

6-2017

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Acknowledgements: We appreciate the constructive feedback and insight from Chad Navis and Pankaj Patel. We also appreciate the valuable comments and guidance from AE Scott Graffin and the three anonymous reviewers.

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Abstract

The extant lobbying literature largely focuses on the effects of firm aggregate lobbying expenditures, suggesting that more lobbying expenditures fuel positive firm benefits. We argue the focus on aggregate expenditures overlooks how expenditures are targeted and the influence of those targeting the expenditures; as such, exploring such factors will both add insight to our understanding of the theoretical mechanisms underlying lobbying and clarify contradictory findings. Specifically, we argue a successful lobbying strategy consists of both the breadth of government targeted and the political connectedness of the firm. Empirical results support our contentions that lobbying breadth and political connectedness affect the benefits firms receive from lobbying, which we operationalize both using government contracts and firm economic performance. Our analyses imply that more is not always better in the case of lobbying breadth, as the benefits accrued via dispersing lobbying across more governmental entities reaches a point of diminishing returns when lobbying breadth reaches high levels. Further, political connectedness has a moderating effect on the outcomes of lobbying breadth. We conclude the article with a discussion of the theoretical and practical relevance of this research and offer avenues forward for future research.

Key words: Lobbying, Corporate Political Activity, Government Contracts, Lobbying Breadth

INTRODUCTION

A growing body of empirical research supports the idea that firms' engagement in lobbying, defined as expending resources in an attempt to sway government officials to make decisions beneficial to the lobbying firm (Graziano, 2001), is a viable strategy for firms to generate favorable outcomes (cf. Kaiser, 2010; Shaffer, 1995). For example, estimates suggest that Boeing secured \$7,250 in tax breaks for every \$1 spent lobbying (Hallman, 2014) and that from 1999 to 2005, Lockheed Martin's \$55 million in lobbying expenditures generated approximately \$90 billion in government contracts – or a 163,536 percent return on lobbying investment (Miller, 2006). Given financial returns as large as those in the Boeing and Lockheed Martin estimates (particularly in light of historical return on investment figures that averages between 10 to 15 percent), it is perhaps not surprising that lobbying is both ubiquitous across the globe (cf. Choi, Jia, & Lu, 2014; Hillman, Keim, & Schuler, 2004) and a topic that generates a wealth of attention from journalists, practitioners, and researchers alike. (For recent summaries, see Baumgartner, Berry, Hojnacki, Leech, & Kimball, 2009; Godwin, Ainsworth, & Godwin, 2013.)

Although extant research has begun to generate knowledge about the implications of firm lobbying on organizational outcomes, such work focuses predominantly on how raw amounts of monetary resources expended by firms provide benefits in the form of firm performance.¹ Yet, evidence from this research is conflictive. For instance, while several studies find positive performance associated with lobbying expenditures (e.g., Alexander, Mazza, & Scholz, 2009; Chen, Parsley, & Yang, 2010; de Figueriredo & Silverman, 2006; Hill, Kelly, Lockhart, & Ness,

¹ Lux, Crook, and Woehr's (2011) meta-analyses found only one outcome associated with firm benefits from lobbying that had more than one study, firm performance, measured with accounting-based measures such as return on assets or return on investment, although there are notable exceptions in single-industry studies such as rate increases (Bonardi, Hillman, & Keim, 2005), ear marks (de Figuerideo & Silverman, 2006) and import tariffs (Schuler, 1996). The focus on firm performance is likely partially data driven, an issue we expand upon later in the manuscript.

2013), other research demonstrates the relationship to be either negative (Hadani & Schuler, 2013; Igan, Mishra, & Tressel, 2011) or not related statistically (Hersch, Netter, & Pope, 2008; Lenway, Jacobson, & Goldstein, 1990). The narrow focus of such work – which may be at least in part due to data constraints – along with inconsistent results relating lobbying expenditures to firm benefits “begs the question whether the current state of [lobbying] taxonomies is sufficient,” as Hillman and colleagues note (2004: 845). That is, while the literature’s near exclusive focus on aggregate expenditures reflects the expectation that expending resources on lobbying may net benefits for firms, the conflicting findings suggests a need to both better develop our understanding of the lobbying-firm benefit relationship and, more specifically, to search for and capture the precise mechanisms underlying how firms net benefits from lobbying.

To address these issues, we focus on two mechanisms that we argue help to better capture the manner in which firms are able to enjoy benefits from their lobbying efforts: the manner in which lobbying expenditures are allocated amongst possible alternatives and connections firms have with politicians. We expect both factors are not only individually important facets of lobbying strategy but also interact in determining the outcomes firms receive from their lobbying efforts. Specifically, we develop both a theoretical framework that conceptualizes firm lobbying strategy as consisting of lobbying breadth and political connectedness as well as a novel measurement for each aspect of lobbying strategy. We argue that the extent of government activities or entities the firm is attempting to influence via lobbying, which we refer to as lobbying breadth, will capture heterogeneity in firms’ lobbying expenditure allocation strategies that affects the benefits a firm receives. Moreover, we build upon prior research on firms’ connections in political circles to develop theory about how relationships with government officials, which we refer to as political connectedness, will play a role in determining the

corresponding benefits firms receive. From a theoretical perspective, we draw on the literatures on resource allocation (e.g., Arrfelt, Wiseman, McNamara, & Hult, 2015; Klingebiel & Adner, 2015; Klingebiel & Rammer, 2014) and political connections (e.g., Hillman, 2005; Hillman, Zardkoohi, & Bierman, 1999; Vidal, Draca, & Fons-Rosen, 2012) to suggest ways in which lobbying breadth and political connectedness will impact the effectiveness of a firm's lobbying strategy.

Further, to gain a more nuanced understanding of the impact of lobbying, we focus on two specific outcomes: government contracts and firm performance. While prior arguments indicate that firms may benefit from lobbying and political connections in various ways, many of which are difficult to directly observe, empirical research has typically measured benefits in the form of firm performance (Hansen & Mitchell, 2000; Kim, 2008; Lux et al., 2011). Using government contract value as an outcome in our study has two important advantages. One is that using contracts allows us to analyze a benefit that is directly observable across a wide swath of industries. As a result, we gain a richer picture of how direct government benefits are elicited through lobbying within a generalizable sample. Another advantage of using contracts is that it answers calls to expand studies to benefits other than firm performance (Kim, 2008; Lux et al., 2011). As such, we are able to add new theoretical arguments to the lobbying literature while also expanding the outcomes to aspects besides firm performance. Moreover, by also focusing on firm performance, we develop arguments about how less directly observable benefits may also advantage firms in the form of performance while remaining consistent with extant literature (cf. Lux et al., 2011). Doing so enhances the comparability of our study with previous research.

Our study advances understanding in multiple ways. Most fundamentally, we provide a finer grained understanding of the complex manner through which lobbying influences firm outcomes. Specifically, by extending firms' lobbying strategies beyond expenditures of resources, our study

not only better explicates what drives effective lobbying for firms, but also begins to clarify the mixed findings of the relationship between lobbying and firm-level outcomes. Within this general framework, we also make distinct contributions to research on resource allocation and political connections. For research on resource allocation, our study speaks to certain limits in the advantages that firms can gain from lobbying. Specifically, we show that allocating lobbying resources to levels of intended targets reaches a point of diminishing marginal returns. For research on political connections, our study speaks to how the myriad of possible connections with government officials can affect the success of a firm's lobbying strategy. Specifically, we argue and find that the totality of a firm's political connections is positively related to firm outcomes and that it impacts the relationship between lobbying breadth and firm outcomes. Relatedly, not only do we introduce lobbying breadth and political connectedness as critical mechanisms for determining the payoffs firms enjoy from their lobbying efforts, but we build upon extant research to develop measures that enable testing these mechanisms, offering an empirical contribution which may serve as a basis for future research. Finally, we contribute to the political strategy literature by leveraging our measures to test our theoretical framework across both overtly visible government benefits to firms (i.e., government contracts) and a more generalized benefit (i.e., firm performance) through a sample of firms across multiple industries.

LITERATURE REVIEW

As Hillman et al. (1999: 67) note, “even the best competitive strategies accompanied by superior products and unique firm resources will not survive without attention to the government” (Carroll & Hall, 1987). Whether it takes the form of securing (and maintaining) government contracts (Blumentritt, 2003), applying for and securing permits (Nownes, 2006), maintaining and building connections with public officials (Clawson, Neustadtl, & Weller, 1998;

Goldman, Rocholl, & So, 2009), or complying with laws and/or regulations (Peltzman, 1976; Stigler, 1971), such attention can burden firms with substantial costs. In fact, estimates suggest that federal regulations in the United States (U.S.) cost firms \$2.028 trillion in 2012 alone (Crain & Crain, 2014). Given this large scale of government influence, it is of little surprise that firms invest resources to sway government entities to act in their favor (Baysinger, 1984)

Corporate political activity (CPA) scholars argue that engaging in CPA provides firms with benefits that are directly visible, such as securing government contracts (Blumentritt, 2003; Hart, 2001), as well as benefits like minimized tax and regulatory burdens, which are not as directly identifiable but still benefit firms' performance (e.g., Chen et al., 2010; Hillman et al., 1999). Most empirical studies of how CPA benefits firms focus on benefits that translate to better firm performance, typically conceptualized using accounting-based measures (Kim, 2008; Lux et al., 2011). Scholars justify this approach for two related reasons. One is that some direct benefits to firms, such as influencing regulation and legislative effects on the firm, are often difficult to observe. For example, Hall and Wayman (1990) note that politicians may not want to engage in directly visible actions because the actions may indicate that the politician is being influenced by the interests of business. Instead, the authors argue, politicians use various maneuvers that avoid direct detection but that nonetheless return benefits for firms. Another is that even if direct benefits to firms are visible, large-scale data on the benefits has not traditionally been available, limiting scholars' ability to analyze CPA benefits on a broader level. Thus, despite few exceptions studying single pieces of legislation (cf. Alexander et al., 2009; Duchin & Sosyura, 2012), extant research generally investigates how CPA relates to firm performance.

Firms derive benefits from CPA in two primary ways: lobbying and campaign contributions (Hillman et al., 2004; Lux et al., 2011; Tahoun, 2014), each of which sway government action in

distinct manners. Lobbying involves communicating information for the purpose of influencing actions (Chen et al., 2010; Nownes, 2006), while campaign contributions can establish a *quid pro quo* relationship where a firm helps improve electoral prospects of candidates in return for the candidate acting in the firm's interest (e.g., Kroszner & Stratmann, 2000; Milyo, Primo, & Groseclose, 2000; Tahoun, 2014). Indeed, some argue that campaign contributions "may be thought of as entry fees that enable corporations to utilize other forms of CPA" (Hillman et al., 2004: 848), such that donations create relationships allowing firms a 'foot in the door' to lobby.

Of the two means of CPA, lobbying not only dominates the expenditures by firms (Hill et al., 2013; Milyo et al., 2000), but evidence also suggests that lobbying is the primary (Kaiser, 2010; Lux et al., 2011) and most effective (Coen, 1997; Lord, 2000) means by which firms influence government officials. The differential use of lobbying by firms and the disparate influence that lobbying has on the benefits firms receive perhaps occurs because campaign contributions are limited in scope whereas lobbying is not. That is, it is not possible to contribute to campaigns of the multitude of appointed officials who do not hold elected office and thus cannot accept contributions from firms. Doing so would constitute a bribe (Tahoun, 2014). In contrast, there are no corresponding restrictions on utilizing information for the purpose of influence as occurs in lobbying, and thus lobbying may be expended to influence more government officials. Similarly, many countries limit or ban campaign contributions, but lobbying faces fewer restrictions (Djankov, Porta, Lopez-de-Silanes, & Shleifer, 2009). Given possible scope differences, lobbying may be both more utilized and more effective because firms can attempt to sway all government officials. With campaign contributions, firms can only target those government officials who are seeking (re)election and are only able to reach a fraction of total government officials. As lobbying is a primary political tool at the disposal of a firm to sway

government officials to act in ways that are beneficial to the firm, the topic generates interest from various parties such as journalists, academics, and practitioners and in both the public and private sectors (e.g., Baumgartner et al., 2009; Godwin et al., 2013).

Historically, scholars, practitioners, and even leaders of state expressed concerns over the ubiquitous role lobbying plays in influencing government officials (Mack, 1989; Silberfeld, 2006). Concerns over lobbying's influence on government officials may be bolstered by a body of empirical research supporting the idea that firms' lobbying can sway government officials to act in ways that benefit lobbying firms (Kaiser, 2010; Shaffer, 1995). For example, Wright (1990: 417) finds that politician voting was "best explained" by lobbying while the amount spent on lobbying has also been linked to higher equity returns, new income, and market share (Kim, 2008; Shaffer, Quasney, & Grimm, 2000). While a body of research supports the contention that expending resources on lobbying has positive implications for firms, extant work largely focuses on the effect of aggregate expenditures toward lobbying on firm performance. Further, some studies suggest that firms do not actually benefit from lobbying. As a case in point, in studies of how lobbying expenditures return benefits to firms in the form of performance, some studies find that the relationship is either negative (e.g., Coates & John, 2010; Igan et al., 2011) or not statistically related (e.g., Hersch, Netter, & Pope, 2008; Lenway, Jacobson, & Goldstein, 1990; Lenway & Rehbein, 1991). Some authors attribute the opposite findings to lobbying firms being overly risky or that lobbying may represent a poor quality investment (cf. Hadani & Schuler, 2013), but these arguments do not directly focus on the allocation of lobbying resources.

We suggest that expanding current understanding of lobbying beyond aggregate expenditures may help to clarify incongruent findings about lobbying and benefits firms receive. Particularly, we argue it is important to investigate how firms allocate expenditures and lever relationships

with government officials. For example, investing \$10 million to lobby a single government official, bill, or agency may return different outcomes than dispersing the same \$10 million lobbying investment across a breadth of officials, bills, or entities. Similarly, the benefits that accrue to a firm based upon that \$10 million expenditure may differ based upon the ability of the lobbying firm to exert influence in government spheres. Moreover, prior research suggests that greater levels of government connections should imply greater influence and ability to persuade government action that is favorable to the firm (Goldman et al., 2009; Goldman, Rocholl, & So, 2013; Hillman, 2005; Nownes, 2006; Vidal et al., 2012). Thus, we propose these two distinct dimensions of lobbying – lobbying breadth and political connectedness – to address both how the firm allocates lobbying expenditures and the ability of the firm to influence government officials.

Further, we build upon the observation that lobbying can return both more directly visible outcomes as well as less directly visible benefits that nonetheless result in improved performance (Nownes, 2006; Richter, Samphantharak, & Timmons, 2009). We do so by addressing how lobbying breadth and political connectedness relate to both a directly visible benefit (firm government contract value) and a benefit that may result from other less directly visible actions (firm performance). We choose to focus on contracting for both practical and theoretical reasons. On a practical level, not only is data on this form of benefit publicly available and not ambiguous in its value (as opposed to regulatory and legislative outcomes), but also government purchases account for a great portion of the business for many firms (Hillman et al., 1999). On a theoretical level, contracts are perhaps the only outcome of lobbying directly visible across industries over time and not obscured by other government processes (Stigler, 1971). Thus, we develop theoretical arguments relating lobbying breadth and political connectedness to both contracts and firm performance. At the same time, by also focusing on how lobbying breadth and political

connectedness affect firm performance, we are able to both capture how less directly observable benefits nonetheless benefit firms' "bottom line" while also tying closely to the extant literature, which focuses predominantly on firm performance as a lobbying outcome (cf. Lux et al., 2011).

THEORY AND HYPOTHESES

Lobbying Breadth

Expending resources on lobbying may attempt to influence government action in multiple branches of government (e.g., executive, legislative, and judicial in the U.S.), spanning vast layers of employees (both elected and nonelected), and shaping specific policy initiatives (Godwin et al., 2013). Because of the sheer size of government, firms may target lobbying efforts towards influencing any number of agencies or legislative actions. To illustrate the breadth of possible lobbying targets, consider that in 2013, the U.S. federal government employed over 2.7 million people (Willhide, 2014) in 438 distinct agencies (www.federalregister.gov) while in the 113th U.S. Congress, 15,926 total legislative acts were initiated: 8,913 specific bills, 5,281 amendments, and 1,732 resolutions (www.congress.gov).

Due to the immense number of possible targets, just as with decisions to allocate resources among possible new products (Klingebiel & Adner, 2015; Klingebiel & Rammer, 2014), business units (Makadok, 2001; Arrfelt et al., 2015), and human resources (Sirmon, Gove, & Hitt, 2008) or across a broader search pattern (Leiponen & Helfat, 2010), firms must decide among myriad lobbying possibilities. We argue the extent of government activities or entities firms attempt to influence via lobbying, which we refer to as lobbying breadth, is an important factor in determining benefits firms accrue from lobbying efforts. As an example of the possible breadth of firm lobbying activities, in 2008, Centerpoint Energy elected to lobby a single legislative act and Schlumberger LTD lobbied only one federal agency, suggesting a narrow

lobbying breadth; alternatively, in the same year, Principal Financial Group lobbied 365 separate legislative acts and IBM lobbied 43 distinct federal agencies, suggesting larger lobbying breadth.

Resource allocation amongst potential options has long been viewed as an important predictor of firm-level outcomes (cf. Penrose, 1959; Williamson, 1975). Indeed, as Arrfelt and colleagues (2013: 1083) note, “allocating scarce resources to competing strategic investment opportunities may be one of the most critical choices managers make and a major determinant of firm performance.” In support of this view, a wealth of research has examined the effects of resource allocation amongst potential options such as in acquisitions (Agarwal, Anand, Bercovitz & Croson, 2012) and alliances (Khanna, Gulati, & Nohria, 1998) as well as amongst industries (Maksimovic & Phillips, 2002) and divisions (Rajan, Servaes, and Zingales, 2000). The premise behind resource allocation arguments is that since the returns associated with any single resource allocation are uncertain, firms benefit from increasing resource allocation breadth because “spreading bets” across a range of possibilities may increase the probability of at least some success – or, simply put, firms should not put ‘all their eggs in one basket’ and instead ‘expand their portfolio’ (Haspelagh, 1982) and spread allocations amongst a breadth of possibilities (e.g., new product introductions; Klingebiel & Rammer, 2014; projects; Stein, 1997).

Like contexts in previous resource allocation research in which returns are not certain, (e.g., new product introductions; projects; business units) returns to lobbying any single piece of legislation or agency are highly uncertain. In fact, even lobbyists disagree as to what increases the odds of securing positive outcomes (Nownes, 2006). Thus, as a part of a lobbying strategy, firms may improve the probability of securing positive outcomes by increasing the breadth of the government entities toward which lobbying resources are allocated. Through greater lobbying breadth, the uncertainty of success on any single target may remain high, but the number of

possible targets for persuasion also increases, thus improving the probability that some lobbying tactics are successful. Therefore, as a firm increases its lobbying breadth and in so doing attempts to influence more aspects of government, the prospect of firms receiving positive outcomes increases (cf., Klingebiel & Rammer, 2014; Stein, 1997).

To understand how lobbying breadth benefits a firm's ability to secure greater value in government contracts, the contracting process must be considered. Generally, the process involves both the appropriation of funds for purchasing a good/service as well as the awarding of the contract (Nownes, 2006). Firms lobby in order to influence both aspects of the contracting process: the former increases the value of possible contracts while the latter increases the odds of securing a contract, making the two aspects of lobbying inextricably linked. Through increased lobbying breadth, firms allocate resources across numerous agencies and pieces of legislation. Thus as those resources are spread, firms are able to: 1) have a broader target base in which to generate demand for their goods/services, 2) increase the number of officials they may persuade to request funding for the firm's goods/services, and 3) increase the number of officials who may be persuaded to award the contract or influence the contract awarding process. (For a detailed review of how lobbying affects the contracting process, see Nownes, 2006.) As such, greater lobbying breadth can aid in increasing the value of possible contracts available for the firms' goods/services in addition to improving the probability of securing available contracts. For example, in 2006 Coca-Cola and PepsiCo expended similar dollar amounts toward lobbying efforts (\$1.06 million and \$880,000, respectively); however, Coca-Cola lobbied 10 agencies and 14 legislative acts while PepsiCo lobbied 18 agencies and 25 legislative acts. In this example, PepsiCo opted for greater lobbying breadth and in so doing had contracts from more departments within the government and with a total value of \$244.4 million to Coca-Cola's \$59.3 million.

While we suggest that as with product innovation (Klingebiel & Rammer, 2014) greater breadth of resource allocation across government improves outcomes obtained through lobbying (and specifically contracts), there are two reasons this positive relationship will likely not continue indefinitely, but instead will reach a point of diminishing returns. First, when choosing to expand the breadth of lobbying, it is possible that as breadth reaches very high levels, the agencies or legislation targeted can only affect the firm tangentially and/or may have a limited number of contracts to award or limited ability to appropriate funds. Therefore, while expanding lobbying breadth to influence a greater number of agencies or legislation, some of them will likely have lower and lower probable impact on the firm. Consider the prior example. PepsiCo lobbied 25 legislative acts, many of which are easily identifiable as possibly impacting a firm in the food and beverage industry (e.g., Childhood Obesity Reduction Act, Healthy Lifestyles and Prevention America Act) while others are less obvious as direct impacts on a firm in that industry (e.g., Voting Rights Act, Haiti Infrastructure Reconstruction Act). Although bills with seemingly less obvious impact on PepsiCo likely have some importance to the firm, or resources would not have been expended toward lobbying them, it seems likely that they are more tangential. Lobbying the more tangential legislation may have a positive impact, yet likely provides fewer benefits than more directly impactful legislation. For instance, Klingebiel and Rammer (2014) find that firms engaging in greater breadth of resource allocation towards product innovation and that were also selective with what projects to continue to pursue had greater performance returns. This finding suggests that while spreading allocations across a greater breadth of products is beneficial, some degree of selectivity of breadth of products in which to invest is optimal. Lobbying should work similarly – while having a greater breadth of

lobbying likely returns greater benefits, at a certain point the possible targets will result in diminishing returns for the corresponding increase in breadth.

Second, as lobbying breadth increases, each new government target requires shifting influence tactics from one target to another. This shift limits the resources (capital, time, lobbyists) that can be directed toward any single target. With the growing spreading of resources, firms are not able to give intense focus to any single target but rather have lower levels of focus across more targets. For example, research shows that resource allocation breadth can limit focus and thrust while removing sufficient resources for the task at hand (Klingebiel & Rammer, 2014). Therefore, all else constant, in the context of lobbying, we expect that as the breadth of lobbying targets increases to very high levels, a smaller amount of emphasis may be placed on any single entity because resources are allocated across a larger number of entities. In such a strategy, the firm's lobbying is widely spread among multiple areas and possible decisions throughout the vast government bureaucracy, diminishing the impact of lobbying as breadth increases. Based on the above, we expect that lobbying breadth will have a positive impact on the amount of government contracts a firm secures. However, we expect that this positive relationship will diminish as lobbying breadth reaches very high levels.

Hypothesis 1: Lobbying breadth will have a diminishingly positive association with firm government contract value; the relationship is most positive at lower levels of lobbying breadth but weakens at high levels of lobbying breadth.

Beyond benefiting firms through higher-value government contracts, lobbying also benefits firms in ways that might not be as overtly visible but nonetheless affect firms' performance, such as creating favorable regulatory environments and securing tax benefits (Stigler, 1971). As Nownes (2006: 37) suggests, it is often hard to identify any single beneficial outcome for a firm

outside of procurement lobbying to generate contracts because “the range of public policy issues with which governments deal is exceptionally broad” and quite nuanced. Thus, many actions not directly visible – such as stalling or altering legislation, impacting regulatory burdens, or obtaining more favorable tax schemes – will in totality benefit firms and are likely to be visible only in the firm’s performance.

Generally, the same arguments relating lobbying breadth to contracts hold with benefits that accrue in the form of firm performance, although generalized to broader aspects of government such as regulation, taxation, and legislation. Through a broad lobbying strategy, the allocation of resources across a greater number of government officials, improving the firm’s ability to secure outcomes that are generally beneficial, such as favorable regulation or e pushing (stalling) regulations and laws that may help (harm) the firm. Therefore, we expect that due to the ability to influence greater levels of government entities, lobbying breadth will have a positive effect on firm performance. Yet, similar to prior arguments relating lobbying breadth to government contracts, the positive relationship with firm performance will have diminishing returns due to tangential targeting and diminishing influence at very high levels.

Hypothesis 2: Lobbying breadth will have a diminishingly positive association with firm performance; the relationship is most positive at lower levels of lobbying breadth but weakens at high levels of lobbying breadth.

Political Connectedness

While lobbying breadth focuses on the allocation among government entities targeted, we must also consider the access and influence that the firm has with government officials in those targeted entities. Scholars note that influencing government actions “is all about connections” (Vidal et al., 2012: 3731) to such an extent that having relationships with government officials

“has become more than a part of legislative politics – for many, it *is* legislative politics” (Levine, 2009: 199, emphasis in original). Consistent with the notion that relationships with government officials are important, scholars argue that firms with greater political connections are better able to influence the government contracting and regulatory process in a manner more favorable to the firm (Goldman et al., 2013; Hillman, 2005; Hillman et al., 1999; Nownes, 2006). These connections generally provide access to powerbrokers that is not available to those without such connections. We build upon the concept that firms can lever political connections to their benefit to argue that the number of relationships with government officials will relate to the benefits the firm receives. Specifically, we posit that the ability to obtain access and influence in lobbying efforts, which we refer to as political connectedness, will generate positive outcomes for firms.

Extant research identifies three relationships that provide firms with greater political connectedness. First, firms are connected to government officials via political service – where a firm employs current or former government officials who collectively offer both experience and a network of contacts that can be levered for the benefit of their employing firm (cf. Faccio, 2006; Faccio, Masulis, & McConnell, 2006; Hillman et al., 1999). Demonstrating the value of political service to firms, Lester and colleagues (2008) note an almost 400 percent rise in the number of public firms with government officials serving on their boards over the quarter-century from 1973 to 1998, despite the average size of boards declining by 44 percent over the same period. Moreover, a multitude of prior research shows the benefit of prior government service of board members (Goldman et al., 2013; Hillman, 2005; Hillman et al., 1999).

Second, firms also improve connectedness through donations to electoral campaigns (Keim & Zeithaml, 1986). Firm donations to election campaigns are argued to create *quid pro quo* relationships such that firms provide resources to help elected officials secure office while the

elected officials provide benefits in return (Kroszner & Stratmann, 1998; Snyder, 1990; Tahoun, 2014; Tripathi, 2000) or, more simply, to buy access and influence (Nownes, 2006; Tahoun, 2014). Indeed, Holburn and Vanden Bergh (2014: 452) find that firms use donations to officials prior to regulatory review because doing so will “gain explicit or implicit political support.”

Third, firms create connections through the employment of former government officials as lobbyists (e.g., Hillman, 2005; Kim, 2008; Vidal et al., 2012). Prior government officials who become lobbyists are thought to have greater access to government information and officials than those without such experience (Levine, 2009; Rosenthal, 2001; Santos, 2006). In fact, a former congressperson, speaking about acting on information obtained from lobbyists, stated “I would do this with a lobbyists that I knew well – mostly ex-staff people I had known” (Levine, 2009: 199). Similarly, Tony Podesta, founder of one of the most prominent lobbying firms, reiterated “people who are experienced in Washington tend to be better at doing this kind of work than people who have never worked in the government before” (Farnam, 2011).

Collectively, as Agrawal and Knoeber (2000: 180) note, connections to government officials “aid the firm with the knowledge of government procedures and their insight in predicting government actions.” More important, such connections are valuable in that “most directly, they may also act to enlist government in the firm’s interest or to forestall government actions inimical to the firm.” Consistent with the idea that greater connectedness provide firms with preferential access to, and influence with, government officials, we argue that, collectively these aspects constitute a firm’s overall political connectedness, offering firms a number of benefits.

First, political connections provide firms with greater access to, and influence with, government officials with whom they are connected (cf. Holburn & Vanden Bergh, 2014; Nownes, 2006; Tahoun, 2014). Indeed, “prior experience in government allows former officials

to develop a network of friends and colleagues that they can later exploit” (Vidal et al., 2012: 3731). The access and influence that more political connectedness provides should result in higher levels of benefits received by the firm as more government officials act in ways that benefit the firms in which they are connected. Similarly, by having relationships with government officials, firms are able to gather information and react proactively to possible government initiatives (Nownes, 2006). That is, greater levels of political connections increase the amount and quality of government information that is accessed, thus providing insight into how a firm should respond. For instance, John Breaux, a former U.S. Senator, is now a lobbyist employed by hedge funds “to provide instant tips on the progress of potentially market-moving legislation, from the settlement of asbestos lawsuits to allowing oil drilling in an Alaskan refuge. It’s a legal way of letting investors benefit from information gleaned from private conversations with lawmakers and aides” (Jensen, Forsythe, & Salant, 2005).

Second, while political connectedness may provide influence via relationships with government officials, these relationships will also lend other selective benefits to the firm such as legitimacy, status, and goodwill (Hillman et al., 1999). Current and former government employees’ prior positions distinguish these individuals from those who do not possess that experience, and as such will accrue advantages from their government experience (Bowers, Greve, Mitsuhasi & Baum, 2014). Indeed, prior government officials employed by firms have a greater level of credibility because of their expertise in both policy and the legislative process (cf. Esterling, 2009; Mattozzi & Merlo, 2008). This expertise “can refer to policy matters, the inner workings of the legislative process, or even the preferences of particular constituencies” (Vidal et al., 2012: 3732). Consequently, firms with greater political connectedness are likely to

be viewed more favorably by government officials; thus when weighing decisions, greater political connections will create greater benefits for the firm.

At a more specific level, when considering government contracts, the value of contracts accessible to firms is quite large. Even a fraction of a percent of government contracts can be substantial to a firm. For instance, Lockheed Martin is typically one of the largest government contractors, yet in 2014 the company's \$13.5 billion contract obligation was only 3 percent of the total \$445.5 billion government contracting value available. As a firm has more political connectedness, the access, influence, and leverage provided by these relationships improves the ability to convince government decision makers to intercede on the behalf of the firm when making purchase decisions. Every procurement lobbyist Nownes (2006) interviewed in his study on lobbying effectiveness stated that prior relationships were essential to winning government contracts, not only because government officials like to award contracts to people they know but also because connectedness grants access to those individuals who award contracts.

Similarly, having more connections provides valuable information that a firm can use to be proactive on bidding for contracts, such as knowledge of price parameters and product or service requirements that should net contracts *vis-à-vis* less-connected firms. Assuredly, relationships with government officials "can provide some government contractors with unfair advantages over their competitors, due to insider knowledge that can be used to the benefit of the contractor" (Revolving Door Working Group, 2005: 8). In sum, relationships with government officials generate favors in the form of officials being more likely to patronize the firm as well as in obtaining information the firm can use to better secure contracts. Thus, as a firm has greater political connectedness, it is likely to increase the value of its government contracts.

Hypothesis 3. Political connectedness will have a positive relationship with firm government contract values.

As Hillman and colleagues note (1999: 71), “theoretically, all of the benefits” associated with firms’ connections to government officials should benefit firms in ways not overtly visible, such as government contracts, but are nonetheless beneficial such that connectedness “should affect firm performance.” For example, scholars note benefits afforded firms with political connections during the Reagan, Bush, and Clinton administrations that benefitted their performance (e.g., Bonardi et al., 2005; Hillman et al., 1999; Nownes, 2006). Therefore, it is likely that political connectedness will be positively associated with firm performance for similar reasons as with government contracts. Specifically, the greater the political connectedness, the more likely the firm will gain benefits in ways that translate to economically beneficial outcomes for firms.

Hypothesis 4. Political connectedness will have a positive relationship with firm performance.

The Intersection of Lobbying Breadth and Political Connectedness

We expect that political connectedness provides firms with benefits such as access, trust, status, and legitimacy that can be levered to generate firm-level benefits (cf. Faccio et al., 2006; Fisman, 2001; Hillman, 2005), as previously argued. However, we also expect connectedness to generate more certainty of success at lower levels of lobbying breadth since more connections create greater access and influence and to some degree limits the uncertainty in the lobbying process. Thus political connectedness initially creates positive outcomes at lower levels of lobbying breadth, yet it is also likely that the benefits accrued from having greater political connectedness will lose prevalence as lobbying breadth increases because of two interrelated mechanisms: the exploitive nature of leveraging connectedness and associated opportunity costs.

With respect to the exploitative nature of leveraging connectedness, scholars note that politically connected representatives of firms are most effective when being opportunistic in exploiting their relationships in political arenas such that moving from one topic area to another is common if the government officials with whom a relationship exists change positions (Bertrand, Bombardini, & Trebbi, 2011; Vidal et al., 2012). That is, rather than attempting to influence government officials with whom they have only a passing relationship, politically connected individuals tend to both exploit those relationships in which they have most influence, to the exclusion of others, and are more effective at doing so. As such, political connections are most beneficial when concentrated on a limited number of relationships that can be exploited.

Yet as a firm's lobbying breadth increases, the firm is targeting more entities and issues, spreading firm representatives across more aspects of government where connections may not be possessed and influence is minimal, thereby limiting the typical exploitive nature of lobbying. When aggregated to the firm level, because political connections typically function within a narrow set of government contacts whom they can sway, the likelihood that the firm will have political connections great enough to reap benefits diminishes as a firm targets more entities. Thus, as lobbying breadth increases, there is a decreasing likelihood that political connectedness will return benefits. As such, the influence of greater lobbying connectedness on the relationship between lobbying breadth and benefits the firm receives decreases as lobbying breadth increases.

Related to the exploitative nature of leveraging connectedness, there are opportunity costs for individuals when spreading influence across greater levels of government because each representative has limited time and capacity for action. Specifically, as the firm attempts to target more entities, the firms' representatives with political connections may not be able to effectively influence each individual with whom a relationship exists. Their time and energy is spread thin

while at the same time also using such focus on influencing government officials in which prior relationships were not as strong and less easy to lever. The net result of spreading both allocated time and capacity away from relationships that are most fruitful (thus decreasing the likelihood of returning benefits) as well as allocating time and energy to relationships that are less likely to return benefits creates a dual opportunity cost: relationships that are most fruitful do not receive adequate attention (thus, decreasing the likelihood of returning benefits) while time spent on attempting to influence individuals where the politically connected individuals have less influence diminishes the firm's overall ability to achieve the desired outcome.

McFadyen and Cannella (2004) discuss a similar type of opportunity cost, finding that knowledge creation is only benefited through relationships to an optimal point, beyond which opportunity costs arise that negatively affect both knowledge creation and time an individual may allocate to activities. This finding suggests that focusing on more activities or individuals may hinder peoples' ability to utilize their relational networks. Arguably, political connectedness should function similarly – individuals' ability to utilize their networks to influence government officials is diminished as the individuals are asked to expand the number they must influence because their focus is turned toward less fruitful relationships. Thus, as all politically connected individuals are faced with similar constraints no matter the manner in which those connections are established, we consider the aggregate impact of these constraints. Therefore, we expect that while those firms with greater levels of political connectedness will have greater overall firm outcomes than those with lower levels of political connectedness, as lobbying breadth increases, the positive benefits reaped through political connectedness will be less positive.

Hypothesis 5. Political connectedness will moderate the diminishing positive relationship between lobbying breadth and government contract values such that the curvilinear relationship is weakened as political connectedness increases.

Hypothesis 6. Political connectedness will moderate the diminishing positive relationship between lobbying breadth and firm performance such that the curvilinear relationship is weakened as political connectedness increases.

METHODS

Sample

The sample consists of U.S. firms listed in the S&P 500 index in the year 2004. Data was collected for these firms from 2004 to 2009 (data from 2003 was also collected to minimize observations lost when using lagged instrumental variables). All data pertaining to firm lobbying and other political activity was collected from the Center for Responsive Politics (CRP), a research group that examines the effects of money and lobbying on elections, government actions, and public policy. CRP provides data for all campaign contributions and lobbying directed toward the federal government. Government contracting data was collected from usaspending.gov, an official website of the U.S. federal government that documents federal government contracts (Tahoun, 2014). Board member linkages between the government and firm were collected from BoardEx. Finally, all other firm-level variables were collected from Compustat. To establish temporal spacing, independent and control variables were collected in the time period t , while dependent variables were collected in time period $t + 1$.

Measurement

Dependent variable. *Government contracts* was measured as the logarithm of the total value of all contracts between the focal company and the U.S. federal government throughout the year. *Firm performance* was measured as Tobin's Q, calculated as market value of the firm divided by total assets. We calculated market value as the value of the firm's common stock, liquidating value of preferred stock, book value of long-term debt, and firm debt with maturity of less than

one year (Kim & Bettis, 2014). Due to the primary focus of the CPA literature on accounting based measures (Lux et al., 2011), the focus on a market based measure such as Tobin's Q provides for unique insight into the manner in which lobbying affects firm outcomes.

Independent variables. The Lobbying Disclosure Act of 1995 provided for additional accountability and transparency in federal lobbying; individuals and firms engaged in lobbying the federal government are required to report the lobbying efforts in which they engage, including amount spent, agencies lobbied, specific issues on lobbied, and lobbyists involved. Lobbying breadth focused on the number of government entities and issues in which a firm attempted to influence. Thus, we used the number of legislative acts and the number of federal agencies/entities directly targeted by lobbying activities on behalf of the firm over the course of a year. To measure *lobbying breadth*, the number of entities and acts were standardized and summed to give an aggregate measure of total breadth of the firms lobbying efforts.

Political connectedness is defined as the ability to access and influence government officials through prior relationships. We constructed our measure of political connectedness through the inclusion of connections in prior research: the number of revolving door lobbyists employed (Vidal et al., 2012), the number of board members with prior government experience (Hillman, 2005), and the number of congressional campaigns to which the firm donated (Tahoun, 2014). The measure of revolving door lobbyists includes individuals formerly employed in federal government, including former members of Congress, Congressional staffs, White House staff, or specific departments within the federal government (e.g, Departments of State, Treasury, Energy, Commerce, Transportation, etc.). Using BoardEx employment history data, board member prior experience was constructed as a count of all individuals on the board who have current or prior employment listed as government. Examples of some of the individuals listed include those who

had previously been appointed to government positions such as district and circuit court judges, regulatory agents, and the Cabinet as well as those elected to positions such as state and national Representatives and Senators. Finally, we also include a count of the campaigns to which the firm contributed in a given year regardless of number of donations such that multiple donations to the same campaign are counted only once².

Similar to lobbying breadth, we standardized and summed each of these variables to create our measure of political connectedness. Each measure was scaled by the number of operating segments within which the firm operates to account for the dispersion of attention of connections.³ Because lobbying breadth and political connectedness effects may be obfuscated by long lead times of government activity (cf. Hadani & Schuler, 2013), we calculated each variable of interest cumulatively over the focal (time t) and prior (time $t - 1$) year as a robustness test.

Control variables. We controlled for overall corporate political investments by including the amount of lobbying expenditures, PAC contributions, and contributions to 527 groups, which are “a tax-exempt group organized under section 527 of the Internal Revenue Code to raise money for political activities” (Center for Responsive Politics). The measure of *lobbying expenditures* was included as the natural logarithm of the total dollar amount expended by the firm on lobbying activity. We included other types of firm political activity such as contributions to political action committees (PACs) and 527 groups (measured as total expenditures in these areas) because resources allocated to these activities may influence the outcomes in our study. The variables are referred to as *PAC contributions* and *contributions to 527 groups*. To account for skewness in each of these variables, both were calculated with the natural logarithm.

² Because it may be argued that PAC contributions are a different type of resource allocation rather than the development of connections, we separately created this variable excluding PAC contributions and only including revolving door lobbyists and board member government experience. Results of this measurement are directly comparable to those reported.

³ We thank an anonymous reviewer for this suggestion.

Beyond political expenditures, *capital investment* was included and measured as annual capital equipment expenditures of the focal firm. Moreover, we also included measures of the firm's exposure and slack in the form of *long-term debt* and cash on hand and short-term investments, termed *financial slack*, to account for the possible effects of such aspects on firm performance and resources available for lobbying (George, 2005; Voss, Sirdeshmukh, & Voss, 2008). We also included a measure of *firm size*, measured as the logarithm of total assets. *Prior ROE* was included to account for accounting-based performance, and *prior Tobin's Q* was also included.⁴ We also include the lagged value for contracts in the contracting models, however because inclusion of lagged dependent variables in random effects causes the estimator to be biased, we follow Kennedy's (2008) guidance and include the prior years value as instrumented by the contracting value in *t-2* (cf. Anderson & Hsiao; 1981)⁵.

We controlled for industry aspects that may impact lobbying necessity. Specifically, we included a measure for *Regulated industry* taking on a value of 1 if the firm operates in a highly regulated industry and a 0 otherwise (Grier, Munger, & Roberts, 2013; Hadani & Schuler, 2013). Similarly, we also included the measure *industry tax rate* as the average marginal tax rate of the firm's industry measured at the two-digit SIC. Finally, we controlled for overall industry lobbying. First, *industry lobbying expenditures* was measured as average lobbying expenditures by each firm in the focal firm's industry (focal firm lobbying was not included in this calculation and the industry lobbying classification used was that created by the Center for Responsive Politics). Second, we included *industry lobbying attention*, which is the number of client organizations that lobbied that specific industry in each year. Finally, we included a control for the number of lobbyists that lobby within each industry, called *industry lobbyist intensity*.

⁴ In alternative Feasible Generalized Least Squares (FGLS) models, we excluded the lagged dependent variable and results remained consistent with those reported below.

⁵ Results are robust to exclusion of this control.

Selection Bias and a Censored Endogenous Variable

Firms that lobby may differ from firms that do not (Grier, Munger, & Roberts, 1994), possibly creating selection bias. Moreover, the process of selecting into level of lobbying may also lead to problems of endogeneity. As such, we followed recent work focusing on two-step estimation of panel data models with possible selection bias and a censored endogenous variable (Vella, 1998; Vella & Verbeek, 1999). Vella and Verbeek (1999) refer to this process as *conditional moment estimation*, which provides initial consistent estimators so that asymptotically efficient estimators can be obtained. They argue that in panel data models, endogeneity and sample selection bias result from a failure to account for unobserved heterogeneity in the primary equations and recommend the inclusion of estimates of this heterogeneity from the reduced form residuals of two first-stage regressions to be included as additional explanatory variables in second-stage analyses. This procedure provides several notable benefits. First, it allows for exploiting the panel nature of the data to isolate the form of heterogeneity driving endogeneity/selection bias. Second, it introduces dynamics into panel data models involving forms of sample selection and/or censored endogenous regressors, allowing for the isolation of the individual effects from state dependence (Vella & Verbeek, 1999). Finally, this two-step procedure provides a test of selection bias with the correction terms similar to the cross-sectional Heckman procedure. However, the major difference is that with this procedure two covariances are estimated, one capturing the correlation between the individual effects and the second capturing the covariance between idiosyncratic shocks that can be accounted for in panel data (Vella, 1998; Vella & Verbeek, 1999).

To employ the correction discussed by Vella and Verbeek (1999) and Vella (1998), we performed two separate random effects Tobit regressions predicting lobbying breadth in a first

stage. The first model assumed the underlying process of sample selection and endogeneity is static. The second model allowed for the possibility of state dependence and thus included time dummies (Vella, 1998). From these two specifications, we computed two correction terms to include as controls (Vella, 1998; Vella & Verbeek, 1999). The first, $\sigma_{\mu\alpha}$, accounts for the static process determining selection and endogeneity, while the second, $\sigma_{\eta\nu}$, accounts for state dependence. Important in this specification is that since the correction terms are estimated by Tobit regression, the terms are accounting for the probability of participation in addition to the breadth of lobbying activity (Vella, 1998; e.g., Vella & Verbeek, 1999). In determining our strategy for inclusion of variables in these regressions, we consulted prior theory and research (Angrist & Pischke, 2008). Since firms engage in lobbying to sway government officials to act in ways that benefit the firm (including minimizing the intrusion of government into the industry in which the firm competes), to shape government policy to be beneficial to the firm, or to assist in shielding the company from current industry governmental policies that affect competition, often in the forms of both regulation or income taxes. Therefore, we included a variable for the amount of income taxes paid by the firm in the prior year, as large levels of income taxes provide an impetus for greater attempts at shaping governmental tax policy. Moreover, research shows that firms with higher firm-specific regulatory burdens have lower productivity and greater levels of cost of goods sold suggesting that cost of goods sold is indicative of regulatory burdens. As such, we included cost of goods sold as a regressor in our first-stage models (Carter, Kale, & Grimm, 2000; Gollop & Roberts, 1983; Gray & Shadbegian, 2003).

To determine the appropriateness of first-stage variables, we conducted several tests of instrument strength. First, each of these measures is highly correlated with lobbying breadth, and much less so with the outcomes of interest. Second, *F*-tests based on ordinary least squares (OLS)

regression are well above the threshold suggested by Stock and Yogo (2001) to provide evidence of validity. However, some argue that both robust and nonrobust F statistics may be high even when instruments are weak; as such, we employed the Montiel-Pflueger test for weak instruments to ensure that our strategy was appropriate as this test is robust to heteroskedasticity and autocorrelation. A rejected test suggests that instruments are strong (Olea & Pflueger, 2013; Pflueger & Wang, 2015). Results of this test suggest that our variable selection strategy for the correction terms was based upon strong, valid instruments. Finally, Hansen's J-statistic following two-stage regression with robust standard errors also suggests that our variable selection strategy was sound (Semadeni, Withers, & Trevis Certo, 2014). More simply, the above tests all suggest that the first-stage regressors were not correlated with the error and therefore that the models were valid.

Each of the first-stage models also included all control variables (i.e., the structural model) from the second-stage model (Semadeni et al., 2014; Vella, 1998). Results of the first-stage model are included in the Appendix. In alternative analysis, we included other possible variables in varying combinations to predict lobbying breadth, such as a proxy for firm inflexibility (net property plant and equipment), which is highly correlated with lobbying breadth and minimally so with our outcome variables. All alternatives provide results similar to those presented below.

Analytical Approach

Our measure of government contracting is left-censored because not all firms receive government contracts in a given year. Indeed, approximately 39 percent of our observations are left-censored at zero. Utilizing OLS regression with a censored dependent variable yields biased coefficient estimates, so we employed a Tobit specification to account for censoring (Greene, 2000). We employed a random effects model (with year and industry dummies) because Tobit models for panel analysis are not defined for fixed effects. However, as a robustness check, we

conducted analysis forcing firm fixed-effects into the models. Results from this alternative specification are analogous to those reported below. Industry dummies were created off the sectors in which the firm lobbies as defined by CRP in an attempt to capture some of the collective nature of political strategy (e.g., Olson, 1965).

Our analysis focusing on firm performance used a two-step Arellano-Bond dynamic panel specification because the inclusion of lagged dependent variables may induce dynamic panel bias. In each model, we followed suggestions by Roodman (2008) and included time dummies, utilized orthogonal deviations to maximize sample size, and included the Windemeijer robust standard error correction. With the exception of the two selections corrections discussed above, all variables were included in the instrument matrix. This dynamic panel specification is especially suited to analyzing autoregressive-distributed lag models from panels with cross-sectional units observed for relatively few time periods. The Arellano and Bond estimator proceeds by transforming regressors through first-differencing and using the Generalized Method of Moments (GMM) (Hansen, 1982) in its estimation (Arellano & Bond, 1991; Arellano & Bover, 1995; Greene, 2000).

This dynamic panel approach provides several advantages. First, prior dependent variable values are controlled for, which is important in our analyses since firm performance in a given year is likely related to prior years' firm performance. Second, the Arellano-Bond approach uses instrumental variables to remove unobserved latent heterogeneity, which may be problematic when a lagged dependent variable is included due to the possibility of its being correlated with the error term (Greene, 2000; Kennedy, 2008). Third, GMM estimation with robust standard errors provides better estimates in the presence of autocorrelation and heteroskedasticity that are common in dynamic panels (Arellano, 2003). Finally, since independent variables become

potentially endogenous because they may be serially correlated to the error terms across time if they are not strictly exogenous, the Arellano-Bond method uses lagged first-differenced values of regressors as instruments to effectively deal with potential endogeneity.

Arellano-Bond tests were performed for autocorrelation and Hansen tests for the validity of the instrumentation strategy. In all models of our hypothesized relationships, these tests demonstrate no autocorrelation in the first-differenced errors and that our instrumentation is valid, thus making us confident about the validity of our results, the treatment of potential endogeneity, and the sufficiency of the use of the Arellano-Bond estimator (Arellano, 2003).

RESULTS

Descriptive statistics and correlations appear in Table 1. While we control for industry lobbying variables, the correlations of our independent variables with these controls are rather low, the highest being .12. Similarly, the correlation between firm lobbying and industry lobbying is also relatively low at .13. These correlations suggest that firm lobbying strategy is somewhat distinct from broader industry lobbying.

Insert Table 1 about here

Parameter estimates for government contracts are presented in Table 2 and firm performance in Table 3. The first models in each table include only the control variables; the second models in each table provide results for linear effects of lobbying breadth. Hypotheses 1 and 2 state that firm lobbying breadth will have a positive relationship with government contracts and firm performance, respectively, and become less pronounced at higher levels of lobbying breadth. To test these hypotheses, we included the squared term of our lobbying breadth variable in Models 3 and 9. The results provide support for both hypotheses, with Models 3 and 9 suggesting a

significant positive linear coefficient ($p < 0.01$ and $p < 0.001$, respectively) as well as a significant negative squared term ($p < 0.001$ and $p < 0.01$, respectively). Additionally, the cumulative measurements also provide support in Models 5 ($p < 0.01$ for linear term; $p < 0.001$ for squared term) and 11 ($p < 0.001$ for linear term; $p < 0.01$ for squared term). These cumulative relationships are graphically represented in Figures 1 (Government Contracting) and 2 (Firm Performance). The figures illustrate that firm outcomes increase initially as lobbying breadth increases, but the increase slows as lobbying breadth becomes increasingly large. In additional analyses, to guard against the possibility that influential values affected our results, we winsorized our lobbying breadth variable and find consistent results. When considering the effects of cumulative lobbying breadth on government contracts, for the average firm at half a standard deviation below the mean, government contracts increase by 5.7 percent while above the mean the increase is less at 4.4 percent. Considering firm performance, for the average firm at half a standard deviation below the mean, performance increase by 8.2 percent for the average firm while above the mean the increase is 7.2 percent. These results indicate the diminishingly positive benefit of lobbying breadth at very high levels.

Insert Figures 1 & 2 and Tables 2 & 3 about here

Results for tests of Hypotheses 3 and 4 are presented in Models 3 and 9. We do not find support for Hypothesis 3 in Model 3 ($p > 0.10$). However, results are supportive of Hypothesis 4 across Models 8 ($p < .01$) and 9 ($p < .01$). Moreover, these results are echoed in Model 11, where political connectedness is measured cumulatively. These results suggest that as there are greater levels of connectedness between the firm and government, firm performance increases.

We also tested the possibility that there is a diminishing effect for political connectedness similar to that argued in Hypotheses 1 and 2. Results for this alternative analysis are not supportive in either government contracts or firm performance. While the diminishing effect of political connectedness is plausible, we believe that it is theoretically more difficult to assume that a firm's ability to influence the government becomes less valuable at any level. That is, unlike lobbying breadth, which captures the dispersion in resources expended, political connectedness is akin to expenditures in that it captures the amount of resources a firm has in the form of political connectedness, not their dispersion across possible connectedness. The nature of political connectedness is important for multiple reasons. First, a single possible relationship may have a wide number of possible contacts within government. For example, a member of a firm's board of directors who previously worked in government may have any number of contacts within government to lever on behalf of his firm. Each of these may benefit the firm in some material way such that greater political connectedness provides greater connectedness and as such, greater potential benefits in return. Second, the U.S. government spends trillions a year; even a fraction of a percent increase in contracts awarded to a firm nets large amounts. With such spending, any additional connection is likely to prove valuable. Therefore, all things constant, more resources (i.e., political connectedness) should have a continuous positive relationship.

Hypotheses 5 and 6 suggest that at high levels of both lobbying breadth and political connectedness, government contracting (H5) and firm performance (H6) will incur more diminishing returns. To test these curvilinear interactions, we included product terms of political connectedness with both the linear and squared lobbying breadth terms (Cohen, Cohen, West, & Aiken, 1983). We focused on the squared terms in testing moderation to assist in avoiding misinterpretation of correlated variables due to linearity or additivity in line with similar

investigations of curvilinear interactions (e.g., Cortina, 1993; George, 2005; Ridge, Aime, & White, 2014). Hypothesis 5 finds support in Model 4 ($p < 0.01$), and Hypothesis 6 finds support in Model 10 ($p < 0.01$). Similarly, cumulative measurements provide analogous results in Models 6 and 12, respectively. These cumulative results are graphically represented in Figures 3 and 4 (with high and low values plotted at plus or minus 2 standard deviations), which show that the diminishing relationship is more pronounced at high levels of connectedness, making the benefits obtained through connectedness converge with higher levels of lobbying breadth.

Insert Figures 3 and 4 about here

The results of our cumulative analyses indicate that for firms with high political connectedness, there is a 4 percent increase in government contracting at half a standard deviation below the mean and a 3 percent increase above the mean. However, overall outcomes are higher than for firms with lower connectedness. For firms with low political connectedness, the increase is 8.9 percent below the mean and 6.9 percent increase above the mean. Similarly, for the average firm with high political connectedness, overall there is a 6.2 percent increase in Tobin's Q at half a standard deviation below the mean and a 5.5 percent increase above the mean. For firms with low political connectedness, the increase is 11.7 percent below the mean and 9.9 percent above the mean. It is important to note, however, that while those firms that have higher political connectedness have a slower increase in the value of government contracts as lobbying breadth increases, they begin at higher levels, ultimately achieving similar outcomes to those with low political connectedness at very high levels of lobbying breadth. This suggests that for those firms with few political connections, greater levels of lobbying breadth are most beneficial. As a robustness test, it may be argued that lobbying Congress and legislation is

redundant (i.e., Congress makes legislation, so counting the houses of Congress as independent entities while also counting legislation is redundant). Thus we calculated lobbying breadth only counting Congress in the breadth variable if a firm did not lobby legislation. Results of this alternative analysis are similar in substance to those reported above.

DISCUSSION

In this paper, we build upon the view that lobbying is a quintessential aspect of firms' CPA and extend our understanding of how lobbying influences the benefits received by the firm. Our research moves beyond the dominant focus on how the total amount of firm expenditures directed toward lobbying relates to the benefits received by firms in the form of firm performance. Specifically, we not only begin to help clarify the inconsistent results in extant research by addressing how firms' performance is benefitted by considering more nuanced aspects of lobbying, but we also extend our understanding to a more directly visible benefit of lobbying, firm contracts. To gain insight into how resource allocation via lobbying breadth and influence via political connectedness impacts firm outcomes in the form of government contracts and firm performance, we developed and empirically tested a more comprehensive view of lobbying strategy. Overall, we argue and find support in the context of S&P 500 firms that while "spreading bets" across a greater number of entities can return benefits for firms, lobbying breadth may suffer diminishing returns as it increases. Further, we generally find support for our arguments that political connectedness both returns benefits for firms and moderates the relationship between lobbying breadth and firm-level outcomes such that as lobbying breadth increases, the benefit of political connectedness begins to diminish. Cumulatively, we advance our understanding of lobbying and offer a number of contributions to theory and practice.

First, we extend current conceptualization of lobbying by introducing the concept of lobbying breadth as a distinct dimension of lobbying strategy. In so doing, we move beyond the relatively narrow focus on lobbying expenditures in previous research, helping to clarify conflictive empirical results. Specifically, we theoretically develop the concept of lobbying breadth and empirically demonstrate the effect that spreading influence across entities may have on firm outcomes received. Further, as firms attempt to influence a greater breadth of government, a tipping point occurs where the gains garnered tapers off at higher levels. These findings suggest that more is not always better: not only does the breadth of how those expenditures are targeted matter, there also comes a point at which lobbying is spread too thin.

Second, our development of lobbying breadth contributes to an understanding of how resource allocation can influence firm outcomes. We find that while the breadth of resource allocation improves benefits generally, these benefits diminish as breadth increases. To date, the impact of resource allocation strategies has been examined for a variety of phenomena, such as organizational innovation (Klingebiel & Rammer, 2014) and investment capital (Arrfelt et al., 2015). We leverage the idea that firms can expand their ‘portfolio’ (Klingebiel & Rammer, 2014; Stein, 1997) of resource allocation to return benefits but that at some point, the returns diminish as the portfolio is spread increasingly thin. Thus, we extend our theoretical understanding of resource allocation generally by suggesting a curvilinear relationship while also expanding resource allocation arguments to the context of lobbying. Such findings are also important to practice, as firms can balance the benefits associated with increasing resource allocation breadth by not spreading such allocations too thin.

Third, our development of political connectedness is important in advancing theoretical explanations of how similar expenditures can generate different returns based upon differences in

political connectedness. We find that as political connectedness increases, the benefits accrued to firms in the form of government contracts and firm performance increase as well. Thus, to understand the performance returns stemming from lobbying efforts, we must consider the ability to influence decision makers via political connectedness. Moreover, while research shows that relationships within the government collectively improve firm outcomes (Faccio, 2006; Fisman, 2001; Nownes, 2006), few if any studies examine the types of political connectivity collectively. Therefore, we extend discussions in the political connectedness literature by showcasing how multiple types of connections can be used collectively to gain influence to positively impact firm performance. Beyond the theoretical relevance of this research, our findings offer practicing managers insight into means by which they can garner influence in the political arena. Specifically, we show that the totality of connectedness with government can be beneficial to firms, implying that firms may benefit by securing such connectedness.

Relatedly, we note the importance of the interplay between lobbying breadth and political connectedness, thus extending our understanding of how firms can lever lobbying strategies – not just aggregate expenditures – to fuel positive firm outcomes. We find that as lobbying breadth increases, the benefit of the connectedness begins to diminish and thus is less beneficial. Therefore, we develop our understanding of how multiple aspects of lobbying strategy work in concert, an important extension to prior views of lobbying. Beyond the theoretical knowledge gained, understanding how to better lever lobbying is particularly important to firms, given how they are embedded in political environments that impact their performance (Hillman et al., 2004; Lux et al., 2011). Thus, looking at how aspects of lobbying work in concert offers practical insights with respect to determining ways in which to expend lobbying resources. At the same time, to develop an understanding of the roles that lobbying breadth and political connectedness

play in determining payoffs firms receive from lobbying, we build upon previous work to introduce novel measures of these constructs. Our development of measures of lobbying breadth and political connectedness offers an empirical contribution in that it enables empirical testing of mechanisms underlying aspects within firms' political strategies.

Finally, we address calls to expand investigations of lobbying beyond firm performance outcomes (Kim, 2008; Lux et al., 2011) to examine more directly observable firm outcomes like government contracting. We do so by empirically demonstrating that lobbying impacts both directly visible firm benefits (government contracts) as well as benefits that might accrue from less directly observable but nonetheless beneficial outcomes that translate to higher firm performance. This expansion is important, as most studies focus on performance outcomes that result from various benefits that are difficult to observe directly (Lux et al., 2011).

Limitations and Future Directions

As with any study, there are limitations in our research that not only must be considered in the context of our findings but that open up avenues for future research as well. One limitation that is frequent in studies focusing on firm political strategy is the availability of data. In this study, we chose to focus on government contracts and firm performance because each of these variables is available and consistent across industries, allowing for greater generalizability of our findings. However, while we provide robust evidence for our theorizing, limited access to large-scale data on regulatory and legislative actions precluded theorizing and testing more nuanced aspects of the policy process. Future research may benefit from doing a more industry-, regulation-, or legislation-specific study of our theorizing as that data may be more available.

Another limitation is that while this paper focuses on the breadth of targeting as well as political connectedness and their interplay, there may be other interactive effects that can add

additional nuance to our understanding of lobbying, such as particular lobbyists being more effective in garnering specific returns like government contracts or defeating of bills (cf. Nownes, 2006). Thus, future research might be well served by investigating contextual aspects of lobbying strategy. One such potential interactive effect that seems worthy of investigation would be to extend this research outside the confines of the U.S. The U.S. political system offers more transparency than many others (Djankov et al., 2009). Still, aspects of the political environment that are idiosyncratic either to the U.S., democratic forms of government, or developed economies may affect how the lobbying process unfolds. Future research could address such factors. While we expect that the mechanisms relating lobbying breadth and connectedness will operate similarly across developed nations and democratic governmental contexts, there may be important differences that would affect how the relationships unfold.

This study created and empirically examined a framework highlighting the importance of aspects of lobbying other than total expenditures. Within this framework of lobbying breadth and, to a lesser extent, political connectedness, there is much opportunity for future research to further develop and examine these dimensions, helping to gain a better understanding of when the tipping point occurs. It is plausible that this might differ by industries, executive teams, or shifts in political power, among many other factors. Further research may also begin to unpack whether firms benefit more from in-house or contracted lobbying. Even more detailed research may investigate that impact of contracting rather than in-house lobbying depending upon the type of action that is being lobbied within the government. Such research may provide insight into certain contexts in which lobbying breadth may meet a less pronounced diminution of impact. Indeed, it is certainly possible that in-house lobbyists provide a greater level of general lobbying expertise, while contracted lobbyists may specialize in certain areas. If this is the case,

then in-house lobbyists may not be as susceptible to diminution of impact when attempting influence over a greater breadth of government action.

CONCLUSION

This research sought to go beyond the focus on lobbying expenditures prevalent in the extant literature to gain more understanding of dimensions of firms' lobbying and how they drive positive outcomes. We thus questioned how firms can successfully influence and impact government entities through lobbying. To address this question, we levered literatures on resource allocation and political connections, finding that outcomes stemming from lobbying are influenced by the breadth of targeting of government entities and the connectedness of the firm. Specifically, we find that in the case of lobbying breadth, there is a point where more targeting will lead to diminishing firm contracts and performance. We also find that as lobbying breadth increases, the benefits of political connectedness begin to diminish.

Appendix: First Stage Regression Results

	$\sigma_{\mu\alpha}$	$\sigma_{\eta\nu}$
Constant	-8.29*** (0.65)	-5.26*** (0.71)
Industry Tax Rate	7.09*** (1.26)	-1.63 (1.56)
Industry Lobbying	-0.03 (0.03)	0.00 (0.03)
Industry Lobbying Intensity	-0.14 (0.08)	0.05 (0.09)
Industry Attention	0.13*** (0.03)	0.02 (0.03)
Regulated Industry	0.06 (0.15)	-0.05 (0.15)
Tobin's Q	0.04 (0.03)	0.04 (0.03)
Firm Size	0.35*** (0.06)	0.34*** (0.06)
Financial Slack	-0.11** (0.04)	-0.10** (0.04)
Capital Expenditures	0.46 (0.31)	0.24 (0.30)
Long-term Debt	0.24*** (0.03)	0.22*** (0.03)
ROE	0.01 (0.01)	0.00 (0.01)
PAC Contributions	0.06*** (0.01)	0.06*** (0.01)
527 Contributions	0.00 (0.01)	0.01 (0.01)
Lobbying Expenditures	0.09*** (0.01)	0.09*** (0.01)
Income Taxes	1.05*** (0.24)	1.05*** (0.24)
Cost of Goods Sold	0.07* (0.03)	0.07* (0.03)
Observations	2180	2180
χ^2	1100.16***	1216.41***

Standard errors in parentheses; * $p < .05$, ** $p < .01$, *** $p < .001$; time dummies included in second model.

TABLE 1
Descriptive Statistics

	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
1 Lobbying Breadth	0.14	1.78																							
2 Depth of Connections	0.09	2.64	.55																						
3 Tobin's Q	1.62	1.19	-.20	-.15																					
4 Prior Tobin's Q	1.70	1.32	-.19	-.14	.85																				
5 Government Contracts ^a	1.20	8.32	.28	.25	-.11	-.10																			
6 Prior Contracts	10.11	8.28	.30	.25	-.12	-.12	.93																		
7 Static Correction	0.45	1.29	.43	.06	.14	.14	-.03	-.02																	
8 Dependence Correction	0.44	1.24	.48	.12	.16	.16	.00	.00	.97																
9 PAC Contributions ^a	6.91	5.72	.57	.51	-.30	-.28	.30	.30	-.16	-.13															
10 527 Contributions ^a	2.83	4.67	.43	.40	-.15	-.14	.16	.16	-.06	-.02	.49														
11 Lobbying Expenditures ^a	9.86	6.25	.59	.44	-.24	-.23	.29	.30	-.16	-.12	.72	.41													
12 Firm Size ^a	9.37	1.37	.60	.45	-.50	-.49	.20	.21	-.25	-.20	.59	.43	.55												
13 Slack ^d	0.44	2.06	.26	.14	-.13	-.12	.06	.06	-.13	-.10	.16	.08	.15	.45											
14 Capital Expenditures ^d	0.11	0.23	.44	.26	-.15	-.15	.12	.13	-.17	-.14	.29	.34	.25	.51	.15										
15 Long-term Debt ^d	0.65	2.42	.39	.29	-.17	-.17	.13	.13	-.18	-.15	.21	.18	.19	.49	.75	.42									
16 ROE	0.23	3.19	.00	-.02	.00	.00	.03	.03	.01	.00	.01	-.01	.01	.00	-.01	.00	.00								
17 Regulated Industry	0.38	0.49	.07	.09	-.31	-.32	-.03	-.03	-.05	-.04	.14	.07	.09	.29	.11	.13	.11	-.03							
18 Industry Attention ^c	9.57	4.81	.09	.10	.17	.21	.14	.15	-.14	-.02	-.08	.00	.05	-.04	-.01	-.05	-.02	-.03	-.25						
19 Industry Lobbying Intensity ^c	2.71	1.70	.05	.06	.21	.23	.15	.16	-.07	.02	-.13	-.04	.01	-.14	-.03	-.10	-.05	-.02	-.35	.93					
20 Industry Lobbying Expenditures ^b	3.73	2.15	.12	.08	-.29	-.30	-.07	-.06	-.14	-.13	.15	.13	.13	.34	.08	.15	.10	-.02	.42	-.02	-.26				
21 Industry Tax Rate	0.33	0.03	-.07	-.05	.07	.10	-.07	-.07	-.02	.05	-.03	.02	-.06	-.08	-.03	-.08	-.09	.02	-.19	-.08	-.07	-.17			
22 Income Taxes ^d	0.06	0.18	.37	.13	-.05	-.04	.10	.10	-.10	-.07	.21	.26	.20	.38	.12	.65	.15	.00	-.01	.00	-.03	.11	.05		
23 Cost of Goods Sold ^d	1.20	2.54	.41	.14	-.18	-.18	.20	.20	-.19	-.16	.29	.30	.25	.50	.26	.67	.34	.00	-.04	-.07	-.10	.12	.00	.67	

Correlations above |.04| are significant at the .05 level.

^aLogarithm

^bScaled by 100000

^cScaled by 100

^dScaled by 10000

TABLE 2
Government Contracts

	(1)	(2)	(3)	(4)	(5) ^a	(6) ^a
Constant	-8.52 (5.09)	-6.26 (5.43)	-5.04 (5.53)	-5.33 (5.49)	-5.44 (4.61)	-5.39 (4.66)
Industry Lobbying	-0.21 (0.15)	-0.21 (0.15)	-0.22 (0.15)	-0.22 (0.15)	-0.20 (0.14)	-0.20 (0.14)
Industry Lobbying Attention	0.29 (0.21)	0.27 (0.21)	0.23 (0.21)	0.24 (0.21)	0.22 (0.21)	0.20 (0.21)
Industry Lobbying Intensity	-0.39 (0.61)	-0.39 (0.61)	-0.29 (0.61)	-0.30 (0.61)	-0.27 (0.59)	-0.23 (0.59)
Industry Tax Rate	-5.35 (7.57)	-4.47 (7.62)	-4.72 (7.60)	-2.92 (7.64)	-4.51 (7.52)	-3.19 (7.58)
Regulated Industry	0.41 (1.82)	0.44 (1.83)	0.46 (1.86)	0.44 (1.84)	0.21 (1.54)	0.21 (1.54)
Tobin's Q	0.44** (0.17)	0.44* (0.17)	0.45** (0.17)	0.45** (0.17)	0.47** (0.17)	0.46** (0.17)
Prior Contracts	0.12*** (0.03)	0.12*** (0.03)	0.12*** (0.03)	0.12*** (0.03)	0.11*** (0.03)	0.11*** (0.03)
Firm Size	1.57*** (0.39)	1.39*** (0.42)	1.33** (0.42)	1.32** (0.42)	1.29*** (0.38)	1.26*** (0.38)
Financial Slack	0.03 (0.21)	0.03 (0.21)	0.00 (0.21)	0.05 (0.21)	0.02 (0.19)	0.06 (0.20)
Capital Expenditures	0.44 (1.33)	-0.01 (1.38)	0.00 (1.38)	0.70 (1.41)	-0.00 (1.33)	0.71 (1.36)
Long-term Debt	0.12 (0.16)	0.06 (0.17)	0.14 (0.17)	0.07 (0.18)	0.23 (0.16)	0.15 (0.18)
ROE	0.01 (0.03)	0.01 (0.03)	0.01 (0.03)	0.01 (0.03)	0.01 (0.03)	0.01 (0.03)
$\sigma_{\mu\alpha}$	1.22 (0.80)	1.31 (0.80)	1.29 (0.80)	1.45 (0.80)	1.36 (0.79)	1.41 (0.79)
$\sigma_{\eta V}$	-1.36 (0.80)	-1.84* (0.89)	-1.84* (0.89)	-1.89* (0.89)	-1.59 (0.82)	-1.60 (0.82)
PAC Contributions	0.11* (0.06)	0.09 (0.06)	0.08 (0.06)	0.07 (0.06)	0.09 (0.06)	0.08 (0.06)
527 Contributions	0.01 (0.04)	0.00 (0.04)	-0.00 (0.04)	-0.01 (0.04)	0.00 (0.04)	0.00 (0.04)
Lobbying Expenditures	0.03 (0.04)	0.01 (0.04)	-0.02 (0.04)	-0.03 (0.04)	-0.00 (0.04)	-0.01 (0.04)
Predictors						
Lobbying Breadth		0.42 (0.34)	0.86** (0.37)	0.87** (0.38)	0.60** (0.30)	0.69** (0.31)
Lobbying Breadth ²			-0.06*** (0.02)	-0.07*** (0.03)	-0.08*** (0.03)	-0.10*** (0.03)
Political Connectedness		0.04 (0.10)	0.03 (0.10)	0.15 (0.13)	0.10 (0.11)	0.20 (0.14)
Lobbying Breadth * Connectedness				-0.10** (0.05)		-0.10* (0.06)
Lobbying Breadth ² * Connectedness				0.01** (0.01)		0.01** (0.01)
Observations	2180	2180	2180	2180	2144	2144
χ^2	146.92***	146.21***	150.69***	157.81***	197.58***	196.16***

Standard errors in parentheses; * $p < .05$, ** $p < .01$, *** $p < .001$; t-tests are two tailed for controls and one tailed for hypothesized variables; Year and Industry dummies included in all models.

^a Predictors measured cumulatively across time t and $t - 1$ in this model.

TABLE 3
Firm Performance

	(7)	(8)	(9)	(10)	(11) ^a	(12) ^a
Constant	1.97* (0.99)	2.29* (0.97)	2.50* (0.98)	2.11* (0.97)	1.69* (0.84)	1.79* (0.91)
Industry Lobbying	- 0.05* (0.02)	- 0.03 (0.03)	- 0.03 (0.03)	- 0.03 (0.02)	- 0.03 (0.03)	- 0.03 (0.02)
Industry Lobbying Attention	0.06* (0.03)	0.06* (0.03)	0.05 (0.03)	0.06 (0.03)	0.06* (0.03)	0.05 (0.03)
Industry Lobbying Intensity	- 0.17* (0.08)	- 0.16* (0.08)	- 0.15* (0.07)	- 0.15* (0.07)	- 0.17* (0.07)	- 0.14* (0.07)
Industry Tax Rate	3.62** (1.24)	3.73** (1.38)	3.73** (1.37)	3.75** (1.34)	3.85** (1.35)	3.68** (1.31)
Regulated Industry	- 0.11 (0.12)	- 0.07 (0.13)	- 0.06 (0.12)	- 0.07 (0.11)	- 0.08 (0.11)	- 0.08 (0.11)
Tobin's Q	0.41*** (0.05)	0.49*** (0.06)	0.49*** (0.06)	0.50*** (0.06)	0.50*** (0.06)	0.51*** (0.06)
Firm Size	- 0.28** (0.09)	- 0.25** (0.09)	- 0.25** (0.09)	- 0.24** (0.09)	- 0.21** (0.08)	- 0.21** (0.08)
Financial Slack	0.07** (0.02)	0.07*** (0.02)	0.06** (0.02)	0.06** (0.02)	0.05** (0.02)	0.05** (0.02)
Capital Expenditures	0.53** (0.18)	0.31* (0.15)	0.34* (0.15)	0.32* (0.14)	0.36** (0.13)	0.34* (0.13)
Long-term Debt	- 0.01 (0.01)	- 0.05** (0.02)	- 0.04* (0.02)	- 0.04* (0.02)	- 0.03* (0.01)	- 0.03 (0.02)
ROE	- 0.01 (0.00)	- 0.00 (0.00)	- 0.00 (0.00)	- 0.00 (0.00)	- 0.00 (0.00)	- 0.00 (0.00)
$\sigma_{\mu\alpha}$	0.34 (0.18)	0.38* (0.18)	0.38* (0.18)	0.41* (0.19)	0.42* (0.19)	0.40* (0.19)
$\sigma_{\eta\nu}$	- 0.27 (0.19)	- 0.48* (0.19)	- 0.47* (0.19)	- 0.50* (0.20)	- 0.45* (0.19)	- 0.44* (0.19)
PAC Contributions	- 0.01 (0.01)	- 0.04*** (0.01)	- 0.04*** (0.01)	- 0.04*** (0.01)	- 0.03** (0.01)	- 0.03** (0.01)
527 Contributions	- 0.00 (0.01)	- 0.01 (0.01)	- 0.01* (0.01)	- 0.01 (0.01)	- 0.01 (0.01)	- 0.01 (0.01)
Lobbying Expenditures	0.00 (0.01)	- 0.00 (0.01)	- 0.01 (0.01)	- 0.01 (0.01)	- 0.01 (0.01)	- 0.01 (0.01)
Predictors						
Lobbying Breadth		0.14** (0.06)	0.18*** (0.07)	0.19*** (0.06)	0.15*** (0.06)	0.17*** (0.06)
Lobbying Breadth ²			- 0.01** (0.00)	- 0.01** (0.00)	- 0.01** (0.01)	- 0.01** (0.01)
Political Connectedness		0.04** (0.02)	0.04** (0.02)	0.05** (0.02)	0.04* (0.02)	0.05** (0.02)
Lobbying Breadth * Connectedness				- 0.02* (0.01)		- 0.02 (0.01)
Lobbying Breadth ² * Connectedness				0.00** (0.00)		0.00* (0.00)
χ^2	718.56***	918.93***	974.85***	993.89***	814.21***	903.30***
AR(2)	0.87	1.11	1.11	1.12	1.28	1.30
Hansen J	353.58	369.55	371.26	369.89	364.63	362.84

$n = 2,162$; Robust standard errors in parentheses; * $p < .05$, ** $p < .01$, *** $p < .001$; t-tests are two tailed for controls and one tailed for hypothesized variables; Year and Industry dummies included in all models.

^a Predictors measured cumulatively across time t and $t - 1$ in this model.

FIGURE 1
Lobbying Breadth and Government Contracting

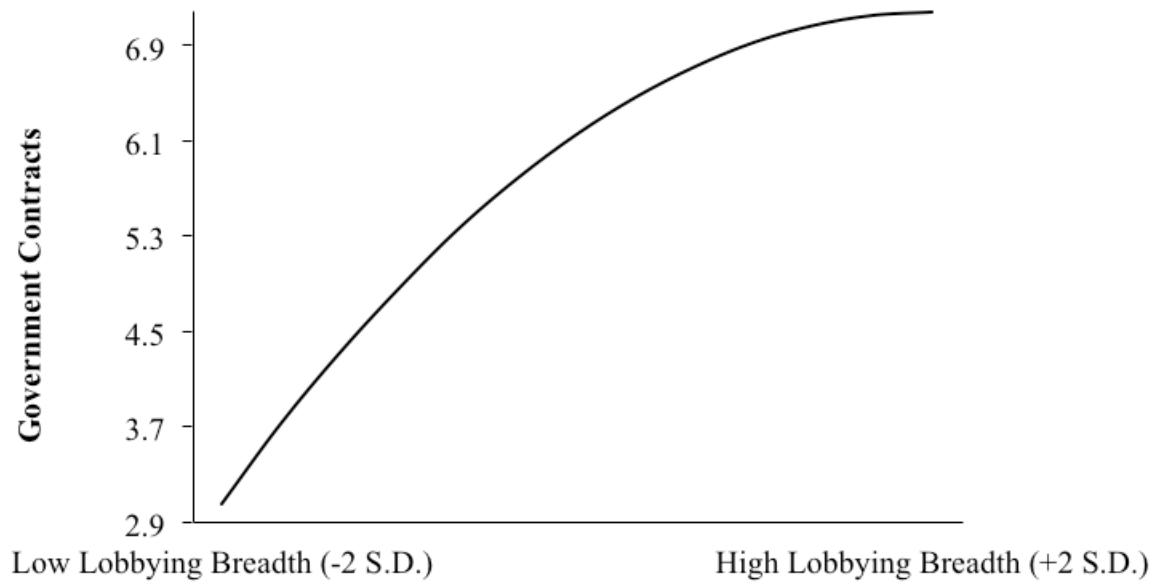


FIGURE 2
Lobbying Breadth and Firm Performance

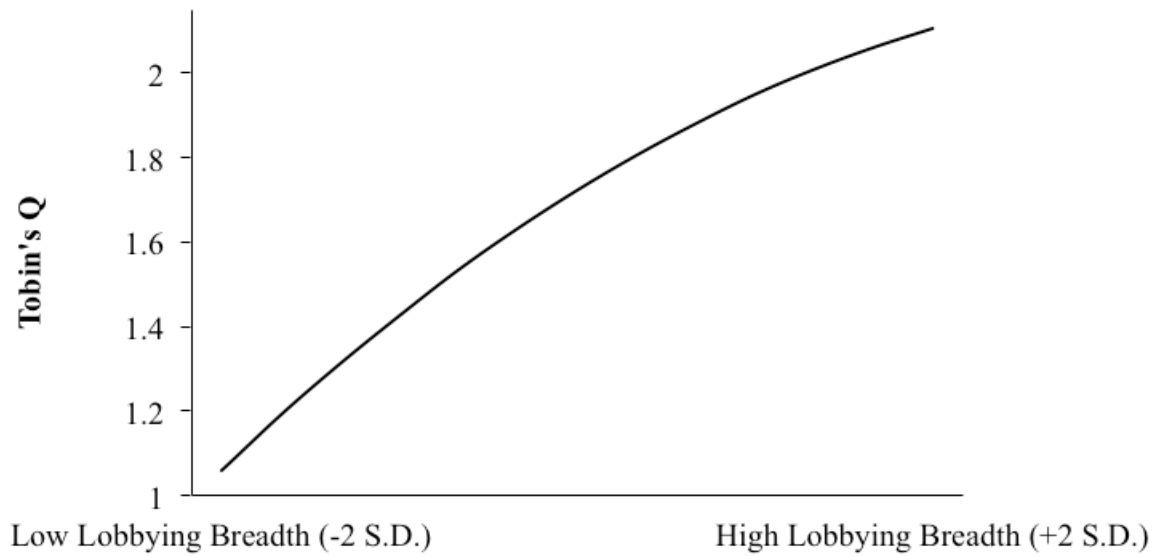


FIGURE 3
Interaction of Lobbying Breadth and Political Connectedness
on Government Contracting

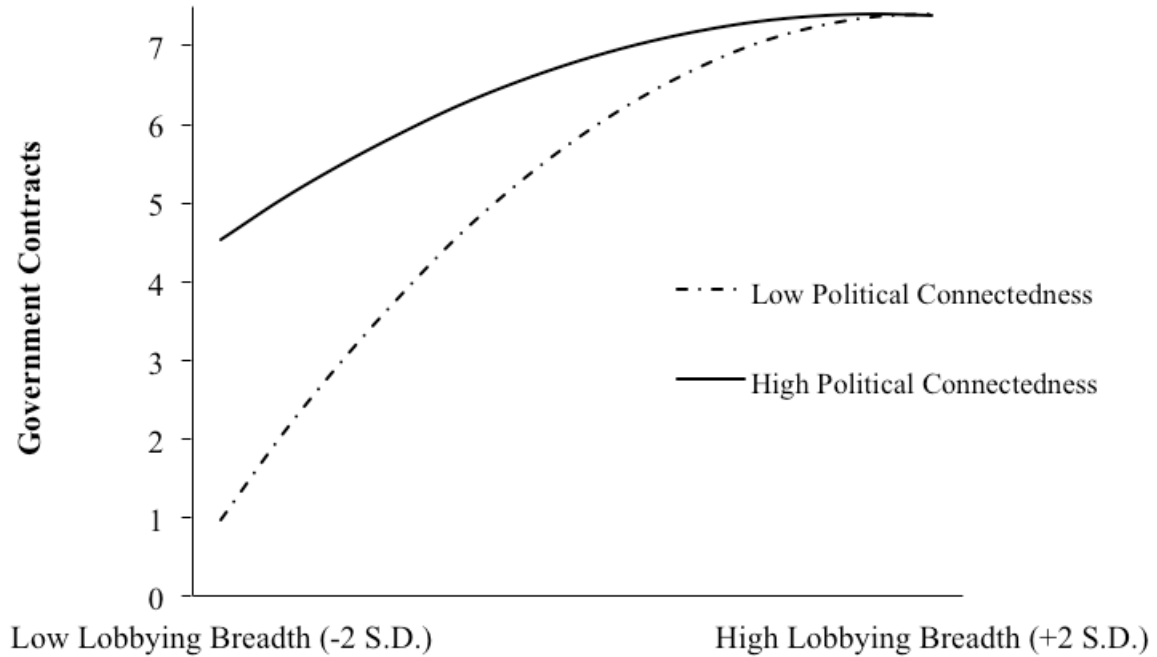
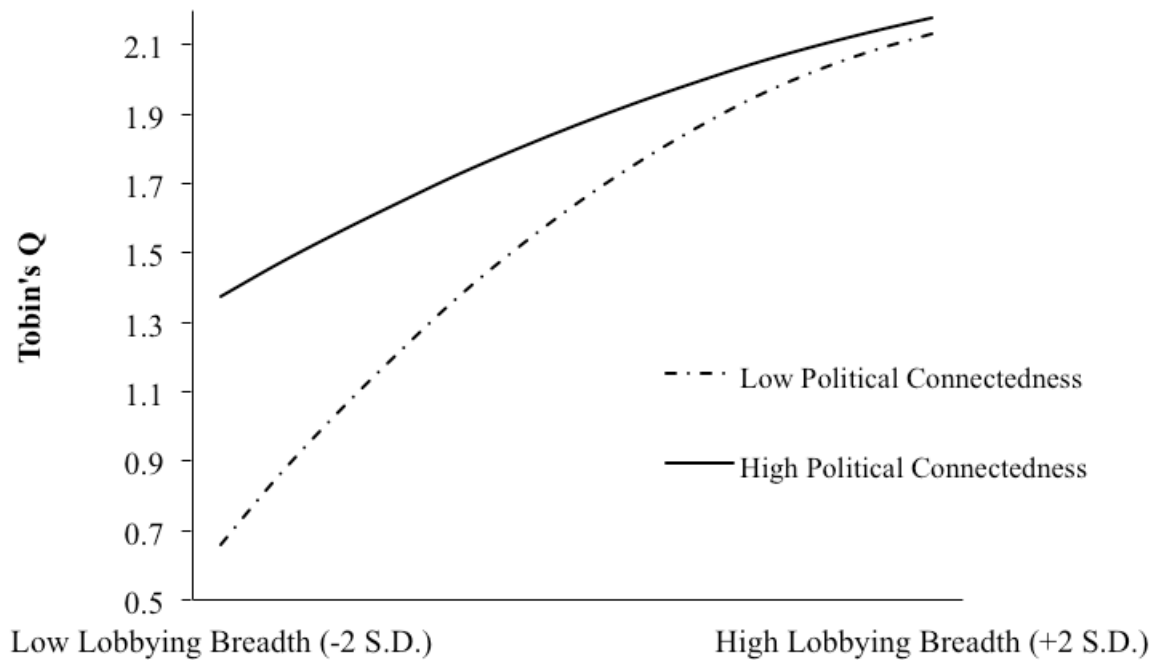


FIGURE 4
Interaction of Lobbying Breadth and Political Connectedness
on Firm Performance



REFERENCES

- Agarwal, R., Anand, J., Bercovitz, J., & Croson, R. 2012. Spillovers across organizational architectures: the Role of prior resource allocation and communication in post-acquisition coordination outcomes. *Strategic Management Journal*, 33:710-233.
- Agrawal, A., & Knoeber, C. R. 2000. Do some outside directors play a political role? *Journal of Law and Economics*, XLIV.
- Alexander, R., Mazza, S. W., & Scholz, S. 2009. Measuring rates of return on lobbying expenditures: An empirical case study of tax breaks for multinational corporations. *Journal of Law & Politics*, 25: 401.
- Anderson, T. W. & Hsiao, C. 1981. Estimation of dynamic models with error components. *Journal of the American Statistical Association*, 76(375): 589-606.
- Angrist, J. D., & Pischke, J. S. 2008. *Mostly harmless econometrics: An empiricist's companion*. Princeton NJ: Princeton University Press.
- Arellano, M. 2003. *Panel data econometrics*. New York: Oxford University Press.
- Arellano, M., & Bond, S. 1991. Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations. *Review of Economic Studies*, 58(2): 277-297.
- Arellano, M., & Bover, O. 1995. Another look at the instrumental variable estimation of error-components models. *Journal of Econometrics*, 68(1): 29-51.
- Arrfelt, Mathias, Robert M. Wiseman, & Hult, G.T.M. 2013. Looking backward instead of forward: Aspiration-driven influences on the efficiency of the capital allocation process. *Academy of Management Journal*, 56(4): 1081-1103.
- Arrfelt, M., Wiseman, R. G., McNamara, G., & Hult, G.T.M. 2015. Examining a key corporate role: The influence of capital allocation competency on business unit performance. *Strategic Management Journal*, 36: 1017-1034.
- Baumgartner, F. R., Berry, J. M., Hojnacki, M., Leech, B. L., & Kimball, D. C. 2009. *Lobbying and policy change: Who wins, who loses, and why*. Chicago IL: University Press.
- Baysinger, B. D. 1984. Domain maintenance as an objective of business political activity: An expanded typology. *Academy of Management Review*, 9(2): 248-258.
- Bertrand, M., Bombardini, M., & Trebbi, F. 2011. *Is it whom you know or what you know? An empirical assessment of the lobbying process*. Working paper, National Bureau of Economic Research, Cambridge, MA.
- Blumentritt, T. P. 2003. Foreign subsidiaries' government affairs activities: The influence of managers and resources. *Business & Society*, 42(2): 202-233.
- Bonardi, J. P., Hillman, A. J., & Keim, G. D. 2005. The attractiveness of political markets: Implications for firm strategy. *Academy of Management Review*, 30(2): 397-413.
- Bowers, A., Greve, H., Mitsuhashi, H., & Baum, J. 2014. Competitive parity, status disparity, and mutual forbearance: Securities analysts' competition for investor attention. *Academy of Management Journal*, 57(1): 38-62.
- Carroll, A., & Hall, J. 1987. Strategic management processes for corporate social policy. *Strategic Planning and Management Handbook*. New York: Reinhold.
- Carter, C. R., Kale, R., & Grimm, C. M. 2000. Environmental purchasing and firm performance: an empirical investigation. *Transportation Research Part E: Logistics and Transportation Review*, 36(3): 219-228.
- Chen, H., Parsley, D., & Yang, Y. W. 2010. Corporate lobbying and financial performance. Working paper No. 21114, MPRA.

- Choi, S. J., Jia, N., & Lu, J. 2014. The structure of political institutions and effectiveness of corporate political lobbying. *Organization Science*, 26(1): 158-179.
- Clawson, D., Neustadt, A., & Weller, M. 1998. *Dollars and votes: How business campaign contributions subvert democracy*. Philadelphia: Temple University Press.
- Coates, I. V., & John, C. 2010. Corporate governance and corporate political activity: What effect will Citizens United have on shareholder wealth? *Harvard Law and Economics Discussion Paper*, 684, Cambridge MA.
- Coen, D. 1997. The evolution of the large firm as a political actor in the European Union. *Journal of European Public Policy*, 4(1): 91-108.
- Cohen, J., Cohen, P., West, S.G., & Aiken, L. S. 1983. *Applied multiple regression/correlation analysis for the behavioral sciences* (2 ed.). Hillsdale, NJ: Erlbaum.
- Cortina, J. 1993. Interaction, nonlinearity, and multicollinearity: Implications for multiple regression. *Journal of Management*, 19(4): 915-922.
- Crain, W. M., & Crain, N. V. 2014. *The cost of federal regulation to the U.S. economy, manufacturing and small business*. Washington DC: National Association of Manufacturers.
- De Figueiredo, J. M., & Silverman, B. S. 2006. Academic earmarks and the returns to lobbying. *Journal of Law and Economics*, 49(2): 597-625.
- Djankov, S., Porta, R. L., Lopez-de-Silanes, F., & Shleifer, A. 2009. *Disclosure by politicians*. Cambridge MA: National Bureau of Economic Research.
- Duchin, R., & Sosyura, D. 2012. The politics of government investment. *Journal of Financial Economics*, 106(1): 24-48.
- Esterling, K. 2009. *The political economy of expertise: Information and efficiency in American national politics*. Ann Arbor, MI: University of Michigan Press.
- Faccio, M. 2006. Politically connected firms. *The American Economic Review*: 369-386.
- Faccio, M., Masulis, R. W., & McConnell, J. 2006. Political connections and corporate bailouts. *The Journal of Finance*, 61(6): 2597-2635.
- Farnam, T. W. 2011. *Study shows revolving door of employment between Congress, lobbying firms*. Washington DC: The Washington Post.
- Fisman, R. 2001. Estimating the value of political connections. *The American Economic Review*, 91(4): 1095-1102.
- George, G. 2005. Slack resources and the performance of privately held firms. *Academy of Management Journal*, 48 (4): 661-676.
- Godwin, K., Ainsworth, S. H., & Godwin, E. 2013. *Lobbying and policymaking: The public pursuit of private interests*. Thousand Oaks, CA: CQ Press.
- Goldman, E., Rocholl, J., & So, J. 2009. Do politically connected boards affect firm value? *Review of Financial Studies*, 22(6): 2331-2360.
- Goldman, E., Rocholl, J., & So, J. 2013. Politically connected boards of directors and the allocation of procurement contracts. *Review of Finance*: rfs039.
- Gollop, F. M., & Roberts, M. J. 1983. Environmental regulations and productivity growth: The case of fossil-fueled electric power generation. *The Journal of Political Economy*: 654-674.
- Gray, W. B., & Shadbegian, R. J. 2003. Plant vintage, technology, and environmental regulation. *Journal of Environmental Economics and Management*, 46(3): 384-402.
- Graziano, L. 2001. *Lobbying, pluralism, and democracy*. New York: Palgrave.
- Greene, W. 2000. *Econometric analysis* (4 ed.). Upper Saddle River NJ: Prentice-Hall.

- Grier, K. B., Munger, M. C., & Roberts, B. E. 1994. The determinants of industry political activity, 1978–1986. *American Political Science Review*, 88(04): 911-926.
- Hadani, M., & Schuler, D. A. 2013. In search of El Dorado: The elusive financial returns on corporate political investments. *Strategic Management Journal*, 34(2): 165-181.
- Hall, R. L., & Wayman, F. W. 1990. Buying time: Moneyed interests and the mobilization of bias in congressional committees. *American Political Science Review*, 84(03): 797-820.
- Hallman, B. 2014. *Boeing got \$7,250 in tax breaks for every \$1 it spent lobbying*. New York: Huffington Post.
- Hansen, L. P. 1982. Large sample properties of generalized method of moments estimators. *Econometrica: Journal of the Econometric Society*: 1029-1054.
- Hansen, W. L., & Mitchell, N. J. 2000. Disaggregating and explaining corporate political activity: Domestic and foreign corporations in national politics. *American Political Science Review*, 94(04): 891-903.
- Hart, D. 2001. Why do some firms give? Why do some give a lot? High-tech PACs, 1977-1996. *The Journal of Politics*, 63(4): 1230-1249.
- Haspeslagh, P. 1982. Portfolio planning: Uses and limits. *Harvard Business Review*, 60 (1), 58-73.
- Hersch, P., Netter, J. M., & Pope, C. 2008. Do campaign contributions and lobbying expenditures by firms create “political” capital? *Atlantic Economic Journal*, 36(4): 395-405.
- Hill, M. D., Kelly, G. W., Lockhart, G. B., & Ness, R.A. 2013. Determinants and effects of corporate lobbying. *Financial Management*, 42(4): 931-957.
- Hillman, A. J. 2005. Politicians on the board of directors: Do connections affect the bottom line? *Journal of Management*, 31(3): 464-481.
- Hillman, A. J., Keim, G. D., & Schuler, D. 2004. Corporate political activity: A review and research agenda. *Journal of Management*, 30(6): 837-857.
- Hillman, A. J., Zardkoohi, A., & Bierman, L. 1999. Corporate political strategies and firm performance: indications of firm specific benefits from personal service in the US government. *Strategic Management Journal*, 20(1): 67-81.
- Holburn, G. & Vanden Bergh, R. 2014. Integrated marketing and nonmarket strategies: Political campaign contributions around merger and acquisition events in the energy sector. *Strategic Management Journal*, 35: 450-460.
- Igan, D., Mishra, P., & Tressel, T. 2011. *A fistful of dollars: Lobbying and the financial crisis*. Cambridge MA: National Bureau of Economic Research.
- Jensen, K., Forsythe, M., & Salant, J.D. 2005. *Hedge funds hire lobbyists for inside tips on U.S. legislation*. New York: Bloomberg News.
- Kaiser, R. G. 2010. *So damn much money: The triumph of lobbying and the corrosion of American government*. New York: Vintage.
- Khanna T, Gulati R, Nohria N. 1998. The dynamics of learning alliances: competition, cooperation, and relative scope. *Strategic Management Journal*, 19(3): 193 – 210.
- Keim, G. D., & Zeithaml, C. P. 1986. Corporate political strategy and legislative decision making: A review and contingency approach. *Academy of Management Review*, 11(4): 828-843.
- Kennedy, P. 2008. *A guide to econometrics* (6 ed.). Blackwell Publishing Ltd: Malden, MA.
- Kim, J. H. 2008. Corporate lobbying revisited. *Business and Politics*, 10(2). Article 3.
- Kim, C., & Bettis, R. A. 2014. Cash is surprisingly valuable as a strategic asset. *Strategic Management Journal*, 35(13): 2053-2063.

- Klingebliel, R., & Adner, R. 2015. Real options logic revisited: The performance effects of alternative resource allocation regimes. *Academy of Management Journal*, 58(1): 221-241.
- Klingebliel, R., & Rammer, C. 2014. Resource allocation strategy for innovation portfolio management. *Strategic Management Journal*, 35(2): 246-268.
- Kroszner, R. S., & Stratmann, T. 1998. Interest-group competition and the organization of congress: Theory and evidence from financial services' political action committees. *American Economic Review*: 1163-1187.
- Kroszner, R. S., & Stratmann, T. 2000. Congressional committees as reputation-building mechanisms. *Business and Politics*, 2(1): 35-52.
- Leiponen, A., & Helfat, C. E. 2010. Innovation objectives, knowledge sources, and the benefits of breadth. *Strategic Management Journal*, 31(2): 224-236.
- Lenway, S. A., Jacobson, C. K., & Goldstein, J. 1990. To lobby or to petition: The political environment of US trade policy. *Journal of Management*, 16(1): 119-134.
- Lenway, S. A., & Rehbein, K. 1991. Leaders, followers, and free riders: An empirical test of variation in corporate political involvement. *Academy of Management Journal*, 34(4): 893-905.
- Lester, R., Hillman, A., Zardhoohi, A., & Cannella, A. A. 2008. Former government officials as outside directors: The role of human and social capital. *Academy of Management Journal*, 51(5): 999-1013.
- Levine, B. J. 2009. *The Art of Lobbying: Building Trust and Selling Policy*. Thousand Oaks CA: CQ Press.
- Lord, M. D. 2000. Corporate political strategy and legislative decision making: The impact of corporate legislative influence activities. *Business & Society*, 39(1): 76-93.
- Lux, S., Crook, T. R., & Woehr, D. J. 2011. Mixing business with politics: A meta-analysis of the antecedents and outcomes of corporate political activity. *Journal of Management*, 37(1): 223-247.
- Mack, C. S. 1989. *Lobbying and government relations: A guide for executives*. West Port CT: Quorum Books.
- Makadok, R. 2001. Toward a synthesis of the resource-based and dynamic-capability views of rent creation. *Strategic Management Journal*, 22: 387-401.
- Maksimovic, V., & Phillips, G. 2002. Do conglomerate firms allocate resources inefficiently across industries? Theory and evidence. *Journal of Finance*, 2: 721-767.
- Mattozzi, A., & Merlo, A. 2008. Political careers or career politicians? *Journal of Public Economics*, 92(3): 597-608.
- McFadyen, M. A., & Cannella, A. A. 2004. Social capital and knowledge creation: Diminishing returns of the number and strength of exchange relationships. *Academy of Management Journal*, 47(5): 735-746.
- Miller, M. 2006. Make 150,000% Today! Looking for a great return on investment? Hire a lobbying. January 27.
- Milyo, J., Primo, D., & Groseclose, T. 2000. Corporate PAC campaign contributions in perspective. *Business and Politics*, 2(1): 75-88.
- Nownes, A. J. 2006. *Total lobbying: What Lobbyists want (and how they try to get it)*. Cambridge University Press: Cambridge.
- Olea, J. L. M., & Pflueger, C. 2013. A robust test for weak instruments. *Journal of Business & Economic Statistics*, 31(3): 358-369.
- Olson, M. 1965. *The logic of collective action*. Cambridge MA: Harvard University Press.

- Peltzman, S. 1976. *Toward a more general theory of regulation*. Cambridge, MA: National Bureau of Economic Research.
- Penrose, E. 1959. *The Theory of the Growth of the Firm*, New York: John Wiley and Sons.
- Pflueger, C. E., & Wang, S. 2015. A robust test for weak instruments in Stata. *Stata Journal*, 15(1): 216-225.
- Rajan, R., Servaes, H., & Zingales, L. 2000. The cost of diversity: the diversification discount and inefficient investment. *Journal of Finance*, 1: 35–80.
- Richter, B.K., Samphantharak, K., & Timmons, J.F. 2009. Lobbying and taxes. *American Journal of Political Science*, 53(4): 893-909.
- Ridge, J. W., Aime, F., & White, M. 2014. When much more of a difference makes a difference: Social comparison and tournaments in top management teams. *Strategic Management Journal*, 36(4): 618-636.
- Revolving Door Working Group, 2005. A matter of trust. Accessed November 11, 2015. <http://www.cleanupwashington.org/documents/RevovDoor.pdf>
- Roodman, D. 2008. How to do xtabond2: An introduction to difference and system GMM in Stata. *Stata Journal*, 9(1): 86-136.
- Rosenthal, A. 2001. *The third house: Lobbyists and lobbying in the states*. Thousand Oaks CA: Sage Publications.
- Santos, A. 2006. *Do members of congress reward their future employers? Evaluating the revolving door syndrome*. Lanham MD: University Press of America.
- Schuler, D. 1996. Corporate political strategy and foreign competition: The case of the steel industry. *Academy of Management Journal*, 39: 720-737.
- Semadeni, M., Withers, M. C., & Trevis Certo, S. 2014. The perils of endogeneity and instrumental variables in strategy research: Understanding through simulations. *Strategic Management Journal*, 35(7): 1070-1079.
- Shaffer, B. 1995. Firm-level responses to government regulation: Theoretical and research approaches. *Journal of Management*, 21(3): 495-514.
- Shaffer, B., Quasney, T. J., & Grimm, C. M. 2000. Firm level performance implications of nonmarket actions. *Business & Society*, 39(2): 126-143.
- Silberfeld, T. 2006. Those damn lobbyists. *Risk Management*, 53(3): 44.
- Sirmon, D. G., Gove, S., & Hitt, M. A. 2008. Resource management in dyadic competitive rivalry: The effects of resource building and deployment. *Academy of Management Journal*, 51(5):919-935.
- Snyder Jr, J. M. 1990. Campaign contributions as investments: The U.S. House of Representatives, 1980-1986. *Journal of Political Economy*: 1195-1227.
- Stein, J. C. 1997. Internal capital markets and the competition for corporate resources. *Journal of Finance*, 1:111–133.
- Stigler, G. J. 1971. The theory of economic regulation. *The Bell journal of economics and management science*: 3-21.
- Stock, J. H., & Yogo, M. 2001. Testing for Weak instruments in linear IV regression. *Social Science Research Network*.
- Tahoun, A. 2014. The role of stock ownership by U.S. members of Congress on the market for political favors. *Journal of Financial Economics*, 111(1): 86-110.
- Tripathi, M. 2000. PAC contributions and defense contracting. *Business and Politics*, 2(1): 53-73.

- Vella, F. 1998. Estimating models with sample selection bias: a survey. *Journal of Human Resources*: 127-169.
- Vella, F., & Verbeek, M. 1999. Two-step estimation of panel data models with censored endogenous variables and selection bias. *Journal of Econometrics*, 90(2): 239-263.
- Vidal, J. B. I., Draca, M., & Fons-Rosen, C. 2012. Revolving door lobbyists. *The American Economic Review*, 102(7): 3731-3748.
- Voss, G. B., Sirdeshmukh, D., & Voss, Z.G. 2008. The effects of slack resources and environmental threat on product exploration and exploitation. *Academy of Management Journal*, 51(1): 147-164.
- Willhide, R. J. 2014. *Annual survey of public employment & payroll summary report: 2013*. In U.S. Department of Commerce (Ed.): U.S. Census Bureau.
- Williamson O. E. 1975. *Markets and Hierarchies: Analysis and Antitrust Implications*. Free Press: New York.
- Wright, J. R. 1990. Contributions, lobbying, and committee voting in the U.S. House of Representatives. *The American Political Science Review*: 417-438.

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