

# Employee Mobility and Interfirm Relationship Transfer: Evidence from the Mobility and Client Attachments of United States Federal Lobbyists, 1998–2014

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**Research summary:** *Employee mobility can erode competitive advantage by facilitating interfirm knowledge and relationship transfer. This study investigates the latter and identifies factors that influence the likelihood of its occurrence. Using a novel database that tracks the employment and client attachments of U.S. federal lobbyists, I show that repeated exchange with employees (firms) increases (decreases) the likelihood clients follow employees who switch firms. Structurally, multiplexity reduces the likelihood of client transfer and weakens the effect of employee–client repeated exchange, with the multiplexity effect strongest when team members have specialized expertise. By examining the main and interactive effects of repeated exchange, multiplexity, and specialized human capital, this study extends prior work by demonstrating how individual, organizational, and structural relationship characteristics affect client transfer and retention ex-post employee mobility.*

**Managerial summary:** *When do clients follow employees who switch firms? What can firms do to guard against it? These questions are important in service-based industries where clients may become loyal to individual employees within the firm rather than to the firm itself. This study provides evidence that helps practicing managers: (a) identify which clients are most at risk of defecting if employees exit, and (b) structure relationships in ways that mitigate the likelihood that employee exit results in client loss. Findings suggest that a client is more likely to defect when she has extensive history working with the exiting employee, particularly if the employee was the sole link between the client and firm. Managers, however, can reduce the risk of client loss following employee exit by structuring relationships so that clients work with teams of employees rather than exclusively with an individual and by increasing the degree of specialization within these teams. Copyright © 2017 John Wiley & Sons, Ltd.*

## Introduction

Human assets have long been recognized as a promising source of competitive advantage (Campbell, Coff, & Kryscynski, 2012; Hatch & Dyer, 2004). Yet sustaining these advantages

is challenging (Coff, 1997), because employee mobility often results in the interfirm transfer of valuable knowledge to rival firms (Agarwal, Ganco, & Ziedonis, 2009). Employee mobility may also lead to the interfirm transfer of valuable stakeholder relationships, for example, relationships with clients, customers, suppliers, and other market actors (Carnahan & Somaya, 2013; Dokko & Rosenkopf, 2010). However, while employee mobility and interfirm knowledge transfer has received significant scholarly attention (e.g., Agarwal et al., 2009), we know much less about the

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conditions under which employee mobility leads to the interfirm transfer of relationships or what (if anything) firms can do to reduce the likelihood of its occurrence (Sorenson & Rogan, 2014).

In this article, I contribute to this literature by examining when employee mobility leads to interfirm client transfer in the context of professional services firms. Client transfer differs fundamentally from knowledge transfer in that the latter is often nonrivalrous and nonexcludable, while the former has agency and makes transfer choices. Accordingly, prior work examining the conditions that lead to knowledge transfer may not easily translate to client transfer, as client transfer presents its own unique set of challenges.<sup>1</sup> I begin by theoretically arguing that employee–client and firm–client relationships are interrelated but distinct (cf. Broschak & Block, 2014) and empirically show that the likelihood a client follows an employee who switches firms increases with repeated exchange between the employee and client, but decreases with repeated exchange between the client and firm. When relationships are structured as multiplex (clients served by a team), however, clients will develop multiple employee–client relationships within the firm, reducing reliance on any specific employee. Accordingly, I hypothesize and find that multiplexity significantly reduces the likelihood that mobility leads to client transfer, while also weakening the effect associated with employee–client repeated exchange. By doing so, my study responds to recent calls urging scholars to investigate “the role that multiplex ties play in the retention of clients” (Rogan, 2014, p. 580). I extend this logic further to argue that the efficacy of multiplex relationship structures will vary with the human capital characteristics of multiplex team members. Drawing from the labor market specialization literature (Ferguson & Hasan, 2013), I theorize and find that the strength of the multiplexity main effect increases when teams are comprised of specialists rather than generalists, consistent with the theoretical argument that increased specialization and

division of labor in team production of products and services increases the difficulty and perceived ability for an individual employee to replicate the production of value without his or her team (Liebeskind, 1996).

I test my hypotheses using data on the interfirm mobility of U.S. federal lobbyists. To overcome the inherent data challenges that have plagued scholars conducting empirical work in this area, I exploit the stringent reporting requirements mandated by the Lobbying Disclosure Act of 1995 and Honest Leadership and Open Government Act of 2007 that require all lobbying activity to be reported via lobbying disclosure reports to the Senate Office of Public Records. I use these reports to construct a novel database that tracks the employment *and* client attachments of all registered lobbyists between 1998 and 2014. Analysis of these data—including econometric corrections for selection and numerous fixed-effects regressions that help account for lobbyist, firm, client, and destination firm unobserved heterogeneity—provide robust support for my theory.

This article contributes to the growing literature on strategic human capital (Bidwell, Won, Barbulescu, & Mollick, 2015; Lecuona & Reitzig, 2014; Raffiee & Coff, 2016) and complements extensive work on interfirm knowledge transfer (e.g., Franco & Filson, 2006) by theoretically identifying conditions that facilitate interfirm relationship transfer. By doing so, this study adds empirical insights to the employee mobility literature by disentangling *what* is transferred through mobility (i.e., clients) from *who* is transferred through mobility (i.e., the employee[s]), a rarity in extant work, despite the prevalence of theoretical arguments in the mobility literature alluding to client transfer and its strategic importance (Campbell, Ganco, Franco, & Agarwal, 2012; Phillips, 2002; Wezel, Cattani, & Pennings, 2006). My findings have significant and widespread economic implications, particularly in the context of professional services, a crucial and substantial component of the U.S. economy that contributed more than \$2.2 trillion (~20%) to the U.S. gross domestic product and was the leading source of U.S. private sector employment in 2011 (USITC Publication 4412). By examining the main and interactive effects of repeated exchange, multiplexity, and specialized human capital, this study empirically shows how individual, organizational, and structural relationship characteristics affect

<sup>1</sup> Prior work has also shown that managerial mobility can lead to the general dissolution of client ties (Broschak, 2004; Broschak & Block, 2014). However, it thus far remains unclear if (or when) defecting clients “follow the individuals leaving the organizations” (Sorenson & Rogan, 2014: p. 272), in part due to empirical difficulties disaggregating employee–client relationships from firm–client relationships. This limitation has important theoretical and practical implications because the competitive ramifications of resource *transfer* are distinct from resource *depletion* (Agarwal, Campbell, Franco, & Ganco, 2016).

the likelihood that employee mobility results in client transfer, thereby contributing to our theoretical understanding of the multilevel nature of relationship attachment (Bermiss & Greenbaum, 2016) and the sustainability of human-asset-based competitive advantages (Coff, 1997).

### Theory and Hypotheses

Human assets are crucial components for value creation and the emergence of competitive advantage, particularly in knowledge-intensive and professional services industries (Coff, 1997). The potential for employee mobility, however, may threaten these advantages because mobility can facilitate the interfirm transfer of knowledge (Aime, Johnson, Ridge, & Hill, 2010) and relationships (Carnahan & Somaya, 2013). While scholars have identified conditions that facilitate interfirm knowledge transfer (Agarwal et al., 2009) and outlined ways firms can reduce it (Liebeskind, 1996), the potential for client transfer presents unique challenges. Unlike knowledge, clients have free-will and therefore must decide whether or not they should follow an employee who engages in mobility to a different firm. Theoretically, I adopt the assumption that in cases of mobility both the employee and the firm prefer to retain the client relationship. As a result, relationship “ownership by a focal actor therefore depends on the orientation of the alter in each relationship” (Sorenson & Rogan, 2014, p. 263), with the alter being the client and the focal actor being the firm or employee.

My theory focuses on three sets of factors that I argue will influence a client’s choice to follow an employee who switches firms and therefore the likelihood that mobility results in interfirm client transfer: (a) the strength of the client’s relationship with the employee, (b) the strength of the client’s relationship with the firm, and (c) structural characteristics regarding how the relationship is organized within the firm. In what follows, I develop arguments to explain how these factors directly and jointly affect client choice and therefore the likelihood mobility leads to client transfer.<sup>2</sup>

<sup>2</sup> Other factors may influence the odds of client transfer, for example, characteristics of the client firm (Broschak & Block, 2014) or the destination of where the mobile employee goes (Sorenson & Rogan, 2014). These factors are outside the scope of this article, but I attempt to empirically account for them in various

### Relationship Strength: Employee–client and Firm-client Repeated Exchange

In this section, I focus on the strength of a client’s relationship with the exiting employee and the strength of the client’s relationship with the firm. Specifically, I examine the degree to which there has been repeated exchange, as theory suggests that repeated exchange generates a number of benefits that can strengthen and embed exchange relationships (Elfenbein & Zenger, 2013).

Importantly, I depart from prior work and treat a client’s repeated exchange with the firm as distinct from repeated exchange with an employee (cf. Rogan, 2013). That is, when a client engages in repeated exchange with a firm, the same employee(s) may or may not be involved in the interaction. Therefore, repeated exchange occurs distinctly at the individual *and* organizational levels, and, as Elfenbein and Zenger (2013, p. 222) note, “a pattern of repeated interorganizational exchange generates both efficiency benefits to the firm and private benefits to individuals within the firm.”

The benefits accrued from repeated exchange are both economic and relational (Kuwabara, 2011). First, logic from an economic perspective suggests that exchange partners will be driven by self-interest and make choices in a manner they believe will maximize (or at least maintain) their individual benefits. Accordingly, actors tend to remain in relationships when the perceived benefits are greater than alternative outside options (Emerson, 1981). Repeated exchange facilitates the accumulation of private information regarding client-specific needs, preferences, and behavioral norms (Bidwell & Fernandez-Mateo, 2010; Chatain, 2011), much of which may be tacit and difficult to codify (Mayer, Somaya, & Williamson, 2012). Over time, this facilitates shared organizational routines, common language, and relationship-specific investment (Dyer & Singh, 1998). These investments can be attributed to individuals (e.g., Anand, Gardner, & Morris, 2007) or firms (e.g., Biong & Ulvnes, 2011) and economically embed relationships by creating uncertainty regarding if (or how quickly) the client’s needs could be met by outside options should the focal relationship end.

Second, logic from a relational perspective suggests that repeated exchange builds “mutual liking,

ways through my primary analysis and subsequent robustness checks.

trust, and the quality of a dyadic relationship” (Curhan, Neale, Ross, & Rosencranz-Engelmann, 2008, p. 192). This can lead actors to perceive the relationship as holding its *own* value above and beyond the economic and uncertainty reduction properties (Lawler & Thye, 1999). Like economic benefits, relational benefits can develop with individuals (Rosenkopf, Metiu, & George, 2001) and firms (Gulati, 1995). These benefits—the development of relational capital, goodwill, and trust—work to socially embed client relationships, thereby increasing the client’s perceived relational cost associated with relationship severance.

Together, these arguments suggest that a pattern of repeated exchange generates economic and relational benefits that simultaneously strengthen employee–client and firm–client relationships. The strength of these relationships, in turn, should influence the locus of client attachment and therefore a client’s decision to follow an employee who switches firms, albeit in different directions.

*Hypothesis 1: The greater the employee–client repeated exchange, the more likely the client will follow the employee if the employee exits, controlling for firm–client repeated exchange.*

*Hypothesis 2: The greater the firm–client repeated exchange, the less likely the client will follow the employee if the employee exits, controlling for employee–client repeated exchange.*

### **Relationship Structure: The Degree of Multiplexity**

As I have argued above, client relationships develop at multiple levels—clients build relationships with individual employees and relationships with the firm itself. However, from a structural standpoint, not all client relationships are organized in the same way—relationships vary in the degree to which they are structured as multiplex. Multiplexity, both at the interpersonal and interfirm levels, broadly refers to situations in which two or more relationships simultaneously occur (Shipilov, 2012). In this study, I follow Rogan (2014) and consider a client relationship to be multiplex if more than one employee works with the client. I do not require relationships to have multiple identities or functions (cf. Wasserman & Faust, 1994).

Thus, multiplexity exists with a single identity (e.g., buyer–seller) but multiple individual ties (i.e., multiple employee–client relationships) (Shipilov, Gulati, Kilduff, Li, & Tsai, 2014).

In terms of determining where client loyalty resides, the degree of multiplexity complicates the allocation process because clients will develop individual relationships—each carrying their own economic and relational benefits—with each employee with whom they work. These relationships can be conceptualized as being aggregated toward the firm, thereby forming the micro-foundations of firm–client relationships. That is, multiplexity pits the employee not only against the firm in terms of competing for client loyalty, but also against the other employees with whom the client works. As multiplexity rises, this becomes increasingly problematic for employees who wish to switch firms and take clients, because larger teams serving clients means that clients are likely to be economically and socially embedded with other employees who will remain with the firm. As a result, for a mobile employee to convince a client to follow, the client’s perceived benefits of following the mobile employee must outweigh the collective benefits from the client’s relationships with the other team members, a conclusion a client is less likely to reach as the size of the team serving the client grows.

In addition, this issue is exacerbated by the fact that team production of services often creates a problem of nonseparability, where individual contributions to the creation of value can be difficult for clients to gauge (Alchian & Demsetz, 1972). These problems are particularly relevant in professional services where knowledge asymmetries make the quality of production opaque and difficult for clients to observe. Accordingly, issues of nonseparability, which arise from high levels of multiplexity can create further uncertainty and doubt regarding the mobile employee’s ability to meet the client’s needs without her team members. Together, these reasons suggest that the greater the degree to which a relationship is structured as multiplex (i.e., the size of the team serving the client), the more concerns a client is likely to have about following an employee who switches firms.

*Hypothesis 3: The greater the multiplexity, the less likely the client will follow the employee if the employee exits.*

While the arguments above point to a multiplexity main effect, similar logic can be used to argue for a moderating effect with respect to employee–client repeated exchange. Of course, even with high levels of multiplexity, the benefits associated with employee–client repeated exchange—specific knowledge and relational capital—will still be developed. However, when relationships are multiplex the client will also build relationships with other employees, which should decrease the relative degree to which the client becomes loyal to a specific employee, even if the client and employee have extensive repeated exchange. Again, this would be particularly true when the client simultaneously develops a high number of individual relationships with employees (i.e., large team). Therefore, while I still expect a positive relationship between employee–client repeated exchange and client transfer, the degree to which repeated exchange increases the relative strength of an employee–client relationship and therefore client loyalty should weaken as multiplexity increases.

*Hypothesis 4: Multiplexity moderates the relationship between employee–client repeated exchange and client transfer such that the positive effect of employee–client repeated exchange on the likelihood a client follows an employee if the employee exits decreases (becomes less positive) as multiplexity increases.*

### **Relationship Structure: Multiplexity and Specialized Expertise**

Thus far I have argued that multiplexity can reduce the risk of client transfer and dampen the effect of employee–client repeated exchange. While my multiplexity arguments focused on mechanisms related to the quantity of employees serving a client, not all employees have the same expertise. And so while greater multiplexity should decrease client transfer for the reasons above, its effectiveness should increase when multiplex teams are comprised of employees whose expertise structures cast further doubt on a client’s belief that his or her needs can be met outside of the multiplex relationship. Accordingly, I focus on the degree to which the team has specialized versus generalized expertise.

The literature on labor market specialization differentiates between individuals who are specialists from those who are generalists (S. Rosen, 1983). To

wit, some employees—specialists—have highly specialized knowledge and expertise in a single area (i.e., high depth and low breadth), whereas other employees—generalists—have a broader set of knowledge and expertise that touches upon a multitude of different areas (i.e., low depth and high breadth) (Ferguson & Hasan, 2013). On the one hand, multiplex teams can be comprised of employees who are specialists in different areas, which typically implies greater division of labor (S. Rosen, 1983). When specialization is used to disaggregate production in this way, it makes it unlikely that any individual employee will possess the knowledge needed to replicate team production on her own (Liebeskind, 1996). This, in turn, should translate into client concerns about following a mobile employee, as the employee’s ability to effectively meet the client’s needs without her team members would be in question. On the other hand, multiplex teams can be comprised of specialists in the same area, a composition that may imply less-explicit division of labor. When relationships are structured this way, it should also raise client concerns regarding an individual employee’s ability to effectively serve his or her needs because teams of same-area specialists can amplify the problem of nonseparability. That is, determining an employee’s unique contribution to the production of value can become more difficult for clients to discern if the employee is part of a large team who all specialize in the same area. Thus, when teams are comprised of specialists rather than generalists, on average, it should increase client concerns and create uncertainty about the choice to follow an employee who engages in mobility.

The logic above is further strengthened by the fact that specialists are often perceived by clients as being scarcer than generalists in professional services—even if objectively this is not the case. The perception of scarcity, regardless of objective reality, is in part a product of employee and firm actions. For example, R. E. Rosen (2010) details how specialization is used by law firms and attorneys as a marketing device to attract and retain clients. Similarly, Dunn and Mayhew (2004) note that auditors in public accounting often emphasize specialized expertise as a way to differentiate themselves from rivals. Indeed, Rosen (9, emphasis added) describes how specialists in the legal sector historically emerged as “a means to *hold onto a client* already in its stable.” The perception of scarcity suggests that when a client works with

specialist employees, it can create further doubt and uncertainty regarding the client's ability to have their needs effectively met outside of the focal relationship. As I elaborate below, the way in which this mechanism influences client transfer will largely depend on relationship structure—the degree to which the relationship is multiplex.

To begin, consider a scenario where a client relationship is not multiplex (i.e., it is exclusive). Because the employee is the sole link between the firm and client, increased employee specialization should increase the likelihood of client transfer postmobility. In other words, because the employee has specialized expertise and specialized expertise is often perceived as scarce (Wholey, 1985), it increases the uncertainty regarding whether or not the *focal firm* will be able to effectively replicate the employee's skills *internally* if the employee exits. In contrast, if the employee is a generalist, then the ability for the focal firm to internally replicate the employee's expertise would be less in question.

Now consider a scenario in which a client relationship is multiplex and team members have a high average level of specialized expertise. The perception of specialist scarcity suggests that as the number of employees involved in the relationship increases, the uncertainty from the client's perspective will become less about the focal firm replicating the employee's expertise internally and more about the *mobile employee's* ability to replicate the expertise of his or her team members *externally* at her new firm. Indeed, even if the mobile employee is a specialist, if he or she was part of a highly specialized team, it can cast doubt regarding the employee's ability to create the same amount of value for the client at the new firm—due both to issues of nonseparability and because the client may perceive that few firms will have the level of business required to support a similarly large stable of specialists (Wholey, 1985). And so while adding employees to a client team should have the main effect of reducing client transfer (i.e., Hypothesis 3), the logic here suggests that the relative size of this effect should increase when teams have higher average levels of specialized expertise.

Importantly, the perceptual logic of scarcity works regardless of the areas the individual employees specialize. That is, if a team of employees are all same-area specialists, then replicating this expertise externally would be perceived as more difficult than replicating a team of generalists. The same holds true for teams in which all the

employees are different-area specialists. Again, replicating this portfolio of (diverse) specialized expertise would be perceived as more difficult than replicating the expertise of a portfolio of generalists, which clients may perceive as less scarce.

*Hypothesis 5: Specialization moderates the relationship between multiplexity and client transfer such that the negative effect of multiplexity on the likelihood a client follows an employee if the employee exits increases (becomes more negative) when the team has higher average levels of specialized expertise.*

## Methods

### Empirical Context

I test my hypotheses in the context of the U.S. federal lobbying industry. Lobbying is defined as targeted activity geared toward shaping public policy outcomes (Drutman, 2015). Clients, mostly corporations and interest groups, hire lobbying firms to advocate for their interests in Washington, DC, arguing for specific legislation to be passed or for lawmakers to maintain the status quo (Baumgartner, Berry, Hojnacki, Leech, & Kimball, 2009). Lobbyists do so by providing issue expertise and political access (Bertrand, Bombardini, & Trebbi, 2014). Because public policy has become increasingly complex, lobbyists frequently function as bidirectional information filters—educating lawmakers regarding the implications of policy changes, while also informing clients about developments in Washington, helping clients make sense of policy, and advising clients about what they should do politically (Drutman, 2015). Indeed, when asked to describe what it is that lobbyists do, Nick Allard of the prominent lobbying firm Patton Boggs noted that the first thing lobbyists do is provide information to the government (e.g., pros and cons of legislation), but “second, and even more important, is that lobbyists provide information to their clients” (Leech, 2013, p. 38). Accordingly, lobbyists are in frequent contact with clients, to act as a conduit of information but also because successful advocacy requires a deep understanding of the client's business and political needs (Drutman, 2015).

The service-based nature of the lobbying industry is high in knowledge-intensity and low in

capital-intensity, two characteristics that broadly define professional services firms, including but not limited to law (Phillips, 2002), accounting (Wezel et al., 2006), consulting (Anand et al., 2007), and advertising (Rogan, 2014). Within lobbying firms, lobbyists are compensated much like legal partners, with compensation largely tied to the value of the clients the lobbyist serves (Drutman, 2015). One difference is that lobbying firms tend to work for fixed fees rather than billable hours (Becker, 2011). Like other professional services, there is a high degree of employee–client interaction and maintaining client relationships is crucial to firm health and performance (Greenwood, Li, Prakash, & Deephouse, 2005).

The process of client acquisition for lobbying firms occurs both passively and actively. For instance, when asked how lobbying firms get clients, Bob Walker of Wexler & Walker Public Policy Associates responded that, “A lot of it is what we call ‘over the transom’. It’s just people who know the reputation of the firm and have an issue they think would fit, and they come to us,” but also noted that “New clients also come from the outreach we do” (Leech, 2013, p. 19). Consistent with the focus of this article, lobbying firms also acquire clients through inbound lobbyist mobility (Wilson, 2014). Qualitative evidence from my informal interviews with lobbyists are consistent with the notion that clients are acquired through a mixture of passive and active recruitment strategies.

Once lobbying firms secure clients, they work to figure out how they can best serve the client’s political needs. As Allard of Patton Boggs put it, a lobbyist’s job is to problem solve—“a good lobbyist looks at the problem or challenge, or whatever it is that a client wants to accomplish, and the lobbyist analyzes it and comes up with a solution” (Leech, 2013, p. 37). Much like developing a case for litigation in the legal sector or creating a media campaign in the advertising industry, this process involves assessing feasibility, developing a strategy, and assembling the proper team to execute that strategy (Levine, 2009). Thus, a key benefit of hiring a lobbying firm, even if a client has its own in-house lobbyists, is that “Many independent lobbying firms—in fact, practically all—feature a full roster of legislative pros,” some of whom have the deep expertise required to effectively lobby even peripheral policy areas (Levine, 2009: 64)—the firm value add is its lobbyists. As Holland and Knight partner Rich Gold explained, “The work we

do for clients, we don’t get hired for a specific issue. ... They hire our whole team as their outside team” (Wilson, 2014).

The process of lobbying is a long-term endeavor as there are rarely quick-fixes in Washington (Levine, 2009). Accordingly, Drutman (2015) provides empirical evidence that once a client hires a lobbying firm it tends to continue to lobby for extended periods of time—both due to the lengthiness of the legislative process but also because clients quickly get accustomed to the perceived benefits of having a political presence in Washington. For example, Bob Walker recalled that “many of our clients here have been here for a long, long time,” and reflected that there are “a couple of clients here that have been here ever since the firm opened back in 1981” (Leech, 2013, p. 19). Thus, retaining existing clients is a key objective for lobbying firms because existing clients represent a steady stream of recurring revenue. Speaking directly to this point, Rob Smith of Venable’s legislative practice group explained that while his firm is constantly looking for new clients, they are primarily concerned with cultivating the relationships with his firm’s existing clients. Indeed, in Smith’s own words, “If you’re not focused on your current clients — they have options ... You have to protect your own slice of pie before you reach for another slice” (Wilson, 2014).

The characteristics and dynamics of the federal lobbying industry provide a unique and appropriate context to examine client relationship transfer for several reasons. First, as detailed above, federal lobbying is a knowledge-intensive industry that is heavily reliant on lobbyist human and social capital (Bertrand et al., 2014). Second, clients represent a key source of value and client retention is a significant priority for lobbying firms. Third, employee mobility is not uncommon, and, despite the potential for noncompete and nonsolicitation enforcement, “lobbyists moving from one firm to another often take their clients with them” (Wilson, 2014). Fourth, following the passing of the Lobbying Disclosure Act of 1995 (henceforth LDA) and subsequent amendment via the Honest Leadership and Open Government Act of 2007 (henceforth HLOGA), all organizations are required to file lobbying disclosure reports with the Senate Office of Public Records (SOPR) that provide details on lobbying activity. As I detail below, the reporting requirements imposed by the LDA and HLOGA offer a unique opportunity to longitudinally link

individual employees with clients, a rarity in extant empirical work (Sorenson & Rogan, 2014).

## Data and Sample

The data used in this study are compiled directly from lobbying disclosure reports, which are legally mandated to be filed with the SOPR as stipulated by the LDA and amended by HLOGA. I obtained the data from the Center for Responsive Politics (CRP), a nonprofit and nonpartisan organization dedicated to promoting political transparency. The CRP collects data directly from the SOPR and maintains a database of all lobbying activity reported between 1998 and the present.<sup>3</sup> Each lobbying report filed contains, among other things, information on the lobbying firm, the client, and the individual lobbyists involved in lobbying activity. The HLOGA amended the LDA, increasing the filing frequency for lobbying reports (semiannually to quarterly). An example of a lobbying report filed under the LDA is provided in Appendix S1 and an example of a lobbying report filed under the HLOGA is provided in Appendix S2. For reports filed under the HLOGA, I collapse the quarterly reports biannually to maintain consistency with the reports filed under the LDA. This results in an initial longitudinal data structure that has a maximum of 32 semiannual observational periods.

Because my hypotheses predict the likelihood of client transfer following employee mobility, I restrict my sample to situations in which employee mobility is observed. I begin with all lobbying firms that have at least two registered lobbyists (Wezel et al., 2006). I identify employee mobility if a given lobbyist  $l$  in period  $p$  occurs on a lobbying disclosure report as a registered lobbyist employed by

lobbying firm  $f$ , but appears on a lobbying disclosure report in period  $p + 1$  as registered lobbyist  $l$  for a firm other than firm  $f$ . Given the fluid nature of labor market transitions, in some cases lobbyist  $l$  will appear as registered to lobby for firm  $f$  and a firm other than firm  $f$  in period  $p + 1$ . In these cases, I require that lobbyist  $l$  registers to lobby for the new firm and only the new firm in period  $p + 2$  (i.e., lobbyist no longer registers to lobby for firm  $f$ ) in order to ensure a clear mobility event.<sup>4</sup> Because lobbyists tend to work for multiple clients, I predict the likelihood that a specific client will follow a specific lobbyist who engages in mobility. The unit of analysis is the lobbyist-firm-period-client. Thus, I have an observation for each client a lobbyist works with when they engage in mobility and I estimate the likelihood that that specific client follows the lobbyist to the new firm. In my primary analysis I analyze the mobility of 1,859 unique individual lobbyists representing 18,305 lobbyist-firm-period-client observations. As detailed below, in my estimation strategy and robustness checks, I attempt to account for selection and unobserved heterogeneity in several ways, including a Heckman (1979) correction and a series of conservative fixed-effects estimations.

A potential limitation of the data is that I do not observe lobbyists who do not meet the requirements to register as federal lobbyists or those who meet the criteria but choose not to register (Drutman, 2015).<sup>5</sup> Despite this limitation, the use of lobbying disclosure reports to identify lobbyist mobility compares favorably with other common practices of identifying employee mobility in the strategy literature,

<sup>3</sup> The CRP research team dedicates a significant amount of time and resources to maintain the accuracy of the data. For example, CRP researchers manually comb the data searching for errors and/or inconsistencies. In situations in which it appears the data contains errors, CRP researchers contact the SOPR and/or the report filer for clarification. The CRP also standardizes variants of individual lobbyist names, lobbying firm names, client firm names, and assigns each lobbyist a unique identifier. The unique identifier facilitates the identification of lobbyists over time. With respect to firm names, to guard against type I errors with regard to mobility, with the help of two research assistants, I manually searched every firm in my sample to identify name changes, mergers, and acquisitions, many of which are not reflected consistently in the CRP's standardized names. The raw data (prior to my manual corrections) used in this study was downloaded on April 11, 2014, from the CRP website <https://www.opensecrets.org/>.

<sup>4</sup> There are multiple ways in which to identify mobility events—particularly given the presence of lobbyists who register to lobby at multiple firms simultaneously. As detailed in the robustness checks, my results are robust to a number of mobility coding schemes—both restrictive and relaxed—which increases the reliability of the results and robustness of the theory developed (see Ge, Huang, & Png, 2016).

<sup>5</sup> According to the LDA, lobbying activity is defined as “*lobbying contacts and efforts in support of such contacts, including preparation and planning activities, research and other background work that is intended, at the time it is performed, for use in contacts, and coordination with the lobbying activities of others,*” where a lobbying contact is defined as, “*any oral or written communication (including an electronic communication) to a covered executive branch official or a covered legislative branch official.*” Registration according to the LDA is required if a registrant employs a lobbyist who lobbies for a client and “*he or she makes more than one lobbying contact and his or her ‘lobbying activities’ constitute at least 20% of the individual’s time in services for that client.*” Detailed information on the LDA and amendments by the HLOGA can be found here: [http://lobbyingdisclosure.house.gov/amended\\_lda\\_guide.html](http://lobbyingdisclosure.house.gov/amended_lda_guide.html).

such as the use of patents, a technique where mobility is only observed for the fraction of employees who patent at multiple firms (Ge et al., 2016). That said, there is a strong incentive for actors to comply with the LDA, as whoever knowingly and corruptly fails to comply with any provision of the LDA (e.g., reporting) may be fined up to \$200,000 and imprisoned for up to 5 years under Title 18 if the United States Code. Indeed, Jack Burkman, founder of the lobbying shop JM Burkman and Associates, alluded to this when discussing new client registrations, “We come from the school of thought that it pays to be squeaky clean, because lots of folks watch these registrations ... So, if it’s close, you file” (Wilson, 2014). Lobbying reports filed with the SOPR are commonly used by national political websites (e.g., Politico, Roll Call, The Hill) and political watchdog organizations (e.g., Factcheck.org) to track lobbying activity and money in politics.

### Dependent Variable

*Client Transfer* is measured with a dummy variable set to 1 if a client that a lobbyist works for in period  $p$  follows them to their new firm in period  $p+1$ . To ensure that the client is following the employee and not simply returning to a firm in which they have prior ties, I also require that the client has not enlisted the services of the lobbyist’s new firm in prior periods. In professional service industries, clients often employ numerous service firms simultaneously. My results are robust if I require the client to sever the relationship with the employee’s prior firm or allow split business.

### Independent Variables

*Employee–Client Repeated Exchange (Employee–client RE)* is measured as the number of periods a given lobbyist  $l$  lobbied for a given client  $c$  for lobbying firm  $f$ , prior to mobility. Thus, this measure captures the employee–client joint tenure at a focal firm or the number of periods the client has enlisted the services of the given lobbyist at the focal firm.

*Firm–Client Repeated Exchange (Firm–client RE)* is measured as the number of periods a given lobbying firm  $f$  lobbied for a given client  $c$ , prior to the mobility of lobbyist  $l$ . Thus, this measure captures the firm–client joint tenure or the number of periods the client has enlisted the services of the given lobbying firm.

*Multiplexity* is measured as the total number of lobbyists at a given lobbying firm that are registered to lobby for a particular client in a given period. Therefore, a value of 1 indicates that the client is exclusively tied to a single lobbyist, whereas a value of 6 indicates that a total of six individual lobbyists (the focal lobbyist and five others) jointly lobby for the client in a given period.

*Specialization* (specialized expertise) is measured with an issue-based Herfindahl-Hirschman Index (HHI) as used by Bertrand et al. (2014). HHIs are a commonly used measure to capture labor market specialization (Ferguson & Hasan, 2013). The LDA and HLOGA require that all lobbying reports list the issues lobbied. There are 79 distinct issue codes (see Appendix S3). These issues, along with the dollar value associated with the lobbying report, allow me to determine the degree to which a given lobbyist specializes in a particular issue or lobbies across issues more generally. Given that multiple issues and multiple lobbyists can be listed on a single report, I follow Bertrand et al and divide the dollar amount by the number of lobbyists listed on that report. I then divide this amount by the number of issues listed on the report. The result is an issue- and lobbyist-weighted dollar value for each lobbying report. Summing these values across issues by lobbyist allows me to create the total amount of lobbying revenue a lobbyist earned for a particular issue, adjusted by the number of lobbyists and issues on a given report. I use these amounts to calculate an issue-based HHI for each lobbyist based on their lobbying history using the following formula:

$$\text{Specialization} = \sum_{i=1}^N s_i^2.$$

where  $s_i$  is the share of lobbyist revenue of issue  $i$  and  $N$  is the number of issues the lobbyist has lobbied. This value is bound between 0 and 1. Higher values indicate specialists and lower values represent generalists. I take the average of these values across all lobbyists who work with a given client in a given period to capture the degree to which the lobbyist team has specialized expertise.

### Control Variables

To control for alternative explanations, I include a number of controls at the firm, lobbyist,

client, and lobbyist–client levels. To establish time-precedence, if the employee reports lobbying for a new firm in period  $p+1$ , the control variables are calculated based on data in period  $p$ .

At the lobbying firm, I control for lobbying firm experience (*F.experience*) as the total number of periods the lobbying firm has actively lobbied, the total number of clients (*F.clients*) the lobbying firm is registered to lobby for, the total number of lobbyists (*F.lobbyists*) the lobbying firm employs, and the logged revenue generated per lobbyist (*F.performance*). With regard to the individual lobbyists, I control for lobbyist experience (*L.experience*) as the number of periods the lobbyist has actively lobbied, lobbyist tenure (*L.tenure*) as the number of periods the lobbyist has lobbied for the focal firm, and lobbyist client portfolio (*L.clients*) as the total number of clients the lobbyist has. To control for potential resource dependence, I control for the percentage of total client spend the individual lobbying contract represents (*LC.percent.client*) and the amount the lobbying contract represents as a percentage of total revenue the lobbyist generates (*LC.percent.lobbyist*). I also control for whether the lobbyist exited individually or collectively (*L.co-mobility*). Specifically, I include a count variable of the number of lobbyists who work for a specific client while registered to lobby for lobbying firm  $f$  in period  $p$  who jointly registered to lobby for a firm other than firm  $f$  in period  $p+1$ . Therefore, a value of 1 indicates that the lobbyist switched firms alone and a value of 6 indicates that a total of six lobbyists (the focal lobbyist and five others) jointly moved. For each client, I focus on whether or not lobbyists who jointly worked with that specific client engage in co-mobility. Thus, when a lobbyist works with multiple clients, it is possible that the lobbyist engages in co-mobility with respect to a particular client and engages in individual mobility with respect to other clients.

At the client level, I control for the number of in-house lobbyists the client firm employs (*C.in-house*), the number of external lobbyists the client firm employs (*C.lobbyists*), the number of lobbying firms the client has hired (*C.firms*), and the logged total amount of dollars the client spends on lobbying activities for external firms (*C.spend*). Finally, I include period fixed effects in all models to absorb changes in the macro economy, political climate, and political lifecycles.

## Estimation Strategy

Given the binary nature of my dependent variable, I test my hypotheses using probit regression (Hoetker, 2007). Because most lobbyists work with multiple clients per period and because some lobbyists experience multiple mobility events, I estimate a cluster corrected covariance matrix that adjusts standard errors for intragroup correlation within lobbyists. Interpretation of interaction effects in probit models is not straightforward because the estimated coefficient for the interaction term does not necessarily convey meaningful information given that the magnitude, sign, and significance of the interaction is conditional on the values of all other variables in the model (Hoetker, 2007). Accordingly, I follow the best-practice recommendation of Hoetker (2007) and use graphical presentations to discuss and interpret interaction hypotheses.

My sample consists only of employees who engage in mobility and is therefore not random. I address this econometrically by employing Heckman's (1979) two-stage sample selection correction. Specifically, I first estimate a probit model in which I predict employee mobility (i.e., selection model). From this I calculate the inverse-mills ratio ( $\lambda$ ) and insert it into my primary estimations where I examine the hypotheses developed above. The identifying assumption of the Heckman model is that the selection model contains at least one covariate—an instrument—which is correlated with mobility, but not correlated with the likelihood that a given client will follow the mobile employee. I follow Kim and Marschke (2005) and Agarwal et al. (2009) and use gender (*L.gender*) as an instrument for mobility. *L.gender* is a dummy variable that takes the value of "1" for females and "0" for males. As detailed by Kim and Marschke (2005), the underlying logic for this instrument is that empirical patterns suggest that women have higher overall rates of turnover (mobility) relative to men (Light & Ureta, 1992), particularly in the context of professional services (Campbell, Ganco, et al., 2012). However, there should not be any unobserved differences across gender (e.g., ability, quality) that, conditional on the controls and explanatory variables, would influence client transfer.<sup>6</sup> Lobbyist gender

<sup>6</sup> Approximately 27% of lobbyists in the data are female (32% of mobile lobbyists). Empirically, *L.gender* is positively related to employee mobility in the selection model but insignificant

Table 1  
Database Summary Statistics<sup>1</sup>

Total lobbyists <sup>2</sup>	Mobile lobbyists	Mobility events	Mobility events w/o any client transfer	Mobility events w/ client transfer
19,608	1,859	2,145	1,247 (58.14%)	898 (41.86%)
Clients of mobile lobbyists	Exclusive client relationships	Multiplex client relationships	Clients who do not transfer	Clients who transfer
18,305	1,248 (6.82%)	17,057 (93.18%)	15,756 (86.07%)	2,549 (13.93%)

<sup>1</sup> These statistics will vary depending on the way in which mobility is operationalized, as described above. However, the general patterns are similar with alternative mobility coding schemes.

<sup>2</sup> This number refers to external lobbyists who work at lobbying firms. In total, there are 42,851 unique lobbyists in the data, including in-house lobbyists who are employed directly by client firms.

was coded by matching the first name of lobbyists listed on the lobbying reports with common male and female first names collected from the census of Social Security card applications filed with the United States Social Security Administration.<sup>7</sup>

### Results

Table 1 presents general summary statistics of the data. As detailed in Table 1, the data contain 19,608 unique lobbyists working at lobbying firms. Of these lobbyists, 1,859 engage in mobility at some point during the sample window, resulting in 2,145 mobility events. These mobility events generate 18,305 lobbyist-firm-period-client observations, an observation for each client a lobbyist works with at the time of mobility. The majority (93.18%) of these client relationships are multiplex with approximately 64% involving multiplex teams of five lobbyists or less.

A potential concern with my empirical design is the possibility that lobbyists move only after receiving assurance that clients will follow. The

patterns in Table 1 provide some descriptive evidence suggesting that this does not appear to be the norm. That is, approximately 58% of mobility events do not result in any client transfer and approximately 86% of clients at the time of mobility do not transfer. While unobservables make it difficult to rule out the pre-assurance possibility completely, the fact that most clients do not transfer helps alleviate some of this concern.

Figure 1 provides kernel-density estimates for the distribution of lobbyist levels of specialization. In Figure 1a, density estimates are provided at the individual lobbyist level using data on all 2,145 mobility events. The vast majority of mobile lobbyists are generalists, however, there is a slight bump in density as specialization approaches 1, indicating that some are highly specialized in a single issue area. Similar patterns hold for the overall distribution of lobbyists in any given period, not just for mobile lobbyists at the time of mobility. Figure 1b provides density estimates for specialization at the team level for all 18,305 lobbyist-firm-period-client observations. The distribution in Figure 1b is similar to the distribution in Figure 1a, albeit with a less pronounced increase in density as specialization approaches 1. Together, these figures suggest that the supply of specialists tends to be more scarce than the supply of generalists in the lobbying context (Figure 1a), and that highly specialized teams appear to be even more scarce (Figure 1b).<sup>8</sup>

when included in the model that predicts client transfer. That said, I acknowledge that my instrument may have some limitations, and so in my robustness checks I estimate a series of fixed effects regressions—including a stringent fixed-effects structure with firm-period-lobbyist fixed effects—which help at least partly alleviate some of these concerns.

<sup>7</sup> For unisex names, two research assistants determined lobbyist gender by examining various internet sources (e.g., LinkedIn, lobbying firm websites, news articles). The name of the lobbyist and lobbying firm name were used in tandem during searches to ensure the precise lobbyist was located and not a random person who happens to have the same first and last name. Gender was determined by examining photos when available and gender-specific language (e.g., “she,” “her”) used to describe the lobbyist in biographies, news articles, press releases, and so on.

<sup>8</sup> Note that the distribution of specialists as shown in the kernel-density estimates is only suggestive of specialist scarcity because I am unable to observe actual client demand for specialists. Accordingly, it is possible that the market for specialists is clearing. Note also that my results remain robust when I use the natural log for specialization.

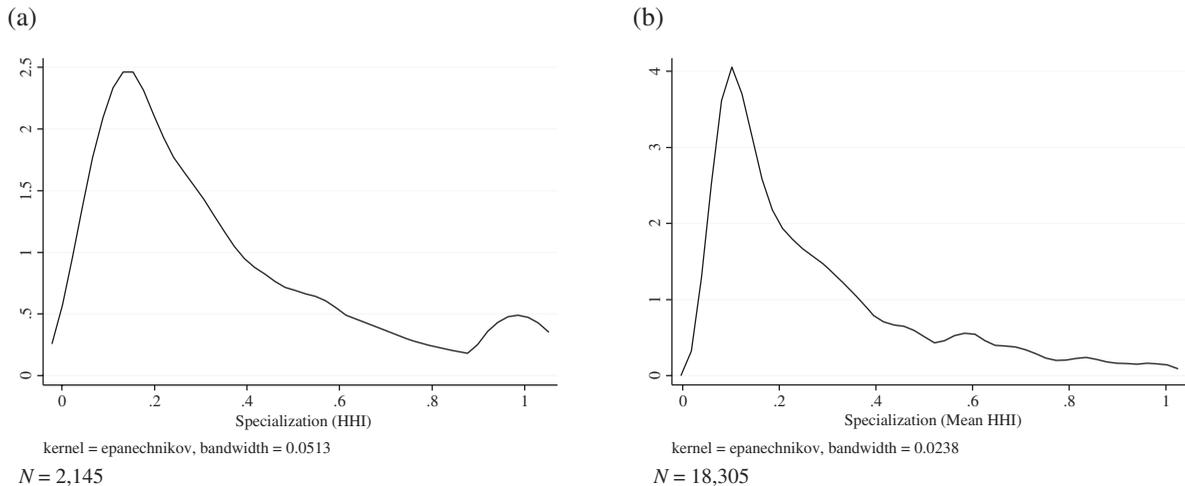


Figure 1. Kernel-density estimates of specialization. (a) Specialization at the individual level and (b) specialization at the team level.

Table 2 displays descriptive statistics and bivariate correlations. Visual inspection of Table 2 reveals some high correlations, so I checked for multicollinearity by calculating variance inflation factors (VIFs). Two control variables had VIFs that surpassed the general threshold of 10 (*C.lobbyists* VIF = 14.00; *C.firms* VIF = 12.61), but the mean VIF was within acceptable range (mean VIF = 3.46). Removal of control variables with high VIFs does not alter the results, and, more importantly, the VIFs for explanatory and moderator variables are below the more stringent criteria of 5 (mean VIF = 2.29), indicating that multicollinearity is not a major concern (Allison, 2012).

Table 3 displays the estimated regression coefficients from my probit regressions. Model 1 begins with a controls-only model and Model 6 includes all controls and independent variables. Of the control variables, it is worth highlighting that *L.co-mobility* in Model 1 of Table 3 has a strong positive effect on client transfer ( $\beta = 0.32$ ;  $p = .000$ ; Confidence Interval 95% [0.25; 0.38]). This result is robust and holds across all models. I return to the implications of this finding in the discussion section. With respect to my hypotheses, Hypothesis 1 predicted that employee–client repeated exchange would be positively related to client transfer, controlling for firm–client repeated exchange. Model 2 of Table 3 provides support for this hypothesis ( $\beta = 0.10$ ;  $p = .000$ ; Confidence Interval 95% [0.08; 0.11]). The average marginal effect is 0.018 (1.8%), which is a nontrivial increase given the 14% baseline probability of client transfer. Hypothesis 2

predicted that firm–client repeated exchange would be negatively related to client transfer, controlling for employee–client repeated exchange. Model 2 of Table 3 provides support for this hypothesis ( $\beta = -0.05$ ;  $p = .000$ ; Confidence Interval 95% [−0.07; −0.04]).<sup>9</sup> The average marginal effect is −0.01 (a decrease of 1%). Importantly, Hypothesis 1 and 2 maintain support in the fully saturated Model 6 of Table 3.

Hypothesis 3 predicted that multiplexity would decrease the likelihood of client transfer. Model 3 of Table 3 provides support for this hypothesis ( $\beta = -0.14$ ;  $p = .000$ ; Confidence Interval 95% [−0.16, −0.12]). The average marginal effect is −0.025 (2.5%), representing an approximate 18% decrease to the baseline probability. Similar results are confirmed in Model 6. Hypothesis 4 predicted that multiplexity would moderate the relationship between employee–client repeated exchange and client transfer. As shown in Table 3, the coefficient for the interaction terms in Model 4 ( $\beta = 0.0002$ ;  $p = .86$ ; Confidence Interval 95% [−0.003, 0.003]) and Model 6 ( $\beta = -0.0001$ ;  $p = .92$ ; Confidence Interval 95% [−0.003, 0.002]) are imprecisely estimated. However, because the interaction depends on the other variables in the model, I plotted it (using the “margins” command in STATA 14.1)

<sup>9</sup> A test of coefficients (using the “nlcom” command in STATA 14.1) indicates that the absolute value of the *Employee-client RE* coefficient is significantly greater than the absolute value of the coefficient for *Firm-client RE* ( $z = 10.00$ ;  $p = .000$ ), suggesting that the benefits of repeated exchange with respect to client transfer may accrue faster at the individual level.

Table 2  
Descriptive Statistics and Bivariate Correlations

Variable	Mean	S.D.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
(1) Client transfer	0.14	0.35	1.00																		
(2) F.experience	14.70	7.66	0.01	1.00																	
(3) F.clients	59.18	49.49	-0.06	0.19	1.00																
(4) F.lobbyists	21.95	22.66	-0.08	0.03	0.82	1.00															
(5) F.performance	11.94	0.76	-0.06	0.23	0.30	0.01	1.00														
(6) L.experience	9.41	7.06	0.08	0.51	0.07	-0.01	0.17	1.00													
(7) L.tenure	7.11	6.16	0.09	0.50	0.14	0.07	0.10	0.80	1.00												
(8) L.clients	19.78	16.67	-0.14	-0.05	0.14	0.01	0.44	-0.01	-0.02	1.00											
(9) C.in-house	2.11	5.27	0.00	-0.01	0.00	0.00	0.14	0.01	0.01	0.07	1.00										
(10) C.lobbyists	13.40	18.60	-0.04	-0.05	0.05	0.09	0.17	-0.02	-0.02	0.21	0.60	1.00									
(11) C.firms	3.38	5.20	0.00	-0.01	-0.01	0.00	0.14	0.01	0.01	0.05	0.64	0.92	1.00								
(12) C.expense	10.53	3.58	0.03	0.06	0.08	0.07	0.26	0.05	0.03	0.01	0.30	0.39	0.38	1.00							
(13) LC.percent.client	0.50	0.39	0.00	-0.18	0.08	0.11	-0.04	-0.12	-0.10	0.00	-0.31	-0.38	-0.43	0.19	1.00						
(14) LC.percent.lobbyist	0.10	0.17	0.09	-0.16	-0.13	-0.02	-0.32	-0.11	-0.10	-0.38	-0.01	-0.01	0.02	0.20	0.19	1.00					
(15) Co-mobility	1.29	0.86	0.21	0.03	0.11	0.04	0.02	0.05	0.10	0.01	0.02	0.06	0.03	0.05	0.01	-0.01	1.00				
(16) Employee-client RE	3.99	3.63	0.14	0.27	0.02	-0.03	0.06	0.45	0.55	-0.05	0.07	0.03	0.06	0.06	-0.08	0.00	0.05	1.00			
(17) Firm-client RE	6.15	5.30	0.03	0.37	0.06	0.00	0.08	0.26	0.33	-0.03	0.13	0.10	0.12	0.13	-0.12	-0.01	0.06	0.67	1.00		
(18) Multiplexity	5.74	5.32	-0.16	-0.09	0.23	0.33	0.16	-0.09	-0.06	0.55	0.10	0.38	0.10	0.14	0.05	-0.12	0.15	-0.08	0.01	1.00	
(19) Specialization	0.28	0.22	0.07	-0.12	-0.12	-0.15	-0.19	-0.06	-0.03	-0.13	-0.06	-0.13	-0.08	-0.11	-0.01	0.15	0.13	0.02	0.00	-0.20	1.00

N = 18,305.

Table 3  
*Probit Regression Results (DV: Client Transfer)*

	(1)	(2)	(3)	(4)	(5)	(6)
F.experience	0.01 (0.01)	0.02 (0.01)	0.02 (0.01)	0.02 (0.01)	0.02 (0.01)	0.02 (0.01)
F.clients	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
F.lobbyists	-0.02 (0.00)	-0.02 (0.00)	-0.01 (0.00)	-0.01 (0.00)	-0.01 (0.00)	-0.01 (0.00)
F.performance	0.06 (0.04)	0.04 (0.04)	0.03 (0.04)	0.03 (0.04)	0.01 (0.04)	0.01 (0.04)
L.experience	0.02 (0.01)	0.02 (0.01)	0.02 (0.01)	0.02 (0.01)	0.02 (0.01)	0.02 (0.01)
L.tenure	-0.01 (0.01)	-0.02 (0.01)	-0.02 (0.01)	-0.02 (0.01)	-0.02 (0.01)	-0.02 (0.01)
L.clients	-0.02 (0.00)	-0.02 (0.00)	-0.01 (0.00)	-0.01 (0.00)	-0.01 (0.00)	-0.01 (0.00)
C.in-house	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
C.lobbyists	-0.02 (0.00)	-0.02 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
C.firms	0.07 (0.01)	0.07 (0.01)	-0.02 (0.01)	-0.02 (0.01)	-0.01 (0.01)	-0.01 (0.01)
C.expense	0.02 (0.01)	0.02 (0.01)	0.03 (0.01)	0.03 (0.01)	0.03 (0.01)	0.03 (0.01)
LC.percent.client	-0.09 (0.05)	-0.08 (0.05)	-0.05 (0.05)	-0.05 (0.05)	-0.05 (0.05)	-0.05 (0.05)
LC.percent.lobbyist	0.29 (0.09)	0.26 (0.09)	0.40 (0.09)	0.40 (0.09)	0.46 (0.10)	0.46 (0.10)
Co-mobility	0.32 (0.03)	0.34 (0.03)	0.46 (0.03)	0.46 (0.03)	0.55 (0.03)	0.55 (0.03)
Employee-client RE		0.10 (0.01)	0.09 (0.01)	0.09 (0.01)	0.09 (0.01)	0.09 (0.01)
Firm-client RE		-0.05 (0.01)	-0.05 (0.01)	-0.05 (0.01)	-0.04 (0.01)	-0.04 (0.01)
Multiplexity			-0.14 (0.01)	-0.14 (0.01)	-0.10 (0.01)	-0.10 (0.01)
Employee-client RE × multiplexity				0.00 (0.00)		-0.00 (0.00)
Specialization					0.55 (0.17)	0.55 (0.17)
Multiplexity × specialization					-0.27 (0.05)	-0.27 (0.05)
Inverse mills ( $\lambda$ )	1.54 (0.75)	1.37 (0.75)	1.01 (0.75)	1.01 (0.75)	0.92 (0.77)	0.92 (0.77)
Constant	-5.81 (2.22)	-5.25 (2.22)	-4.19 (2.19)	-4.19 (2.19)	-3.98 (2.27)	-3.98 (2.27)
Period fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	18,305	18,305	18,305	18,305	18,305	18,305
Log pseudo likelihood	-6,416	-6,265	-6,008	-6,008	-5,925	-5,925
Pseudo R-squared	0.132	0.152	0.187	0.187	0.198	0.198

Notes. Robust standard errors in parenthesis clustered by lobbyist. Asterisks for significance levels omitted per the policy of the *Strategic Management Journal*.

from the estimates in Model 6. The plot is displayed in Figure 2. The three lines in Figure 2 represent multiplexity of 5 (approximate mean), multiplexity of 1 (exclusive), and multiplexity of 10

(approximately 1 standard deviation above the mean), with other covariates held at mean values. As shown in Figure 2, the effect of repeated exchange on the probability of client transfer is

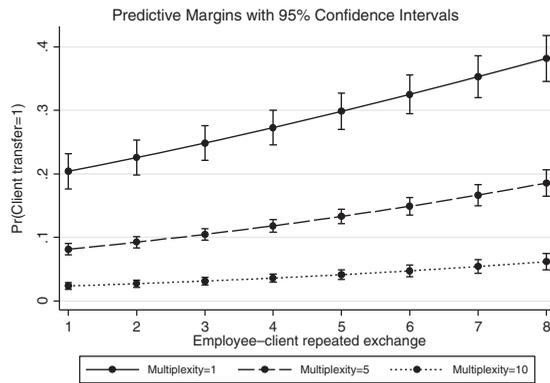


Figure 2. Employee-client RE  $\times$  multiplexity interaction.

weaker (stronger) when multiplexity is high (low), providing general support for Hypothesis 4.

Hypothesis 5 predicted that specialization would moderate the relationship between multiplexity and client transfer. The coefficient for the interaction term in Model 5 ( $\beta = -0.27$ ;  $p = .000$ ; Confidence Interval 95%  $[-0.37, -0.17]$ ) and Model 6 ( $\beta = -0.27$ ;  $p = .000$ ; Confidence Interval 95%  $[-0.37, -0.17]$ ) of Table 3 are negative and nearly identical. Again, to interpret these effects I plotted the interaction from the estimates in Model 6, as displayed in Figure 3. The three lines in Figure 3 represent the mean level of specialized expertise (specialization = 0.28), highly generalized expertise (specialization = 0), and highly specialized expertise (specialization = 1). When multiplexity is equal to 1 (i.e., the relationship is exclusive), the point estimates for the probability of client transfer rise with the level of specialization. This suggests that when a relationship is exclusive, specialization may increase the likelihood of client transfer, although the point estimate 95% confidence intervals slightly overlap. As multiplexity rises, the probability of client transfer decreases at all levels of specialization, but, as shown in Figure 3, the rate of decrease is much stronger for teams that have high levels of specialized rather than generalized expertise.<sup>10</sup> Thus, Hypothesis 5 receives support.

<sup>10</sup> Results are similar when *specialization* excluded the mobile lobbyist's specialization, which was separately controlled for, when I exclude observations where the client relationship is exclusive, and when I include measures of within-team variation in specialization as additional controls. Note also that the rate of decrease for specialized teams dampens when multiplexity approaches a size of seven because at this point the probability of client transfer begins to approach zero.

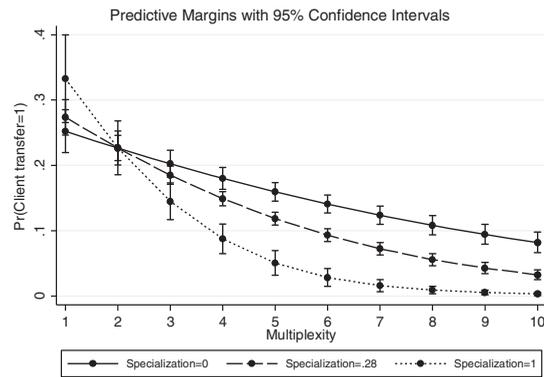


Figure 3. Multiplexity  $\times$  specialization interaction.

### Robustness checks

I conducted several robustness checks to ensure the robustness of the results reported. First, I took additional steps to help ensure my results are not being entirely driven by unobserved heterogeneity or self-selection by estimating a series of conditional fixed-effects logistic (logit) regressions. Note that I use logit rather than probit to allow for fixed effects. The conditional fixed-effects logit model uses within-subject variation (e.g., lobbyists, lobbying firms), thereby allowing subjects to serve as their own controls. The benefit of the fixed-effects estimations is that it allows me to control for sources of unobserved heterogeneity. The downside is that covariates without within-subject variation and subjects that do not experience variation on the outcome are dropped. Table 4 provides regression results for a number of different conditional fixed-effects logit specifications.

Starting with Model 1 in Table 4, I use individual lobbyist fixed effects, thereby allowing me to control for sources of unobserved lobbyist heterogeneity that may explain individual differences and preferences resulting in self-selection. In Model 2 of Table 4, I estimate a conditional fixed-effects regression with fixed effects for lobbying firms. In Model 3 of Table 4, I estimate a conditional fixed-effects logit with fixed effects for client firms. These models capture firm-specific and client-specific factors that may influence client transfer. All models include period fixed effects. The pattern of results in Table 4 are generally consistent with the results reported in Table 3.

In Models 1–3 of Table 4, coefficients are estimated for variables that are time invariant at the time of mobility, such as firm and lobbyist characteristics. This is because some lobbyists

Table 4  
 Conditional Fixed Effects Logistic Regression Results (DV: Client Transfer)

	(1)	(2)	(3)	(4)
F.experience	0.04 (0.03)	0.17 (0.21)	0.03 (0.01)	
F.clients	0.00 (0.01)	0.01 (0.00)	0.01 (0.00)	
F.lobbyists	-0.00 (0.02)	-0.01 (0.01)	-0.02 (0.01)	
F.performance	-0.07 (0.26)	0.30 (0.19)	0.14 (0.09)	
L.experience	0.04 (0.55)	0.03 (0.01)	0.03 (0.01)	
L.tenure	-0.03 (0.03)	-0.02 (0.01)	-0.02 (0.01)	
L.clients	-0.01 (0.01)	-0.02 (0.01)	-0.01 (0.01)	
C.in-house	0.00 (0.01)	0.00 (0.01)	0.01 (0.02)	0.00 (0.01)
C.lobbyists	0.00 (0.01)	0.00 (0.01)	0.01 (0.01)	0.00 (0.01)
C.firms	-0.01 (0.02)	-0.02 (0.02)	-0.05 (0.04)	-0.01 (0.02)
C.expense	0.08 (0.01)	0.07 (0.01)	-0.03 (0.03)	0.09 (0.01)
LC.percent.client	-0.05 (0.10)	-0.14 (0.10)	0.26 (0.23)	-0.08 (0.11)
LC.percent.lobbyist	0.78 (0.32)	1.05 (0.26)	1.30 (0.30)	0.79 (0.35)
Co-mobility	0.82 (0.08)	0.98 (0.15)	1.29 (0.13)	0.71 (0.09)
Employee-client RE	0.12 (0.02)	0.15 (0.02)	0.12 (0.02)	0.13 (0.02)
Firm-client RE	-0.06 (0.01)	-0.07 (0.01)	-0.07 (0.01)	-0.06 (0.01)
Multiplexity	-0.21 (0.03)	-0.18 (0.04)	-0.21 (0.05)	-0.22 (0.03)
Employee-client RE × multiplexity	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Specialization	1.01 (0.66)	1.22 (0.44)	1.47 (0.57)	0.95 (0.70)
Multiplexity × specialization	-0.48 (0.13)	-0.59 (0.10)	-0.54 (0.19)	-0.43 (0.14)
Period fixed effects	Yes	Yes	Yes	No
Lobbyist fixed effects	Yes	No	No	No
Firm fixed effects	No	Yes	No	No
Client fixed effects	No	No	Yes	No
Lobbyist-firm-period fixed effects	No	No	No	Yes
Observations	10,179	16,099	5,701	8,895
Log pseudo likelihood	-3,134	-4,492	-1,446	-2,883
Pseudo R-squared	0.116	0.147	0.313	0.078

Notes. Robust standard errors in parentheses. Model 1 clustered by lobbyist, Model 2 clustered by firm, Model 3 clustered by client, and Model 4 clustered by lobbyist-firm-period. Asterisks for significance levels omitted per the policy of the *Strategic Management Journal*.

engage in multiple mobility events. As a result, the conditional fixed-effects model uses the variation from multiple movers to estimate coefficients for variables that are time-invariant at the time of

mobility (Allison, 2009). In Model 4 of Table 4, however, I estimate an extremely conservative conditional fixed-effects logit that uses a fixed effect at the lobbyist-firm-period level. Accordingly, only

data on lobbyists who (a) have more than a single client at the time of mobility, (b) have variation with respect to the explanatory variables between clients, and (c) have variation on the dependent variable, is used in this specification. In essence, this model forces variation to be primarily confined to the explanatory variables, holding all else constant and using the lobbyist-firm-period combination as its own control. This is noteworthy for several reasons. First, it allows me to control for unobserved characteristics, such as potential political connections the lobbyist may have at the time of mobility, which may influence client transfer. Second, it also provides evidence that, even if mobility is partly determined ex-ante by assurance that some clients will transfer, the clients who do transfer (even if they agreed ex-ante) exhibit characteristics consistent with the theoretical arguments above. Third, by holding the lobbyist-firm-period constant, this estimation implicitly controls for the characteristics of the firm that the lobbyist joins (which is absorbed by the fixed effect). In doing so, this model also helps alleviate lingering concerns regarding the strength of the mobility instrument (*L.gender*), particularly the concern that mobile women may systematically join different types of firms relative to mobile men. It also helps rule out the potential that destination-firm characteristics are driving client transfer. No material differences manifest from this test, providing added evidence against the potential for selection bias or unobserved heterogeneity strongly influencing the results.

Next, some lobbyists register to lobby for multiple lobbying firms, making it unclear if these lobbyists are employees or independent contractors (Bidwell & Briscoe, 2009). Accordingly, I examined a number of alternative ways to code mobility events to ensure that the results are not sensitive to the measurement of mobility (see Ge et al., 2016). I relaxed my requirements for mobility and treated a lobbyist as mobile even if they did not sever their employment with their prior lobbying firm in period  $p + 1$  or  $p + 2$ . I also restricted my sample to events where a lobbyist registered to lobby for the source firm (and source firm only) for at least two periods pre-mobility and remained registered to lobby for the destination firm (and only the destination firm) for a minimum of two periods post-mobility. In addition, I focused only on the lobbyist's "dominant employer" as the firm where the lobbyist generates the most revenue (e.g., Campbell, Ganco, et al., 2012). Neither these restrictions nor

controlling for "moonlighters" materially altered the results reported above.

Furthermore, because reporting is done in semi-annual periods, it is possible that my dependent variable may be capturing the continuation of the same lobbying assignment/contract rather than true interfirm client transfer, especially if lobbyist mobility is sudden and unexpected. To investigate this, I examined how long clients who follow mobile lobbyists stay with the new lobbying firm. If the majority of these clients stay with the new firm for only a single period, then it raises concern as to whether or not these events represent relationship transfer. Of the clients who followed lobbyists, more than 80% remained with the new firm for at least 1 year (two periods) and more than 60% remained with the new firm for 2 years (four periods) or greater. The mean duration is just over six periods (3 years), consistent with the overall sample mean for firm-client repeated exchange. Accordingly, while I cannot fully rule out the possibility that my dependent variable captures some continuation of lobbying assignments, the fact that the vast majority of clients who follow mobile employees stay with the new lobbying firm for a considerable amount of time indicates that my results are indeed capturing true interfirm relationship transfer.

I also took steps to ensure that instances of co-mobility and subsequent client transfer were not being influenced by unobserved factors driving mobility, such as a potential scandal. First, the fixed effects estimations—particularly the model with lobbyist-firm-period fixed effects—help rule out this possibility. Second, using the covariates and specification in Model 3 of Table 3, I included the number of employees an employee jointly exited with who *did not* share the client and the total number of employees exiting a firm (i.e., total turnover). The effect of co-mobility with respect to employees who worked jointly together for a client remained positive and statistically significant. Interestingly, the coefficients for co-mobility with respect to employees who did not jointly work with a client and total mobility were both negative, but failed to reach conventional statistical significance thresholds. This suggests the effect of co-mobility with respect to client transfer is conditional on co-mobile employees jointly working directly with the client, thereby highlighting a potentially serious hazard of multiplex relationship structures.

Finally, I checked the robustness of my results with respect to subsamples and range restrictions

on various explanatory variables. This included restricting my sample to larger lobbying firms (e.g., at least 10 lobbyists), increasing my sample to include firms with a single registered lobbyist, and eliminating observations with excessive levels of multiplexity (e.g., greater than 10). In addition, given that the LDA was amended in 2007 with the HLOGA, I used subsamples for lobbying activity pre and post the passing of the HLOGA. Results are materially consistent.

## Discussion

The strategic management literature has long identified employee mobility as a salient threat to sustainable competitive advantage (Coff, 1997), in large part due to its role in facilitating knowledge transfer and spillover (Agarwal et al., 2016). In this study, I investigated the conditions under which employee mobility may lead to interfirm *relationship transfer*, a potentially serious concern that has received much less scholarly attention (Sorenson & Rogan, 2014). By isolating a key mechanism through which mobility may influence firm outcomes (i.e., relationship transfer), this study adds insights to the employee mobility literature, a body of work where the transfer of resources (i.e., *what* is transferred) is rarely disaggregated from mobility itself (Campbell, Ganco, et al., 2012; Phillips, 2002).

Utilizing a novel database that allowed me to track the mobility and client attachments of U.S. federal lobbyists with uncharacteristically high levels of precision, I found that the likelihood a client follows a mobile employee to his or her new firm increased with the strength of the relationship (repeated exchange) between the employee and client (Hypothesis 1), but decreased with strength of the relationship (repeated exchange) between the client and firm (Hypothesis 2). These findings are consistent with the theoretical predictions deduced from prior literature (Broschak, 2004; Somaya, Williamson, & Lorinkova, 2008) and provide robust empirical evidence that repeated exchange simultaneously generates economically significant benefits for both individuals and firms (Elfenbein & Zenger, 2013). However, not all relationships are structured in the same way, and I found strong evidence that structural characteristics of client relationships, specifically the degree to which relationships are organized as multiplex, have significant implications for client retention. I found consistent

evidence that multiplexity reduced the likelihood that mobility leads to client transfer (Hypothesis 3) and also diminished the effects associated with employee–client repeated exchange (Hypothesis 4). The theory developed suggests that multiplexity works by reducing the degree to which clients rely on any single employee and creating ambiguity with regard to the unique contributions of each team member (Alchian & Demsetz, 1972). In keeping with this logic, I further argued and found that the effect of multiplexity would be strongest when multiplex team members had high average levels of specialized expertise (Hypothesis 5). This finding complements classic management work that suggests firms can protect knowledge through specialization and division of labor as a means to increase the difficulty and perceived ability for individual employees to replicate the production process (Liebeskind, 1996). Taken together, this study highlights the precarious position firms are in with respect to employee mobility and client transfer, but also identifies several characteristics of relationships that increase the odds of client retention.

## Limitations and Future Research

This study is not without limitations, many of which create promising pathways for future research. First, it is not clear how generalizable my findings are to contexts outside of federal lobbying. However, my findings should be fairly generalizable to other professional services firms (PSFs), a sector that is an increasingly important component of the overall economy (Greenwood et al., 2005). That said, my findings may also have implications that extend beyond service industries, particularly to firms that employ sales representatives, client-facing employees, or have extensive buyer–supplier and alliance networks. Indeed, employees interface across firm boundaries in contexts beyond PSFs and so future research could examine relationship transfer in non-PSF settings.

Second, while the LDA/HLOGA offers me a unique way to observe the dynamics of lobbyist and client mobility, I am unable to observe lobbyists who do not meet the registration thresholds specified in the LDA/HLOGA or lobbyists who exceed these thresholds but choose not to register (Drutman, 2015). Although the limitations associated with using lobbying registrations to track mobility are similar to the limitations in prior work

(Ge et al., 2016) and my fixed-effects estimations show that the theoretical mechanisms proposed work with respect to within-lobbyist variation, evidence suggests the unreported lobbying activity may be substantial (Drutman, 2015).

Third, lobbyists are not randomly assigned to clients and so I am unable to empirically disentangle to what degree initial match quality between lobbyists and clients leads to greater levels of repeated exchange and therefore a higher likelihood of client transfer, or, if greater levels of repeated exchange between lobbyists and clients leads to higher match quality, which leads to a higher likelihood of client transfer. While it is theoretically possible that pure initial match quality drives the results, it is somewhat unlikely because establishing match quality takes time, during which the benefits of repeated exchange continually accrue (Bidwell & Fernandez-Mateo, 2010). Future work could tease apart these factors and establish the relative importance of each, perhaps through an experiment where researchers can manipulate initial match quality and utilize random assignment.

Fourth, I am also unable to differentiate voluntary from involuntary employee mobility. Although involuntary mobility is unlikely given the research design, and interviews with practicing lobbyists support this view, future research that examines differences in voluntary and involuntary turnover as it relates to interfirm knowledge and relationship transfer would be useful.

Finally, employee mobility is not random. Therefore, while I attempted to econometrically account for selection, utilized stringent fixed-effect structures, and presented descriptive evidence showing that the majority of employees who switch firms do not take clients, the general nature of my research question means that my results should be interpreted with at least some caution.

### Contributions and Conclusion

Notwithstanding the above limitations, this study makes several contributions. This study contributes to the strategy and mobility literatures by responding to recent calls urging researchers to investigate the micro-foundations of strategic human capital (Campbell, Coff, et al., 2012; Coff & Raffiee, 2015). Surprisingly, despite decades of research on employee turnover and firm performance, little work has examined the potential role of relationship transfer (cf. Somaya et al., 2008), despite calls to

examine how relationships between employees and customers influence mobility processes and outcomes (Holtom, Mitchell, Lee, & Eberly, 2008). By isolating client transfer, this study further reinforces the need to theoretically and empirically account for relationship transfer when examining mechanisms through which mobility may impact firm performance (Carnahan & Somaya, 2013). The research design and granularity of the data in this study add further empirical contribution by facilitating the measurement of client transfer as distinct from employee mobility (cf. Campbell, Ganco, et al., 2012).

By doing so, this study extends prior work examining the role of employee departure on the stability of interfirm relationships (Broschak, 2004). My ability to observe client attachments at the employee level allowed me to add nuances to existing work by theorizing about how characteristics of individuals and characteristics of firms uniquely and jointly influence client transfer (cf. Broschak & Block, 2014). For example, this study highlights the unique and opposing effects of employee–client and firm–client repeated exchange, effects that would and could be confounded absent separate measurement of employee and firm client attachment. These results also contribute to the literature on repeated exchange, “as few studies have been able to measure or infer directly the economic value that accrues within these relationships of repeated exchange” (Elfenbein & Zenger, 2013, p. 222). The finding that repeated exchange has robust effects on client transfer—the primary source of economic value for firms—suggests the value of repeated exchange, particularly in professional services industries, is extremely high and may have long-term economic implications.

This study also extends research on labor market specialization. Prior work has shown that specialization and the division of labor can increase firm productivity (S. Rosen, 1983) and protect intangible knowledge assets (Liebeskind, 1996). This study builds on this work to show how specialization can embed important tangible assets—client relationships—with the firm. The theoretical contribution is rooted in the nuanced relationship between multiplexity, specialization, and client transfer uncovered in this study—increased specialization can benefit the firm when client relationships are multiplex, but potentially harm the firm when the relationship is exclusive. My findings also raise the question of who captures

value created from multiplex client relationships, particularly when clients are served by highly specialized teams. Future work could examine how specialization influences value creation versus capture in client relationships (Ethiraj & Garg, 2012).

Beyond the literature on labor market specialization, this study contributes to the broader literature on multiplexity and embeddedness by showing that the client retention benefits of multiplexity depend not just on the quantity of employees involved in multiplex ties (Bermiss & Greenbaum, 2016), but also on their human capital characteristics (i.e., specialization). At the same time, this study adds to the literature by drawing attention to the fact that the client retention benefits associated with multiplexity do not come without potential hazards. Although not hypothesized, I found strong evidence that collective employee exit increased the likelihood of client transfer, specifically when co-mobile employees jointly served the client. This finding adds to the nascent stream of research on co-mobility (Campbell, Saxton, & Banerjee, 2014), an understudied phenomena estimated to account for up to 11% of all interfirm job moves (Marx & Timmermans, 2014). Within this emerging body of work, scholars have shown that co-mobility is associated with lower performance declines (Groysberg & Lee, 2009), greater increases in individual compensation (Marx & Timmermans, 2014), and greater adverse effects on source firm performance (Agarwal et al., 2016). This article adds to this conversation by providing robust evidence that co-mobility is positively associated with relationship transfer. One implication is that relationship transfer—not solely the preservation of coworker-specific human capital, co-specialized skills, and tacit knowledge embedded in routines—may explain findings in prior work, particularly since many studies examining co-mobility test theory in professional services industries, but lack empirical measures of client relationships and client transfer (e.g., Wezel et al., 2006).

Lastly, the above discussion broadly raises a number of interesting questions regarding the strategic use of restrictive covenants in employment contracts. Indeed, my interviews with lobbyists revealed an interesting pattern—lobbying firms seemed reluctant to enforce restrictive clauses to prevent client transfer because they viewed the loss of clients as a repeated games scenario and believed that by *not* enforcing the contract it increased

their chances of reacquiring the client at a later date. In contrast, lobbying firms were concerned that enforcing the contract could be viewed as restricting the client's market choices, thereby creating bad-will and essentially eliminating the firm's chances of reacquiring the client down the road. As these anecdotes suggest, the decision to enforce restrictive covenants can have both short-term and long-term consequences, and firms must balance these tradeoffs when making enforcement decisions. Future work examining these nuances could yield interesting insights regarding how restrictive covenants can aide firms in retaining employees, interfirm relationships, and ultimately sustaining a competitive advantage.

In sum, this article investigated when employee mobility leads to interfirm relationship transfer and identified how individual, organizational, and structural relationship characteristics influence this process. Analysis of a novel database tracking the employment and client attachments of registered U.S. federal lobbyists provided support for my theoretical predictions while unearthing numerous areas for future research on mobility, relationship portability, and competitive advantage.

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## Supporting Information

**Additional supporting information may be found in the online version of this article:**

- Appendix S1.** LDA lobbying disclosure report.  
**Appendix S2.** HLOGA lobbying disclosure report.  
**Appendix S3.** Issue codes and issues listed on lobbying disclosure reports.