Revolving Door Lobbyists and the Value of Congressional Staff Connections

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ABSTRACT

Building on previous work on lobbying and relationships in Congress, I propose a theory of staff-to-staff connections as a human capital asset for Capitol Hill staff and revolving door lobbyists. Employing lobbying disclosure data matched to congressional staff employment histories, I find that the connections these lobbyists maintain to their former Hill coworkers primarily drive their higher relative value as lobbyists. Specifically, a one standard deviation increase in staff connections predicts an 18% increase in revenue attributed to the lobbyist during her first year. I also find that the indirect connections lobbyists maintain to legislators through knowing a staffer in a legislative office are of potential greater value than a direct connection to a Senator given a large enough number of connections. This paper sheds additional light onto the political economy of the lobbying industry, making an important contribution to the literature on lobbying and the revolving door phenomenon.

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A fact of life in Washington D.C. is the regular transition of Capitol Hill staffers into high paying lobbying jobs on K Street – often for salaries orders of magnitude more than what they earned on the Hill. The so-called "revolving door" creates, at the very least, the perception of perverse incentives for Hill staffers and their bosses. With trust in Congress as an institution near all time lows,[1] the study of lobbying and the political economy of the revolving door gains renewed importance.

Anecdotal evidence suggests Americans have reason to be worried about the revolving door. The lobbying industry – a $3 billion industry in 2016 – capitalizes on congressional staffers' persistent awareness of valuable outside options. The infamous Jack Abramoff, who stated "almost 90 percent" of staff want to work on K Street, would remind staffers in meetings that they could work at his firm once they left the Hill. After that, he said, "they were already working for me" (Abramoff 2011, 94-95). Journalistic accounts suggest that privately-paid lobbyists[2] are frequently and explicitly performing the jobs of the staff of our elected officials (e.g., Williams 2017).

Recent empirical work provides evidence that lobbying firms reward congressional staff-turned-lobbyists with higher salaries than their colleagues without Hill experience (Blanes i Vidal, Draca and Fons-Rosen 2012). Similarly, others have found links between diminishing congressional capacity and the increase in demand for lobbyists with government experience, as lobbyists fill in for missing expertise on Capitol Hill (LaPira and Thomas 2017). In essence, if staff are not explicitly "auditioning" for high-dollar jobs once they have the attention of firms, their incentives for doing so are clear. The evidence indicates a competitive market for forward-looking congressional staff, suggesting a substantial monetary premium for a staffer

[1]Just 12% of Americans report either "quite a lot" or a "great deal" of trust in Congress in 2017 (Gallup 2017).

[2]Who are reported to earn up to seven-figure salaries their first year off the Hill – almost 10 times what the staffer made as a Capitol Hill employee, where most senior staff earn around $100,000 a year (Bogardus and Leven 2011).

with optimal Capitol Hill experience.

This paper establishes a story of revolving door lobbying that suggests staffers who become lobbyists benefit from connections to their staff colleagues, a unique human capital asset they can bring to the private sector. Employing a comprehensive dataset of lobbying disclosure reports matched to congressional staff employment histories from 2000-2016, I bring new data to bear on the study of revolving door lobbying. The empirical results support the theory, finding that with one or two years of the "right" kind of additional experience on Capitol Hill – the type of experience that increases the number of ties to other staffers – the staffer can increase her expected revenue by 18% in her first year as a lobbyist.[3]

I build upon previous findings, presenting evidence that connections to legislators *and* their staff are of value to revolving door lobbyists. Based on the importance of staff in the policymaking process, when lobbyists maintain connections to legislative offices purely through their staff networks, a one standard deviation in the number of this type of connections predicts $60,000 in additional yearly revenue over the predicted value of a direct connection to a Senator. Lobbyists benefit from extensive ties to congressional staff on top of their relationships with legislators.

These findings serve to advance the literature on the political economy of lobbying. Further, this paper represents a needed first step in empirically determining whether the public's concerns about the revolving door are warranted based on the labor market for public employees. The evidence indicates lobbying firms and their clients reward those lobbyists with the most connections to other staffers with larger contracts and more revenue. I show a clear and substantial monetary premium associated with larger staff-to-staff networks. I also demonstrate these results are robust to a battery of robustness checks, including attempts at partialing out the skill level of the lobbyist from the distinct value of connections, a classic omitted variable and threat to validity in analyses of lobbying (e.g., De Figueiredo

[3]As detailed further below, this figure represents *lobbying revenue*, not the lobbyist's salary.

and Richter 2013). Through shedding new light onto the determinants of monetary value in the lobbying industry, this paper suggests access to key legislative actors (congressional staffers) is of importance to high-paying private interests.

Lobbying, Congressional Staff and Personal Connections

Though the empirical work on revolving door lobbying is still relatively new, extant political science theories on lobbying provide a solid foundation from which to build a theory of revolving door lobbying. This section motivates a theory of personal connections as a valuable human capital asset for revolving door lobbyists by first considering what previous literature theorizes lobbyists do and then by applying this framework to revolving door lobbyists in particular.

Lobbying and the Importance of Who You Know in Congress

Political science literature on the role of lobbyists has a rich theoretical tradition. A substantial body of work focuses on the the informational role of lobbying, arguing that lobbyists utilize their expertise and resources to provide information to resource-constrained legislators (e.g., Austen-Smith and Wright 1992, 1994; Ainsworth 1993, 1997; Hall and Deardorff 2006; Cotton 2015; Schnakenberg 2016). A key tenet of these theories is that lobbyists must first gain access to legislators in order for legislators to trust their information and adequately lower transaction costs – conceptually, they must establish a relationship (see also Hirsch and Montagnes 2015, on the importance of trust in lobbying). Many scholars conceptualize a quid pro quo arrangement with donations as how lobbyists gain access and build trust (e.g., Wright 1989; Chin, Bond and Geva 2000; Cotton 2009), though empirically identifying the effect of donations is difficult due to issues with endogeneity and homophily (e.g., Baumgartner and Leech 1998; Hojnacki and Kimball 1998, 1999; Ansolabehere, De Figueiredo and Snyder 2003). Hall and Deardorff (2006) note that lobbyists primarily target their legislative allies with their efforts, since these legislators have the lowest 'cost' of attaining access, and develop a theory of legislative subsidy. In essence, "lobbyists serve as 'service bureaus' or

'adjuncts to staff"'(Hall and Deardorff 2006, p.76).

Taken together, this research suggests that lobbyists primarily target their legislative allies – though not always (e.g., Holyoke 2003; Kelleher and Yackee 2009) – and those who are best capable of providing expertise to resource-constrained congressional offices and staff are likely to be the most effective lobbyists. Connections are valuable because they lower the transaction costs for legislators to validate the information provided by the lobbyists (they are more likely to trust a former staffer than a stranger because of shared preferences and experiences) while simultaneously facilitating the job of a lobbyist gaining access to an office in the first place. In the words of John Boehner, "absent our personal, long-standing relationships" with lobbyists, it is impossible for lawmakers to know who to trust (2006).

The value of revolving door lobbyists becomes evident in this context; they have personal connections through previous employment and thoroughly understand the legislative process. In theories of informational and legislative subsidy lobbying, these traits are imperative for an effective lobbyist to possess. Moreover, existing work employing social network analysis provides evidence that personal relationships affect policy outcomes and legislative activity in Congress (e.g., Koger, Masket and Noel (2009); Ringe, Victor and Carman (2013); Canen and Trebbi (2016); see also Victor and Koger (2016) which examines networks lobbyists create with legislators through donations). Who you know in Congress matters, and lobbyists benefit from having connections to key actors within the legislative process in order to cheaply (in terms of transaction costs) build relationships with members and offices. Given the empirical importance of relationships and the demands placed on congressional offices and their staff (discussed more below), lobbyists with experience as congressional staffers are best able to provide this service and will be the most valuable to firms and their clients. These empirical regularities support theories of informational and legislative subsidy lobbying.

Congressional Staff as Revolving Door Lobbyists

Extant scholarship on congressional staff emphasizes their importance as political actors possessing substantial agency and policymaking influence within Congress (e.g., Fox and

Hammond 1977; Malbin 1980; Salisbury and Shepsle 1981; DeGregorio 1988; Hall 1998; Montgomery and Nyhan 2016). There is also evidence that lawmakers are significantly constrained in their resources and time (e.g., Grim and Siddiqui 2013), leaving the vast majority of the day-to-day legislative work to their staff. Congressional staff, according to research and journalistic accounts, are the "invisible force" behind the scenes on Capitol Hill (Fox and Hammond 1977). But what makes a former staffer a valuable lobbyist?

One argument is that staffers-turned-lobbyists benefit from their congressional staff experience by developing connections directly to legislators. Theorizing that their time as staffers generates valuable ties with their former employers (members of Congress) that they can then utilize for access as private sector employees, existing work finds substantial premia associated with legislator ties. Blanes i Vidal, Draca and Fons-Rosen (2012) demonstrate that when former Senate staffers lose a connection to the senator for whom they previously worked, they suffer a 24% drop in revenue, which equates to about $182,000 a year. Measuring connections as donations from lobbyists to lawmakers, Bertrand, Bombardini and Trebbi (2014) show that lobbyists benefit from their connections to a lawmaker (compared to those who do not have connections) and that lobbyists tend to work in the same policy areas as the lawmakers to whom they are connected.

Evidence from previous research also indicates that revolving door lobbyists are unique among the larger population of their peers in terms of the types of issues they work on and in the types of contracts they receive from firms and clients (LaPira and Thomas 2014; LaPira, Thomas and Baumgartner 2014; Lazarus and McKay N.d.). LaPira and Thomas (2017), in the most extensive examination of revolving door lobbying to date, argue that lobbyists primarily assist their clients in hedging against political uncertainty. Revolving door lobbyists in particular excel at providing primarily strategic and/or informational services to their clients because of their previous government experience. The particular aspects of the congressional staff experience that makes these lobbyists more effective *and* valuable is understudied, however. I argue that focusing on these traits – human capital assets – sheds

light onto why ex-staffers are idiosyncratic in the lobbying industry.

Staffers develop unique expertise and relationships while working on the Hill which aid them when they begin to seek employment in the lobbying industry. I argue the attribute that makes staffers both effective and valuable lobbyists is the relationships they build on Captiol Hill. For instance, a relevant trait of successful staffers and lobbyists is proactivity. For staff, this entails seeking out legislative opportunities for their boss and knowing what is going on in Capitol Hill before everyone else does. Praising two staffers-turned-lobbyists, Rep. Patrick McHenry said the former chiefs of staff "had an uncanny ability to read the pulse of the chambers and think three steps ahead on any given situation" (Wilson 2014). Building a network to other staffers and offices is one of the best methods to cultivate this trait.

But how do staff build their professional networks on Capitol Hill? Two common and observable paths include extended tenure in one office or moving around the Hill to gain experience in various offices. The first option is potentially problematic for some. Working your way up as a junior staffer relies on people above you leaving (offices have difficulty in creating new openings since there is a fixed allocation for staff salaries) and your boss may lose an election. Without turnover in a desired position, it is possible an otherwise qualified staffer may wait years for such a position. You can build a reputation and relationships in one office, but an ambitious staffer may choose the second option.

Moving to a new office can speed up the likelihood of landing a key assignment, increase salaries, and build a professional network more quickly. However, the ability to leave one congressional office for another is also a function of your existing connections. The more people you know, the more likely you are to hear about new openings and move your name up the list. Building connections in Congress represents a positive feedback loop: the more people you know, the easier it will be to increase your connections.[4]

For lobbyists, their relationships on the Hill – that they cultivated during their time as

[4]I address this further in the analysis.

staffers – facilitate their new responsibilities. In the language of informational lobbying, relationships lower the transaction costs of working with legislators and their staff, which is beneficial for both parties (e.g., Ainsworth 1997). Legislators – and by extension their staff – who have a personal relationship with a lobbyist find it "cheaper" to work with the lobbyist. Once lobbyists have established their bona fides with an office and its staff, they can proceed to effectively subsidize the office, in a Hall and Deardorff (2006) sense. The more connections lobbyists have to staff *and* legislators, the easier it is for lobbyists to work with offices. Thus, an extensive network of connections across the Hill is a vital human capital asset for a staffer-turned-lobbyist.

From the perspective of the firm seeking to hire a lobbyist and the client who pays the contract, they will want to ensure the lobbyist they hire has access to key legislators working on their respective issues (e.g. Bryner 2017). The firm who employs the lobbyists knows the best avenue for access is through relationships of former staffers to current staffers. Firms are deeply knowledgeable about the legislative process and understand that the bulk of work is done by the unseen staffers. Therefore when considering who to place on a valuable account, the firm wants the lobbyist with the most connections to key offices, and those connections come through staff-to-former staff connections. In turn, lobbyists advertise their connections to the firms seeking to hire them and firms are also aware of the relationships of staffers through their own networks. When legislators begin to consider new policy, the client's perspectives and recommendations will get recognition at the initial stages – through former staff (now lobbyists) influencing the current staff writing the policy (providing a legislative subsidy).[5]

In sum, revolving door lobbyists' connections to their former staff coworkers are vital for the task of lobbying. Staff are influential in the policymaking process, and access to the key staffer for a policy initiative is an ideal way to get your client's concerns heard. In the words

[5]Or, as LaPira and Thomas (2017) argue, lobbyists gain inside information about policy proposals to hedge against "uncertainty...and ambiguity" (p. 203).

of Rep. John Boehner's former chief of staff, "the most effective lobbyists are the people that have actually been in the position of the people they're lobbying" (Wilson 2014). This makes sense in light of theories of informational lobbying: personal relationships the lobbyist maintains with their former coworkers lowers the transaction costs of working with an office, and the more connections the lobbyist has the more likely they will know the right person in the right office. A lobbyist with more extensive ties to staffers earns the marginal dollar over less-connected lobbyists because they can establish these relationships with more offices.

Hypothesis 1: *Revolving door lobbyists with more connections to congressional staffers will earn more revenue as lobbyists.*

Additionally, the specific type of staff connection may matter. In the previous example, the most valuable point of access for complex regulatory policy may be at the committee level. Some research suggests lobbyists are particularly interested in targeting committees (e.g., Hojnacki and Kimball 1998; Hall and Deardorff 2006; Bertrand, Bombardini and Trebbi 2014). Cain and Drutman (2014) find that the demand for lobbyists with committee experience increased after new regulations made it harder for lobbying firms to hire senior congressional staff. To date, though, no work has analyzed the value of committee connections for lobbyists. This leads to an additional testable hypothesis:

Hypothesis 1a: *Revolving door lobbyists with more connections to committee staffers will earn more revenue as lobbyists.*

Finally, why might connections to legislators be of particular value? The above discussion emphasizes the importance and agency of staff in the policymaking process in the context of resource and time constrained elected lawmakers. Since the revolving door lobbyists themselves were once congressional staff their most extensive relationships will be with the staff with whom they previously worked, not necessarily with the member herself. Lobbyists, who have gained access to the office through their personal relationships, work with the *staff* first and foremost. Framed in this way, the value of direct ties to legislators becomes less clear. If lobbyists rely on their connections for access to offices, then their most extensive

connections – those they have with their former coworkers – should be the most valuable.

However, a legislator connection has value for potentially two reasons. First, some staff will have genuinely personal relationships with their former boss, particularly if they built a career in one office. If they are able to sell this connection as an asset when seeking lobbying jobs then it is feasible firms and clients would also be interested in securing close, personal access to certain legislators and pay more for that connection. Second, firms themselves can advertise legislator connections to clients. For instance, a firm hires a well-known senator's chief of staff. It can then sell to clients that they deserve the contract over a competitor because of this new asset.

Nevertheless, I argue for the prominence of staff connections in driving lobbyist value. While a firm may be able to advertise a legislator connection, it also knows when hiring a lobbyist and placing her on a contract that she will still have to perform as a lobbyist. And as previously detailed, the task of lobbying requires extensive ties at the staff level and the marginal dollar will be rewarded to the lobbyist with the most staff connections – the legislator connection is an added benefit. Because staff connections facilitate the task of informational/subsidy lobbying these connections serve as access to information and the policy process for the lobbyist. A lobbyist will benefit from both types of connections, though staff relationships should be the more valuable asset. This leads to the final hypothesis:

Hypothesis 2: *A large congressional staff network will be more valuable than a direct legislator connection for a lobbyist.*

Staffers build relationships to catalyze their careers on Capitol Hill which optimizes their likelihood of landing high-dollar lobbying jobs. Extensive networks drive the primary variation in lobbyist value as personal connections are the key human capital asset for revolving door lobbyists. Personal relationships with congressional offices enable lobbyists to perform the informational and subsidy tasks of lobbying. Lobbying firms, who deeply understand the workings of Congress, appreciate the value of connections for staff, hiring the best-connected lobbyists and placing them on the highest-value contracts.

Data and Empirical Strategy

To identify the value of congressional staff connections for revolving door lobbyists, I employ data covering lobbying revenue and employment and congressional staff employment history. Ideally we would have data on lobbyists' salaries, but beyond a handful of journalistic accounts these data are not available. Fortunately, though, the 1995 Lobbying Disclosure Act (LDA) mandated that lobbying firms report their lobbying activity, including the names of individual lobbyists and the revenue that clients pay firms for lobbying activity. The raw data includes over 4.5 million observations. This section details the use of the available data, the key dependent and independent variables, and the identification strategy.

Data Overview

The analyses in this paper use a comprehensive dataset from 2000-2016 of congressional staff employment records matched to the database of lobbying reports released under the LDA. These data are publicly available; the congressional employment records come from quarterly disbursements released by the House and Senate, and the LDA data is available online also via the House and Senate websites. However, this dataset was matched and cleaned by *Legistorm* (2016) in order to clear up the numerous discrepancies and inconsistencies in the raw data. Legistorm, among other tasks, individually checks all congressional staffers' names (and the numerous variations of their names) against names in the LDA data[6]. Because of the extensive manual matching done by Legistorm and the 2000-2016 time period, this is the most comprehensive dataset used in the literature to date. In the online appendix, Tables 1B and 2B disaggregate key summary statistics of the lobbyists in the data.

My analysis focuses on revolving door lobbyists who work for lobbying firms. I exclude in-house lobbyists from this analysis since revenue for these lobbyists is not reported in LDA

[6]Examples of name inconsistencies and related robustness checks are in the online appendix.

disclosures.[7] I also only include the ex-staffer's first stint as a lobbyist, since a few revolvers do go back and forth from the Hill to K Street (in other words, each lobbyist is in the data once). This limits the impact of omitted variables such as connections gained through previous lobbying experience. The revenue attributed to firm lobbyists has a meaningful interpretation as reflecting some level of personal worth of the lobbyist's individual production. An interesting question for future work is if certain characteristics of a congressional staffer predict whether they become a firm lobbyist or an in-house lobbyist.

Key Dependent Variable

The LDA data merits additional discussion. The dependent variable comes directly from the LDA reports and is composed of revenue attributed to individual lobbyists aggregated up to semester-level periods. Lobbyists registered under the LDA must report information about their lobbying activities, including revenue for firms lobbying on behalf of a client. The revenue is attributed to each lobbyist who works on a specific contract on each report filed. For example, if five lobbyists are on one report that states $50,000 in revenue, each lobbyist has an observation in the data for that report and $50,000 is associated with their name. Following the convention in other empirical work (e.g., Blanes i Vidal, Draca and Fons-Rosen 2012; Bertrand, Bombardini and Trebbi 2014), I attribute the total amount of revenue for the report to each lobbyist.[8] In this example, that means each lobbyist will be associated with $50,000 from that report. In Table 1C in the online appendix, I test the version of this variable where, in this example, each lobbyist is assigned $10,000 instead of $50,000 (i.e., $50,000 divided by 5). The results are unchanged.

I also believe this is an appropriate, if not ideal, way to measure lobbyist value. While salary information would be optimal (and would allow me to extend this analysis to a larger

[7]In-house lobbyists are lobbyists employed by a company to work solely for that company – see Online Appendix B for more information and example LDA reports.

[8]The total amount of revenue depends on the number and size of contracts. Lobbyists receive more revenue by gaining bigger and/or more contracts.

population of lobbyists), this measure captures something close and theoretically interesting. As argued previously, clients know what they want in terms of outcomes and pay firms differentially based on their ability to deliver. Firms place their "best" lobbyists – as I argue, those with the most staff connections – on their most lucrative accounts with the largest contracts. Therefore, contract value is an appropriate proxy for lobbyist value.

To operationalize the dependent variable, I focus on the staffer's first year as a lobbyist. This facilitates a clearer substantive interpretation of the results, since this is when their value will be most tied to their Capitol Hill experience. Basing the analysis on the first year as a lobbyist isolates their Capitol Hill experience as the trait driving the most variation in their revenue. This also supports the idea that congressional staff are in a sense auditioning for these jobs, so they will advertise their Hill background to potential employers as their most recent and valuable experience. Thus, the revenue totals for the first year lobbying are most reflective of the lobbyist's individual Hill background. To create this variable, I take the highest log dollar amount (adjusted for inflation) of revenue per individual lobbyist among their first two periods in the lobbying data after leaving Capitol Hill.[9]

Key Independent Variables

The primary independent variable used to test Hypotheses 1 and 2, congressional staff connections (`Number of Connections`), is a logged count of a lobbyist's network size.[10] I calculate network size by first determining all (unique) staffers with whom the lobbyist shared

[9]I pick the highest revenue among the first two periods to mitigate measurement error. For instance, a lobbyist might join a firm halfway through one period while another may be present for the entire period, artificially increasing the latter's revenue. Further details on this variable are included in Online Appendix B and robustness checks are reported in Table 1C.

[10]Since the data are right-skewed, I log this variable to account for skewed residuals (discussed more in the results). Table 1C in the online appendix includes robustness checks which remove outliers and all results maintain.

an office with as a congressional staffer. I then determine which of these staffers are still on Capitol Hill during the ex-staffer's first year as a lobbyist. For example, a congressional staffer leaves Capitol Hill to become a lobbyist after a long career and 100 of her former coworkers are still congressional staffers in her first year as a lobbyist. The number of staff connections for this lobbyist takes on the (logged) value of 100.[11] Note that one is added to independent variable (before taking the log) because of the presence of some zeros in the data.[12] Figure 3B in the online appendix plots the bivariate correlation of this variable with lobbying revenue, showing a positive relationship.

There is a possibility of measurement error in this independent variable. Since my data start in 2000, I do not have employment history of those prior to this period and cannot accurately count connections for congressional staff with employment history prior to 2000. I mitigate this possibility by subsetting my sample from the nearly 3,500 revolving door firm lobbyists to a smaller set for which I can reasonably assume I have full coverage of their congressional staffer careers (i.e., those staffers who only show up in the data after 2000). If this still misses some staffers – which it undoubtedly does – it would mean I am under-counting connections for certain lobbyists. Fortunately, this would bias my results in a downward direction.

Additionally, one could be concerned that this count of connections systematically misses

[11]So if a lobbyist takes a 10 year break before lobbying after leaving Capitol Hill, they will have fewer connections than someone who does not take a break. Variation in this variable comes through a variety of mechanisms, including tenure on the Hill, wave elections that see a large number of members from one party losing, or the number of offices the staffer works in, to name a few.

[12]There are very few zeroes and, after examination, the lobbyists with zero connections are lobbyists who have a substantial gap between their last year as a staffer and their first year as a lobbyist. Figure 1B in the online appendix displays a density plot of this variable and Table 1C in the online appendix reports robustness checks removing these observations.

the actual size of staffers' relevant networks. For example, perhaps committee staff are systematically under-counted because of the nature of working on a committee introduces them to more staffers, whereas the House and Senate staff counts are more accurate. I do not believe this to be the case. For instance, we see that, on average, staffers with House experience know fewer staffers (51.6) than those with Senate experience (88.2) and those with committee experience (109.7; full summary statistics are in the online appendix, Table 2B). Senate staffers and committee staffers should possess more staff connections given the relatively larger size of their offices, which is the case in these data. I also account for these different offices in the models that follow, so it is possible to predict the variation in lobbyist revenue as a function of network size given these concerns. In sum, this measure has reasonable face validity.

In an alternative specification of the initial models, I substitute the staff connections independent variable for a count of the unique *legislative offices* (`Staff-Office Connections`) the lobbyist is connected to *only through staff* – I call these "indirect" connections compared to "direct" connections which come from having worked directly for a legislator.[13] Similarly to the staff network variable, this is constructed based on all unique legislative offices within which a staffer in the lobbyist's network works during the lobbyist's first year. For example, a legislative assistant in the office the staffer currently works takes a job in a newly-elected member's office. This staffer has now gained an indirect connection to this office, as measured by this variable. This count does not include offices that the lobbyist herself worked in. The inclusion of this variable identifies the predicted value of a legislator connection that exists only because the lobbyist knows a staffer in the office. This is comparable to existing measures of connections (e.g., Blanes i Vidal, Draca and Fons-Rosen 2012), but follows directly from the logic of value in staff ties.

Finally, I include count variables for the number of connections lobbyists maintain to legislators (`House Connection` and `Senate Connection`), as determined by whether a legis-

[13]Figure 2B in the online appendix plots the distribution of this variable.

lator for whom they worked is in office during their first year as a lobbyist. As previous work suggests substantial value for legislator connections (Blanes i Vidal, Draca and Fons-Rosen 2012, find a connection to a Senator predicts $182,000 in additional revenue for the lobbyist in a year), the inclusion of this measure allows me to assess the value of a legislator connection when also accounting for the lobbyist's larger professional network. It is also possible that the number of connections is primarily driven by the years of experience a staffer has on Capitol Hill and accounting for Hill tenure will wash away the significance of connections. Though I think this unlikely, as I outlined in the second section, it is necessary to control for Hill seniority beyond the position title. To do this, I include `Years of Hill Experience` (and its square) in the first set of models.[14]

Empirical Strategy

The empirical strategy I employ is straightforward. The purpose of these models is to test if the number of connections a revolving door congressional staffer has to other currently serving congressional staffers predicts the revenue they earn in their first year as a lobbyist. Significant positive results on the coefficient estimate for the connections variable would support Hypothesis 1, that lobbyists with more extensive ties to staffers are of higher value to lobbying firms. The baseline model is as follows:

$$\log \boldsymbol{R}_i = \beta \cdot \log \mathbf{N}_i + \mathbf{X}_i' \cdot \theta + \gamma_t + \epsilon_i \tag{1}$$

In this OLS model, $\boldsymbol{R}_i$ is the outcome variable of interest, the highest (log) first year lobbying revenue. The key independent variable, $\mathbf{N_i}$, is the logged number of staff connections and the vector $\mathbf{X}_i'$ captures individual level covariates. The γ_t and ϵ_i variables represent year fixed-effects and a vector of individual specific, mean zero residuals, respectively. I also report models included lobbying firm fixed-effects, last-office fixed effects, and number of unique offices fixed-effects, all of which are explained in further detail below. In a similar set of models, I rerun this regression employing committee connections as the independent variable to test the second part of Hypothesis 1.

[14]And I report additional related robustness checks in Online Appendix Table 4C.

The largest threat to validity for this identification strategy is the unobserved skill level of the lobbyist, creating an omitted variable problem since this would be correlated with both revenue and connections (e.g., De Figueiredo and Richter 2013). Fortunately, the richness of the data available presents me with a number of options to rigorously address this concern – though ultimately ability/skill remain unobservable. The alternative explanations section after the initial results and the online appendix present a variety of different tests interrogating this potential issue.

Turning to the covariates, `Republican` is a dummy variable set to one if the lobbyist, as a staffer, ever worked for a Republican. This allows me to delineate different partisanship preferences in the lobbying industry. I also include a dummy variable set to one if the staffer has experience working on a committee (`Ever Committee Staff`) since previous literature has found a higher demand for committee staff as lobbyists (Cain and Drutman 2014), and a broad literature has established the institutional importance of committees in Congress (e.g., Shepsle 1978; Lazarus 2010; Berry and Fowler 2015). Committee offices are also larger on average, so this adjusts for the larger networks of committee staff. I also present a model in the main analysis and additional models in the appendix that includes fixed-effects for the importance of the offices in which a lobbyist worked while on the Hill. The possible categories are: a member on a power committee (majority or minority), a member chairing a power committee, a member who was a committee chair, a committee staffer, a power committee staffer, or majority/minority rank and file members.[15]

An additional variable (`Ever Senate Staff`) accounts for the chamber the lobbyist worked in as a staffer, which is set to one if they worked in the Senate. This is also important since Senate staff generally have higher numbers of connections, and I will be able to assess the difference in chamber preferences in the lobbying industry. Finally, I take the title of

[15]Power committees are defined by the House Ways & Means Committee, the House Appropriations Committee, the Senate Budget Committee, and the Senate Finance Committee. More information on these variables is available in Online Appendix C.

the last job the lobbyist held as a Hill staffer and bin them based on broad categories of seniority and responsibility.[16]. Without these controls, it would be impossible to make inferences about the value of connections since certain job titles and experience (e.g., legislative staff or senior staff) could account for the bulk of the variation in lobbying revenue. This is also a substantive contribution of this paper, since previous work does not have detailed information about the lobbyist's background as a Hill staffer.

I run an additional set of models to identify the additional value of legislator connections for these lobbyists, testing Hypothesis 3. These models involve the same covariates as equation 1 but now include an additional count variable for House and Senate connections, respectively. Formally:

$$\log \boldsymbol{R}_i = \beta_1 \cdot \log \mathbf{N}_i + \beta_2 \mathbf{HC}_i + \beta_3 \mathbf{SC}_i + \mathbf{X}_i' \cdot \theta + \gamma_t + \epsilon_i \tag{2}$$

This model includes count variables for House and Senate connections ($\mathbf{HC}_i$ and $\mathbf{SC}_i$) along with the staff network size variable and the covariates from Equation 1.

Results

This section presents results from three sets of models. Table 1 shows the results from regressions in the form of equation 1 that includes the number of total connections, and then the number of committee connections, as the independent variable and a number of covariates. Table 2 includes legislator connections and legislative office connections. I then account for some possible alternative explanations of these results and present robustness checks.

The Value of Congressional Connections

The motivating argument in this paper is that lobbyists benefit from extensive ties to their former congressional staff colleagues. The more of these ties, the more valuable they should be as lobbyists. Table 1 shows the results from the first series of models with total congres-

[16]This process is very similar to the one described in Montgomery and Nyhan (2016) and Madonna and Ostrander (N.d.) Further detail is in Online Appendix A.

sional staff connections as the independent variable in Models 1-3, directly assessing the first hypothesis. In Model 4, I change the independent variable to a count of committee staff connections (`Num. Cmte. Connections`). The second part of Hypothesis 1 argues that connections to committee staff should also be valuable, given the importance of committees and their staff in Congress. Model 4 tests this by isolating committee staff connections for lobbyists and including this (logged) count as the independent variable. The results show strong support for both elements of the first hypothesis.

[Table 1 here]

The models show statistically and substantively significant results. Since the dependent and independent variables are logged, the coefficients on `Number of Connections` and `Num. Cmte. Connections` can roughly be interpreted as the percentage increase in revenue given a one percent increase in connections.[17] Since the dependent variable here is only one six month period, the revenue totals would be doubled to approximate total yearly revenue. Figure 1 presents these results more intuitively. When holding all variables other than the staff connections count at their mean, an increase in staff connections by one standard deviation (58.2) over the mean number of connections (70.3) predicts over $118,000 in additional revenue in the lobbyist's first year. However, for lobbyists with certain backgrounds (i.e., some of the coefficients are now zero instead of at their mean) this difference is more pronounced. For a lobbyist who worked in a Democrat's personal office on the House side as a senior staffer, a one standard deviation increase over the mean predicts roughly $215,000 in additional yearly revenue (an 18% increase over the mean).

[Figure 1 here]

[17]For example, a 10% increase is roughly a 2.7% increase in revenue. However, elasticities are useful only as a first order approximation and becomes less accurate the further the percentage is from 0. Also note that in these examples fixed-effects are held at their means, as well as categorical and binary variables (unless otherwise specified). Substantive interpretations of the results change little if the variables are held at their modes.

Model 5 shows value in committee staff connections as well. An interesting result from Models 1-5 is that experience as committee staffer is consistently negative. In Model 6, I include fixed-effects for the importance of the office in which a staffer worked as a lobbyist, as described previously. By desegregating committee staffers based on the importance of the committee in which they worked, we see that experience on a powerful committee is positive and significant in predicting revenue, and washes out the negative coefficient from Ever Committee Staff. The other fixed-effects are not statistically significant and their inclusion does not change the interpretation of staff connections.[18]

[Table 2 here]

Table 2 presents models which include counts for a connection to a legislator and indirect connections to legislative offices via the lobbyist's staff relationships, allowing me to test my second hypothesis about the relative value of a connection to legislators. The coefficient on the number of total connections remains close to the Table 1 models. In Models 1 and 2 we see what existing work would predict (Blanes i Vidal, Draca and Fons-Rosen 2012; Bertrand, Bombardini and Trebbi 2014) – a legislator connection predicts an increase in revenue and Senate connections are the most valuable. Models 2 through 4 show that the number of staffers a lobbyist knows is significantly predictive of higher lobbying revenue. Model 5 introduces the `Staff-Office Connections` variable to assess the value of indirect legislator connections. Figure 2 plots of the results from Model 5 as predicted revenue compared to a direct Senator connection.

[Figure 2 here]

Once I include controls for the highest position the staffer worked on Capitol Hill, the predicted value of legislator connections drops and is no longer statistically different form zero. These individual-level covariates were not included in previous studies, and the results here indicate that they were important omitted variables. Lobbyists who worked as senior

[18]More robustness checks with these fixed-effects are presented in Online Appendix C. All results maintain with their inclusion.

staffers on the Hill no longer benefit from direct connections to Senators. However, the size of their staff network is still substantially predictive of higher revenue, providing further evidence of the importance of maintaining congressional staff connections.

Model 5 in Table 2 employs a different independent variable (`Staff-Office Connections`). As previously noted, this measures the number of unique legislators lobbyists are indirectly connected to by knowing a staff member in the office. The estimated coefficient on this variable is that for each additional staff-office connection gained the predicted revenue increases by roughly 2.5%. At 8 indirect connections (the mean is 6) the predicted revenue is roughly the same as possessing a Senator connection, so indirect legislator connections are about 12.5% of the value of one direct Senator connection. Further, a one standard deviation (6) increase over the mean of this variable (also 6) predicts roughly $85,000 in additional yearly revenue. A substantive interpretation of this finding, however, is to compare the value of staff-office connections to a Senator connection (plotted as the dotted line in Figure 2). At 12 *indirect* legislator connections (a one standard deviation increase over the mean), the predicted yearly revenue is over $60,000 greater than maintaining a *direct* Senator connection. In other words, the lobbyist is relatively better off gaining more staff connections compared to gaining a Senate connection. The staffer faced with a) leaving the Hill while their boss is still in office or b) staying on the Hill for another year or two to gain additional connections even if their boss is leaving office (or might lose an election) is better off choosing the second option.

Alternative Explanations

There are a few alternative explanations and threats to inference for the findings presented above. The most prominent of which is that the value of connections is purely endogenous to the staffer's ability and what I am really measuring through connections is skill. Although in this paper I am interested in the value of connections for lobbyists, as De Figueiredo and Richter (2013) correctly note, studies of lobbying often cannot account for the overall "ability" of the lobbyist, an omitted variable that can bias results. So it is possible that when

I control for aspects of ability the variation in revenue driven by connections diminishes. Unfortunately measuring lobbying ability is difficult at best.

Given the available data, I conduct a battery of tests that, to some degree, should capture whether a person may have improved "ability" as a staffer or higher expertise as a lobbyist. In this section I attempt the following: first, I present models that incorporate whether the lobbyist is a "specialist" (`Specialist`) and the rate of increase of their salary during their time on Capitol Hill (`Hill Salary Slope`). The specialist variable (constructed as described in Bertrand, Bombardini and Trebbi (2014)) captures the degree to which the lobbyist is an "expert" in a given policy area, determined by whether the lobbyist spends a quarter or more of their efforts (based on lobbying revenue) in one issue area. This should correlate with ability in that it captures distinct expertise that the lobbyist brings from their Capitol Hill experience in certain policy areas. The Hill salary variable, constructed from congressional salary disbursement data, measures the rate of change of the lobbyist's salary during their time on Capitol Hill. Here the idea is that the larger the slope, the more competent the person was as a staffer due to their ability to increase their salary conditional on their starting salary. This should also correlate with overall competence as a staffer and, more importantly, helps address the concern that connections is a proxy for skill as a staffer. Models 1 and 2 demonstrate that the inclusion of these controls do not affect the results.[19]

Next, I include dummy variables for possessing a graduate degree (`Graduate Degree`) and whether the lobbyist had previous executive branch work experience (e.g., in the White House or an agency, delineated `Previous Govt. Exper.`).[20] Possessing a graduate degree may benefit the lobbyist by giving them additional, specific knowledge in certain policy areas (for example, a Master of Public Health degree may add additional value to the lobbyist due to their expertise in health policy). Similarly, having previous experience in the federal government may endow the lobbyist with difficult to obtain, agency-specific policy information

[19]The construction of these variables is outlined in Online Appendix B.

[20]Note that education information is only available for a subset of the sample.

and would facilitate the job of informational lobbying, increasing their ability especially in their first year as a lobbyist. Models 3 and 4 show that the inclusion of these variables do not change the results and that connections remain significant in predicting revenue.

I also include fixed-effects for the total number of offices in which the staffer worked on Capitol Hill. High-ability staffers are able to more easily move offices and create for themselves larger networks, in which case if connections are purely a proxy for skill the fixed-effects should attenuate the value of connections. Models 5 and 6 show that even within different numbers of offices worked, the results remain unchanged and connections still significantly predict higher lobbying revenue.

In the online appendix (section C) I report the results from three more tests to this end. First, I turn the data into panel data and to conduct a time series analysis including the years in which the staffer is a lobbyist (in a similar fashion to Blanes i Vidal, Draca and Fons-Rosen 2012), which includes lobbyist, time and experience fixed-effects and standard errors clustered at the lobbyist level. The benefit of this approach is the inclusion of lobbyist fixed-effects, which hold constant the lobbyist's initial skill level while varying the number of connections. The results (Table 6C in the online appendix), while slightly less precise, are substantively the same magnitude as those presented previously (the coefficient on connections is 0.225 at $p = 0.11$). It is not surprising to see a decrease in precision in this analysis due to collinearity between the number of connections – which necessarily decrease over time, and the lobbying experience variable – resulting in an increase in the standard errors. I am also unable to measure *time-varying* traits of the lobbyist, such as connections that lobbyists inevitably gain, increasing variability in the estimate.[21] Nonetheless, it is heartening that with the inclusion of lobbyist fixed-effects the results remain substantively unchanged.

[21]However, when I take cross-sectional results at different levels of lobbying experience, I find statistical significance in the value of connections persists through the first 10 years of experience Figure 7B in the online appendix. This is further support for the the value of staff connections for revolving door lobbyists.

Finally, the online appendix presents results that include the lobbyist's eigenvector centrality as well as their number of raw connections (this process is outlined in Online Appendix C). Eigenvector centrality is a measure that takes into account the lobbyist's status in their network based on the importance of their other connections. While the raw connections count used in the initial analyses capture how widely the lobbyist is connected – a concept of theoretical importance because lobbyists benefit from relationships (and thus access) to many offices – eigenvector centrality is distinct in that it captures the importance of who the lobbyist knows. This analysis further isolates connections from a staffer's ability since the lobbyist's eigenvector centrality in her staff network would be more difficult to engineer as it depends on the actions of others within the network. As a result, endogeneity with the lobbyist's skill should be less of a concern.[22] I show that the results hold once centrality is accounted for and that centrality itself also predicts increased lobbying revenue – more evidence for the importance of who you know as well as how many you know.

[Table 3 here]

Additional robustness checks are presented in Online Appendix C, including firm-level fixed-effects (and firm-clustered standard errors) which accounts for the possibility that certain firms are accounting for a bulk of the variation in lobbying revenue; the removal of outliers since there is some right-skew in the independent variable; alternate specifications of the revenue dependent variable (due to considerations outlined in the Data Description section); the inclusion of last-office fixed-effects (including fixed-effects for the importance of the last office, such as the committee membership of the member, majority status, etc.), to account for the possibility that only certain offices are sending staffers to be valuable lobbyists; and additional tests with Staff-Office connections as the independent variable. The results maintain across all models.

Across all alternative specifications presented here and in the appendix, the primary results remain significant and of a similar magnitude. Across numerous tests attempting to

[22]I thank an anonymous reviewer for this suggestion.

account for lobbying ability as an omitted variable, the results remain substantively similar and almost entirely statistically significant. Further, the inclusion of lobbyist fixed-effects and network centrality lend additional credibility to these findings.

Discussion and Conclusion

This paper has argued that revolving door lobbyists primarily work in an informational role through providing a legislative subsidy. As the theory suggests, lowering the transaction costs associated with establishing relationships to congressional offices facilitates the job of a lobbyist. Revolving door lobbyists are specifically well suited for this task given the key role of congressional staff in the legislative process and their previous background as staffers. These lobbyists benefit from personal relationships with their former colleagues on Capitol Hill – a specific type of human capital unique to revolving door lobbyists – that translates into higher value for firms and lobbying clients.

The empirical results support this story of revolving door lobbying, showing evidence through lobbying revenue that staff connections are highly valued in the lobbying industry. I find that, on average, a one standard deviation increase over the mean number of staff connections predicts $118,000 in additional revenue in the lobbyist's first year off the Hill. For some lobbyists – for example, a Democratic staffer without Senate or committee experience – this figure increases to $215,000 (an 18% increase over the mean). These sums are substantial. While I am cautious to tie these numbers directly to salary, it is not a stretch to imagine such a large gap in revenue translates into higher personal income in a direct way.

Further, this analysis builds on findings from previous work (e.g., Blanes i Vidal, Draca and Fons-Rosen 2012; Bertrand, Bombardini and Trebbi 2014) which demonstrate value in connections directly to legislators. Extending the logic of valuable staff connections, I find that *indirect* connections to legislators through their staff is predicted to be worth $60,000 more than a direct link to a Senator. Finally, the results persist across a number of specifications which attempt to address the threat to inference caused by the difficulty in measuring lobbying skill and ability. While this paper has not sought to solve the connections versus

expertise debate in the lobbying literature, these analyses presents some suggestive evidence that connections are highly desirable by lobbying firms and their clients. In short, the lobbying industry places a high price tag on lobbyists that are well-connected to congressional staff.

This study advances our understanding of the political economy of public sector careers – a vital first step towards answering some of the larger questions in studies of lobbying and private influence in public policy. Among these questions are: how and why are connections valuable in lobbying? How do lobbyists influence the policymaking process? What inferences do we draw from the substantially large monetary value of connections for revolving door lobbyists?

The large premium associated with connections to congressional staffers suggests that gaining access to the legislative process and its key actors is what firms and their clients value. The high revenue attributed to former congressional staffers who become lobbyists, which increases even further based on their Capitol Hill connections, supports the theory of lobbying as a legislative subsidy. This finding has increased salience in an era of low congressional capacity, where anecdotal evidence points to lobbyists filling in for staffers (see for example Williams 2017).

Finally, what insights can we gain from the political economy of the careers of congressional staffers on how lobbying influences public policy? Should Americans' distrust of Congress be affected by the revolving door phenomenon? On the one hand, attractive outside options could induce staffers to work harder for their boss (and the public interest) in order to convince future employers of their ability (e.g., Kedia et al. 2015). The draw of lucrative private employment could induce staffers to place higher importance on private concerns over the public interest. Absent substantial reform, the sheer value of the outside option for underpaid staff will create, at the least, the perception of perverse incentives for them to "audition" for lucrative private-sector jobs while on the public payroll. The asymmetry in salaries and salary growth available to Hill staffers when compared to the private

sector, combined with the increasing cost of living in Washington, D.C., exacerbate these incentives. While building expertise could be a net social good, Congress needs to bolster its resources to incentivize these public employees to keep their abilities on Capitol Hill. In sum, this prima facie evidence is strongly suggestive of the influence of privately-funded interests in public policymaking and ascertaining what firms and their clients value in the lobbyists they hire is a promising method for more systematic analyses of these questions.

This study contributes to existing questions within the lobbying literature, though many remain fertile areas for future research. For instance, little work currently exists on individual-specific human capital of congressional staffers or lobbyists. Adding more granular measures of these attributes would provide greater insight into who is driven to lobbying and who is successful once there. Similarly, building on research by (LaPira and Thomas 2017), what career paths as congressional staffers translate into the type of lobbyist they become once they leave public service? Do certain types of experience lead to higher desirability for small firms versus large firms? Who is more likely to become a strategic versus informational lobbyist? This is a promising area for future research.

Though taken up briefly in this analysis, a relevant question is how revolving door lobbyists continue to rely on connections once they become established lobbyists? Alternatively, do they develop an additional sort of human capital over time while working in the lobbying industry? What other ways do connections between lobbyists and legislators and their staff impact policy? Careful panel and social network analaysis designs would shed light on this question. Finally, what is the relationship between the draw of the outside option – the revolving door – and congressional capacity? Does the regular turnover of staff to higher paying, private sector jobs affect Congress' ability to do its job? Ultimately, the sheer magnitude of the dollar figures associated with walking through the revolving door demonstrate the importance of further research on revolving door lobbying. Analyses such as the one in this paper help us eventually shed light onto these questions by understanding the labor market and the incentives to which public employees respond.

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References

Abramoff, Jack. 2011. *Capitol Punishment: the hard truth about Washington corruption from America's most notorious lobbyist*. BookBaby.

Ainsworth, Scott. 1993. "Regulating lobbyists and interest group influence." *The Journal of Politics* 55(1):41–56.

Ainsworth, Scott H. 1997. "The role of legislators in the determination of interest group influence." *Legislative Studies Quarterly* pp. 517–533.

Ansolabehere, Stephen, John M De Figueiredo and James M Snyder. 2003. "Why is there so little money in US politics?" *The Journal of Economic Perspectives* 17(1):105–130.

Austen-Smith, David and John R Wright. 1992. "Competitive lobbying for a legislator's vote." *Social Choice and Welfare* 9(3):229–257.

Austen-Smith, David and John R Wright. 1994. "Counteractive lobbying." *American Journal of Political Science* pp. 25–44.

Baumgartner, Frank R and Beth L Leech. 1998. *Basic interests: The importance of groups in politics and in political science*. Princeton University Press.

Berry, Christopher R and Anthony Fowler. 2015. "Cardinals or clerics? Congressional committees and the distribution of pork." *American Journal of Political Science* .

Bertrand, Marianne, Matilde Bombardini and Francesco Trebbi. 2014. "Is it whom you know or what you know? An empirical assessment of the lobbying process." *The American Economic Review* 104(12):3885–3920.

Blanes i Vidal, Jordi, Mirko Draca and Christian Fons-Rosen. 2012. "Revolving door lobbyists." *The American Economic Review* 102(7):3731–3748.

Bogardus, Kevin and Rachel Leven. 2011. "Lobbyists took $100K cut in pay to work for members of Congress." `http://thehill.com/business-a-lobbying/168709-lobbyists-took-100k-cut-in-pay-to-work-on-the-hill`. Accessed: 2017-06-24; Published 2011-06-28.

Bryner, Sarah. 2017. "Healthcare lobbyists are no strangers on the Hill." `https://www.`

opensecrets.org/news/2017/07/healthcare-lobby-on-the-hill/. Accessed: 2017-07-09; Published: 2017-07-07.

Cain, Bruce E and Lee Drutman. 2014. "Congressional staff and the revolving door: The impact of regulatory change." *Election Law Journal* 13(1):27–44.

Canen, Nathan and Francesco Trebbi. 2016. Endogenous Network Formation in Congress. Technical report National Bureau of Economic Research.

Chin, Michelle L, Jon R Bond and Nehemia Geva. 2000. "A foot in the door: An experimental study of PAC and constituency effects on access." *The Journal of Politics* 62(02):534–549.

Cotton, Christopher. 2009. "Should we tax or cap political contributions? A lobbying model with policy favors and access." *Journal of Public Economics* 93(7):831–842.

Cotton, Christopher. 2015. "Competing for Attention.".

De Figueiredo, John M and Brian Kelleher Richter. 2013. Advancing the empirical research on lobbying. Technical report National Bureau of Economic Research.

DeGregorio, Christine. 1988. "Professionals in the US Congress: an analysis of working styles." *Legislative Studies Quarterly* pp. 459–476.

Fox, Harrison W and Susan Webb Hammond. 1977. *Congressional staffs: The invisible force in American lawmaking*. Free Press.

Gallup. 2017. "Confidence in Institutions." http://news.gallup.com/poll/1597/confidence-institutions.aspx. Accessed: 2017-09-22.

Grim, Ryan and Sabrina Siddiqui. 2013. "Call time for congress shows how fundraising dominates bleak work life." *The Huffington Post* .

Hall, Richard L. 1998. *Participation in congress*. Yale Univ Pr.

Hall, Richard L and Alan V Deardorff. 2006. "Lobbying as legislative subsidy." *American Political Science Review* 100(01):69–84.

Hirsch, Alexander V and B Pablo Montagnes. 2015. The Lobbyist's Dilemma: Gatekeeping and the Profit Motive. Technical report mimeo.

Hojnacki, Marie and David C Kimball. 1998. "Organized interests and the decision of whom to lobby in Congress." *American Political Science Review* 92(04):775–790.

Hojnacki, Marie and David C Kimball. 1999. "The who and how of organizations' lobbying strategies in committee." *The Journal of Politics* 61(04):999–1024.

Holyoke, Thomas T. 2003. "Choosing battlegrounds: Interest group lobbying across multiple venues." *Political Research Quarterly* 56(3):325–336.

Kedia, Simi, Kevin Koh, Shivaram Rajgopal et al. 2015. "The revolving door and the SEC's enforcement outcomes." *Journal of Accounting and Economics* 60(2):65–96.

Kelleher, Christine A and Susan Webb Yackee. 2009. "A political consequence of contracting: Organized interests and state agency decision making." *Journal of Public Administration Research and Theory* 19(3):579–602.

Koger, Gregory, Seth Masket and Hans Noel. 2009. "Partisan webs: Information exchange and party networks." *British Journal of Political Science* 39(03):633–653.

LaPira, Timothy M and Herschel F Thomas. 2014. "Revolving door lobbyists and interest representation." *Interest Groups & Advocacy* 3(1):4–29.

LaPira, Timothy M and Herschel F Thomas. 2017. *Revolving Door Lobbying: Public Service, Private Influence, and the Unequal Representation of Interests*. University Press of Kansas.

LaPira, Timothy M, Herschel F Thomas and Frank R Baumgartner. 2014. "The two worlds of lobbying: Washington lobbyists in the core and on the periphery." *Interest Groups & Advocacy* 3(3):219–245.

Lazarus, Jeff and Amy McKay. N.d. "Consequences of the Revolving Door: Evaluating the Lobbying Success of Former Congressional Members and Staff.".

Lazarus, Jeffrey. 2010. "Giving the people what they want? The distribution of earmarks in the US House of Representatives." *American Journal of Political Science* 54(2):338–353.

Legistorm. 2016. `http://www.legistorm.com`. Accessed: 2016-12-17.

Madonna, Anthony and Ian Ostrander. N.d. "Getting the Congress You Pay For: The Role of Staff and Legislative Productivity.".

Malbin, Michael J. 1980. *Unelected representatives: Congressional staff and the future of representative government*. Basic Books.

Montgomery, Jacob and Brendan Nyhan. 2016. "The Effects of Congressional Staff Networks in the US House of Representatives.".

Ringe, Nils, Jennifer Nicoll Victor and Christopher J Carman. 2013. *Bridging the Information Gap*. University of Michigan Press Ann Arbor.

Salisbury, Robert H and Kenneth A Shepsle. 1981. "US Congressman as enterprise." *Legislative Studies Quarterly* pp. 559–576.

Schnakenberg, Keith E. 2016. "Informational Lobbying and Legislative Voting." *American Journal of Political Science* .

Shepsle, Kenneth A. 1978. *The giant jigsaw puzzle: Democratic committee assignments in the modern House*. University of Chicago Press.

Victor, Jennifer Nicoll and Gregory Koger. 2016. "Financing friends: How lobbyists create a web of relationships among members of Congress." *Interest Groups & Advocacy* .

Williams, Joe. 2017. "Staff Departures Undermine GOP Legislative Agenda." `http://www.rollcall.com/news/policy/staff-departures-undermine-gop-legislative-agenda`. Accessed: 2017-06-20; Published 2017-06-19.

Wilson, Megan. 2014. "Ex-Cantor aides start lobby firm." `http://thehill.com/business-a-lobbying/business-a-lobbying/224797-ex-cantor-lieutenants-hang-shingle-on-k-street`. Accessed: 2016-12-17; Published 2014-11-19.

Wright, John R. 1989. "PAC contributions, lobbying, and representation." *The Journal of Politics* 51(03):713–729.

Tables and Figures

Table 1: Total Connections and Lobbying Revenue

	(log) Highest First Year Lobbying Revenue					
	(1)	(2)	(3)	(4)	(5)	(6)
Number of Connections	0.274***	0.395***	0.339***	0.270***		0.275***
	(0.029)	(0.037)	(0.036)	(0.040)		(0.043)
Num. Cmte. Connections					0.217***	
					(0.053)	
Ever Committee Staff		−0.309***	−0.259***	−0.257***	−0.950***	−0.272***
		(0.069)	(0.067)	(0.068)	(0.227)	(0.081)
Republican		−0.042	−0.116**	−0.132**	−0.119**	−0.123**
		(0.057)	(0.056)	(0.056)	(0.057)	(0.060)
Ever Senate Staff		−0.216***	−0.188***	−0.175***	−0.043	−0.172***
		(0.060)	(0.059)	(0.059)	(0.055)	(0.063)
Legislative Staff			0.356***	0.304***	0.319***	0.319***
			(0.065)	(0.067)	(0.068)	(0.069)
Senior Staff			0.730***	0.605***	0.634***	0.614***
			(0.080)	(0.087)	(0.089)	(0.091)
Press Staff			−0.226	−0.262*	−0.288*	−0.227
			(0.156)	(0.157)	(0.160)	(0.156)
Years of Hill Experience				0.069*	0.131***	0.075**
				(0.036)	(0.035)	(0.036)
Years of Hill Exp. (squared)				−0.002	−0.005*	−0.002
				(0.003)	(0.003)	(0.003)
Cmte. Chair						−0.053
						(0.118)
Committee Staff						−0.048
						(0.133)
Power Cmte. Chair						−0.164
						(0.190)
Power Cmte. Staff						0.364**
						(0.169)
Majority Power Cmte.						0.058
						(0.116)
Minority Power Cmte.						0.076
						(0.132)
Majority Rank & File						−0.014
						(0.110)
N	2,524	2,524	2,524	2,524	2,524	2,484
R^2	0.073	0.085	0.120	0.125	0.116	0.129
Adjusted R^2	0.067	0.078	0.112	0.117	0.108	0.118

*p < .1; **p < .05; ***p < .01

All models include year fixed-effects and robust standard errors are reported in parentheses. The Number of Connections and Num. Cmte. Connections variables are a logged count of total connections and committee connections, respectively. Model 6 includes fixed-effects for the highest importance office in which the lobbyist worked as a staffer, with the omitted category as Minority Rank & File. There are fewer observations in Model 6 because a few staffers worked in administrative offices (e.g., the House Clerk) and are not included.

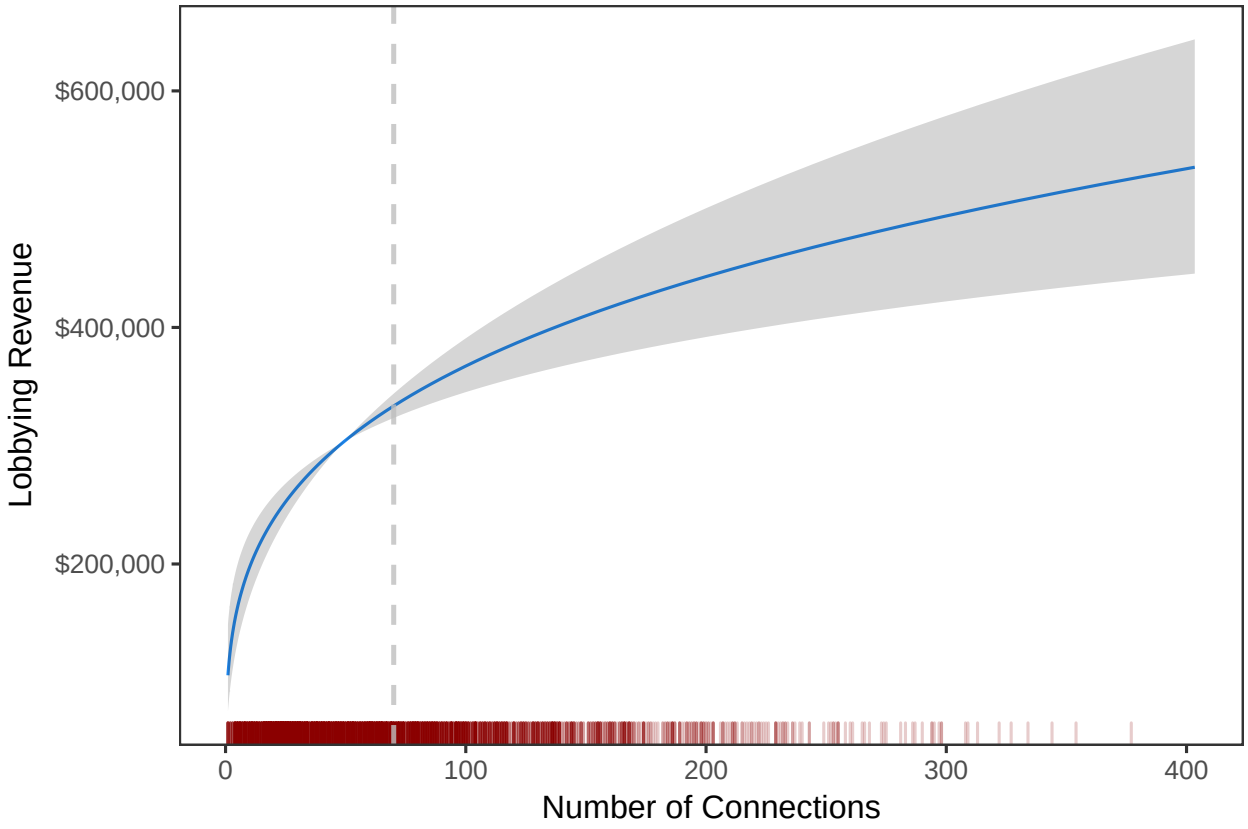

Figure 1: Total Connections and Lobbying Revenue

This figure plots results from Model 4 in Table 1, holding all variables other than the connections count at their mean. The distribution of connections is plotted along the x-axis. The mean of the independent variable is marked by the dashed line. Note: there are two observations with connections counts greater than 400. I censored this figure at 400 for aesthetic purposes.

Table 2: Staff Connections, Legislator Connections, and Lobbying Revenue

	(log) Highest First Year Lobbying Revenue				
	(1)	(2)	(3)	(4)	(5)
log(Number of Connections)		0.264***	0.338***	0.316***	
		(0.031)	(0.041)	(0.040)	
Staff-Office Connections					0.025***
					(0.006)
House Connection	0.187***	0.191***	0.119**	0.027	0.032
	(0.046)	(0.046)	(0.051)	(0.051)	(0.055)
Senate Connection	0.281***	0.125**	0.160**	0.087	0.192***
	(0.051)	(0.054)	(0.071)	(0.071)	(0.069)
Ever Committee Staff			−0.197**	−0.214***	0.170***
			(0.078)	(0.077)	(0.064)
Republican			−0.083	−0.130**	−0.191***
			(0.057)	(0.057)	(0.057)
Ever Senate Staff			−0.222***	−0.222***	−0.180**
			(0.080)	(0.079)	(0.081)
Legislative Staff				0.348***	0.360***
				(0.065)	(0.067)
Senior Staff				0.710***	0.672***
				(0.084)	(0.086)
Press Staff				−0.233	−0.270*
				(0.156)	(0.160)
N	2,524	2,524	2,524	2,524	2,524
R^2	0.057	0.083	0.089	0.120	0.104
Adjusted R^2	0.051	0.076	0.081	0.112	0.096

*p < .1; **p < .05; ***p < .01

All models include year fixed-effects and robust standard errors are reported in parentheses. The House and Senate connections variables are counts of the total number of Representatives/Senators still in Congress, that the lobbyist worked for, during their first period as a lobbyist. Staff-Office Connections is a count of the number of legislative offices a lobbyist is connected to via their staff network (and not the last office the staffer worked in).

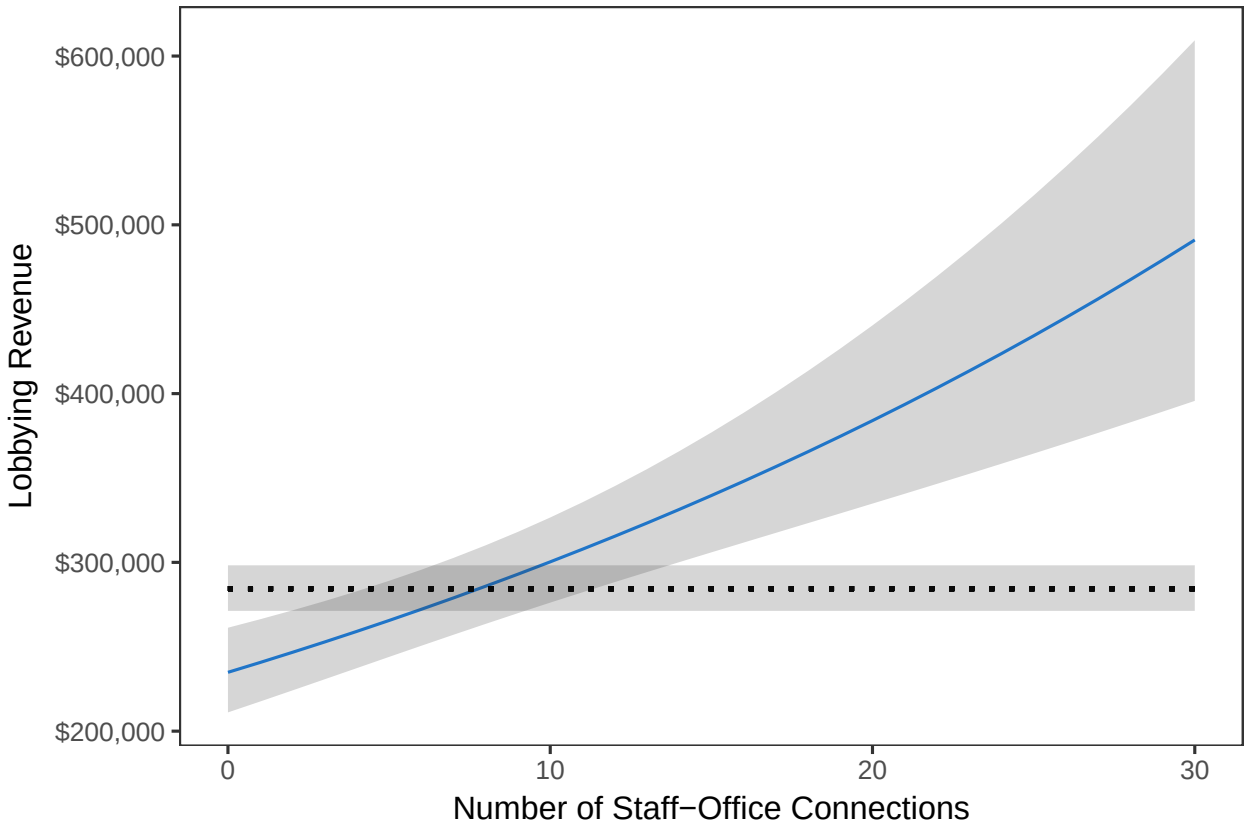

Figure 2: Legislator Connections via Staff and Lobbying Revenue

This figure plots the predicted value of a connection to a legislative office that lobbyists maintain via their congressional staff network (as previously described). The dotted line is the predicted value of possessing a connection to a Senator, holding the staff-office connections at zero (i.e., you are only connected to your previous employer and no other offices). The mean value of staff-office connections in the data is roughly 6, and a standard deviation is also 6.

Table 3: Alternative Explanations for Predicting Lobbying Revenue

	(log) Highest First Year Lobbying Revenue					
	(1)	(2)	(3)	(4)	(5)	(6)
Number of Connections	0.284***	0.263***	0.240***	0.214***	0.307***	0.301***
	(0.041)	(0.044)	(0.049)	(0.053)	(0.037)	(0.040)
House Connection		−0.045		−0.029		−0.035
		(0.047)		(0.052)		(0.060)
Senate Connection		0.118*		0.133*		0.036
		(0.067)		(0.073)		(0.075)
Ever Committee Staff	−0.241***	−0.213***	−0.214***	−0.180**	−0.271***	−0.272***
	(0.067)	(0.076)	(0.079)	(0.088)	(0.068)	(0.083)
Republican	−0.177***	−0.185***	−0.130**	−0.142**	−0.152***	−0.155***
	(0.055)	(0.055)	(0.065)	(0.065)	(0.058)	(0.058)
Ever Senate Staff	−0.223***	−0.335***	−0.206***	−0.316***	−0.177***	−0.226***
	(0.060)	(0.079)	(0.070)	(0.088)	(0.059)	(0.080)
Legislative Staff	0.341***	0.339***	0.287***	0.285***	0.344***	0.344***
	(0.071)	(0.072)	(0.091)	(0.092)	(0.066)	(0.066)
Senior Staff	0.614***	0.617***	0.532***	0.528***	0.682***	0.685***
	(0.084)	(0.086)	(0.102)	(0.105)	(0.084)	(0.085)
Press Staff	0.082	0.081	0.040	0.041	−0.235	−0.237
	(0.146)	(0.146)	(0.188)	(0.188)	(0.157)	(0.158)
Graduate Degree			0.013	0.014		
			(0.064)	(0.064)		
Previous Govt. Exper.			0.071	0.073		
			(0.092)	(0.092)		
Specialist	−1.515***	−1.522***	−1.535***	−1.535***		
	(0.067)	(0.067)	(0.083)	(0.082)		
Hill Salary Slope	0.028	0.029	0.057	0.059		
	(0.078)	(0.078)	(0.100)	(0.100)		
Fixed Effects?	Year	Year	Year	Year	Offices + Year	Offices + Year
N	2,073	2,073	1,456	1,456	2,524	2,524
R^2	0.307	0.309	0.328	0.330	0.126	0.126
Adjusted R^2	0.299	0.300	0.315	0.317	0.115	0.114

*p < .1; **p < .05; ***p < .01

All models include year fixed-effects and robust standard errors are reported in parentheses. The independent variable is the number of connections a lobbyist has to congressional staffers. Models 1 and 2 are ran on the subset of data for which the slope of the lobbyist's Hill salary could be calculated (more information on this is in the online appendix). Models 3 and 4 are ran on a subset of the larger data for which exists education information. Models 5 and 6 include fixed-effects for the number of offices in which a lobbyist worked on the Hill.