXChamber	No	No	Yes	Yes
Lobbyist Experience	No	No	No	Yes
Individuals	1113	1113	1113	1113
Observations	10418	10418	10418	10418

Note: This table presents the effects of Table 2 separately for different levels of politician committee assignments. The dependent variable is as in Table 2. The main independent variables are as in Table 2, with the exception that connections to Senators and Representatives are disaggregated by the politician committee assignments **at the time of leaving Congress**. All regressions use a sample containing only ex-staffers turned lobbyists and include individual lobbyists dummies and time effects (i.e. semester dummies). Column (2) allows for different time effects for lobbyists connected to politicians in different parties (i.e. Democrats versus Republicans). Columns (3) and (4) allow for different time effects for lobbyists connected to politicians in different party/chamber combinations (i.e. Democrats in the Senate, etc.). Column (4) includes lobbyist experience (i.e. number of periods that a lobbyist appears in the sample) in quadratic form. Standard errors are clustered by lobbyist.

Table 5: Effects Disaggregated by Type of Exit (Retirement vs. Others)

Dependent Variable: (Log) Revenue per Lobbyist				
	(1)	(2) plus Party	(3) plus Chamber	(4) plus Experience
# of Senators:				
Retired	.16* (.08)	.16* (.08)	.15* (.09)	.18** (.09)
Other Exits	.28*** (.10)	.28*** (.10)	.24** (.10)	.28*** (.10)
# of Representatives:				
Retired	.13* (.08)	.12 (.08)	.12 (.08)	.13 (.08)
Other Exits	.04 (.06)	.02 (.06)	.03 (.06)	.06 (.06)
Individual Dummies	Yes	Yes	Yes	Yes
Time	Yes	No	No	No
TimeXParty	No	Yes	No	No
TimeXPartyXChamber	No	No	Yes	Yes
Lobbyist Experience	No	No	No	Yes
Individuals	1113	1113	1113	1113
Observations	10418	10418	10418	10418

Note: This table presents the effects of Table 2 separately for different types of Congressmen exit. The dependent variable is as in Table 2. The main independent variables are as in Table 2, with the exception that connections to Senators and Representatives are disaggregated by the type of exit from the Chamber. Politicians who voluntarily move to a position outside government service are classified as Retirements. Other exits include being defeated in re-election or in re-nomination; moving to another loca, state or federal post; running unsuccessfully for another office, being involved in a political scandal, and dying. All regressions use a sample containing only ex-staffers turned lobbyists and include individual lobbyists dummies and time effects (i.e. semester dummies). Column (2) allows for different time effects for lobbyists connected to politicians in different parties (i.e. Democrats versus Republicans). Columns (3) and (4) allow for different time effects for lobbyists connected to politicians in different party/chamber combinations (i.e. Democrats in the Senate, etc.). Column (4) includes lobbyist experience (i.e. number of periods that a lobbyist appears in the sample) in quadratic form. Standard errors are clustered by lobbyist.

Table 6: Effects Disaggregated by Type of Exit (Unexpected versus Other)

Dependent Variable: (Log) Revenue per Lobbyist				
	(1)	(2) plus Party	(3) plus Chamber	(4) plus Experience
# of Senators:				
Unexpected Exits	.50** (.21)	.48** (.21)	.48** (.22)	.51** (.22)
Other Exits	.18*** (.07)	.18*** (.07)	.16** (.07)	.19*** (.07)
# of Representatives:				
Unexpected Exits	.09 (.23)	.09 (.23)	.05 (.23)	.03 (.23)
Other Exits	.07 (.05)	.06 (.05)	.07 (.05)	.09* (.05)
Individual Dummies	Yes	Yes	Yes	Yes
Time	Yes	No	No	No
TimeXParty	No	Yes	No	No
TimeXPartyXChamber	No	No	Yes	Yes
Lobbyist Experience	No	No	No	Yes
Individuals	1113	1113	1113	1113
Observations	10418	10418	10418	10418

Note: This table presents the effects of Table 2 separately for different types of Congressmen exit. The dependent variable is as in Table 2. The main independent variables are as in Table 2, with the exception that connections to Senators and Representatives are disaggregated by the type of exit from the Chamber. For Senators, the group Unexpected Exits contains lobbyists connected to the following Senators: Paul Coverdell (brain hemorrhage), John Chafee (heart failure), Graig Thomas (leukemia), Fred Thompson (retirement triggered by daughter heart attack), Robert Torricelli (bribing scandal) and Trent Lott (unexpected announcement of retirement, effective within four weeks). The Appendix contains brief discussions of each of these exits. The group Other Exits contains lobbyists connected to all other Senators. For Representatives, see Appendix. All regressions use a sample containing only ex-staffers turned lobbyists and include individual lobbyists dummies and time effects (i.e. semester dummies). Column (2) allows for different time effects for lobbyists connected to politicians in different parties (i.e. Democrats versus Republicans). Columns (3) and (4) allow for different time effects for lobbyists connected to politicians in different party/chamber combinations (i.e. Democrats in the Senate, etc.). Column (4) includes lobbyist experience (i.e. number of periods that a lobbyist appears in the sample) in quadratic form. Standard errors are clustered by lobbyist.

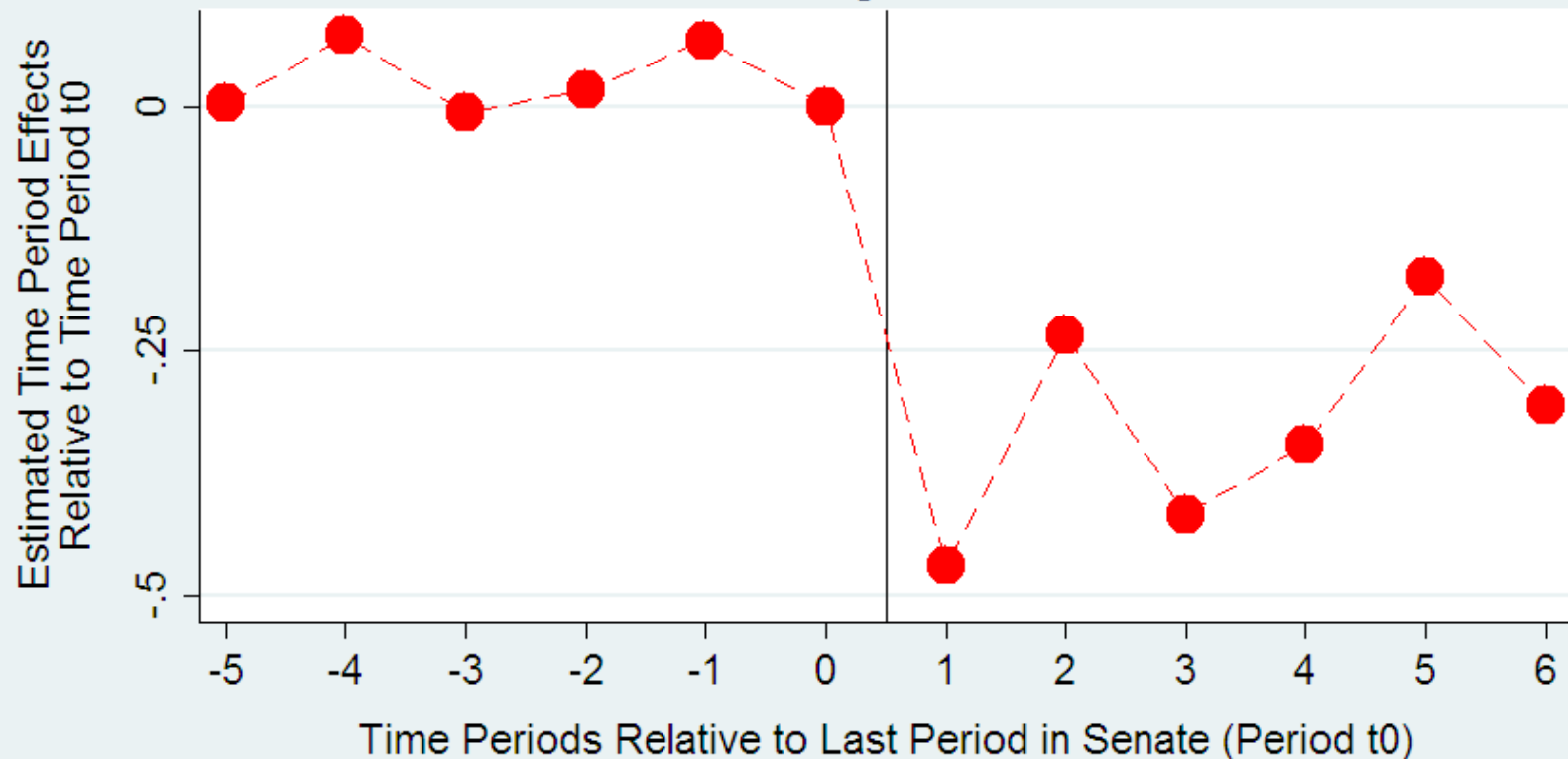
Table 7: Likelihood of Leaving the Industry

Dependent Variable: =1 if Lobbyist i Left the Industry in Semester t

	(1)	(2) Party	(3) plus Chamber	(4) only new Lobbyists
# of Senators	-2.07*** (.5) [.13]	-2.08*** (.5) [.12]	-1.88*** (.5) [.15]	-1.73*** (.5) [.18]
# of Representatives	-2.67*** (.5) [.07]	-2.68*** (.5) [.07]	-2.82*** (.5) [.06]	-3.17*** (.71) [.04]
Time	Yes	No	No	No
TimeXParty	No	Yes	No	No
TimeXPartyXChamber	No	No	Yes	Yes
Individuals	983	983	983	802
Observations	8097	8097	8097	5382

Note: This table represents the likelihood of a lobbyist's exit from the lobbying industry. Lobbyist exit is defined in terms of the lobbyist's last appearance in our 1998-2008 panel. Specifically, a lobbyist is classified as having exited the industry if they do not appear in the last 3 periods of the data. That is, they are inactive as working registered lobbyists for at least 18 months. We restrict the sample to the 19 periods between 1998 and the first semester of 2007. We do not consider lobbyists who first entered the industry after the first semester of 2007. The two main dependent variables are indicator variables for a current connection to either a serving Senator or member of the House of Representatives. All models include time effects (i.e. semester dummies). Column (2) allows for different time effects for lobbyists connected to politicians in different political parties (i.e. Democrats versus Republicans). Column (3) allow for different time effects for lobbyists connected to politicians in different party/chamber combinations (i.e. Democrats in the Senate etc). The final column (4) uses a sample that includes only those lobbyists who enter after the first semester of 1998. That is, it drops those lobbyists who are left censored and may have a long unrecorded history of employment in the lobbying industry. Standard errors clustered by lobbyist.

Figure A1 (Weighted Revenue)
Timing Effects



Note: Figure A1 displays the estimated time period effects leading up to and following the transition (exit from Senate) period from equation (5) in Section 4.2. Each period comprises 6 months. The left-hand side variable is lobbyist (log) weighted revenue as in Table A1. Right-hand side variables include individual lobbyist dummies and party-chamber time dummies, as well as estimated period effects. Every estimated effect is relative to period t0 - the last period in which a Senator is still serving in Congress. Since period t0 is the omitted group, there is no estimated effect for this group. We however display an 'effect' of 0 at t0 to aid visual analysis.

Table A1: Average Effects of Revolving Door Connections on Lobbying Revenue

Dependent Variable: (Log) Weighted Revenue per Lobbyist					
	Full Sample		Baseline Sample		
	(1)	(2)	(3) plus Party	(4) plus Chamber	(5) plus Experience
# of Senators:	.56*** (.04)	.20*** (.07)	.19*** (.07)	.20*** (.07)	.24*** (.07)
# of Representatives:	.43*** (.03)	-.01 (.05)	-.03 (.05)	-.03 (.05)	-.01 (.05)
Individual Dummies	No	Yes	Yes	Yes	Yes
Time	Yes	Yes	No	No	No
TimeXParty	No	No	Yes	No	No
TimeXPartyXChamber	No	No	No	Yes	Yes
Lobbyist Experience	No	No	No	No	Yes
Individuals	15315	1113	1113	1113	1113
Observations	98705	10418	10418	10418	10418

Note: This table presents the average effects of political connections on ex-staffers lobbying revenue. The dependent variable is the log of the weighted revenue generated from all the clients that an individual lobbyist serves in a time (semester) period. The two main independent variables are the number of Senators and Representatives that an individual lobbyist worked for previously to entering the lobbying industry *and are serving in Congress in that time period*. All regressions include time effects (i.e. semester dummies). Column (1) is an OLS regression using a sample containing all active individual lobbyists. Columns (2)-(5) use a sample containing only ex-staffers turned lobbyists and include individual lobbyist dummies. Column (3) allows for different time effects for lobbyists connected to politicians in different parties (i.e. Democrats versus Republicans). Columns (4) and (5) allow for different time effects for lobbyists connected to politicians in different party/chamber combinations (i.e. Democrats in the Senate, etc.). Column (5) includes lobbyist experience (i.e. number of periods that a lobbyist appears in the sample) in quadratic form. Standard errors are clustered by lobbyist.

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