NONMARKET AUTONOMY: COMBINING PRIVATE AND COLLECTIVE APPROACHES TO CORPORATE POLITICAL ACTIVITY

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DISSERTATION ABSTRACT

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By pursuing private and collective political action in the nonmarket environment, businesses attempt to influence public policy that shapes their operating environment. This dissertation considers how a firm's market-based experience and its accumulation of political resources affect how the firm combines private and collective political tactics. Drawing on the resource-based view of the firm (RBV) I investigate how a firm's alliance experience, political resources and prior collective political experience influence the autonomy of its Corporate Political Activity (CPA). I use fixed effects GLS regression with clustered standard errors to test my model on a panel of 21,329 firm/year observations of 2,779 U.S. property casualty insurance companies over the ten-year period between 2005 and 2014. I find support for the influence of state-level political resources, equity alliances, and the interaction of prior collective CPA experience with regulatory complexity and learning capacity on autonomy. My findings contribute to the growing literature connecting market and non-market strategies by linking collaboration in the political arena to the related market activity of alliance experience. Findings also contribute to our understanding of how participation in a collective provides opportunities for learning, and reveals that taking advantage of this opportunity depends

on a firm's learning capacity and the complexity of its regulatory environment. These findings add insight to the literatures on CPA, inter-organizational learning, collective action and trade associations.

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CHAPTER I

INTRODUCTION

This dissertation explores how market and nonmarket experience and resources affect firm action in the nonmarket arena. More specifically, the research will consider how a firm's market experience and its accumulation of political resources affect how the firm combines private and collective political tactics. Drawing on the resource-based view of the firm (RBV) I investigate how a firm's alliance experience, political resources, and prior collective political experience influence the autonomy of its Corporate Political Activity (CPA).

Businesses exist in an environment characterized by increasing interdependence with government. Governments, in the form of legislative bodies and regulatory agencies, set and enforce policies that affect how businesses operate and what products and services they produce and sell in the market. Governments in turn rely on firms for critical information about industries and influence with key constituencies. A firm's corporate political strategy and tactics have implications not only for its ability to create value from government policy, but also for its competitive position among other firms in the market (Capron & Chatain, 2008). Nonmarket strategy scholars argue that firms should integrate their market and nonmarket strategies (Baron, 1995), and yet we know far too little about whether and how a firm's market strategy influences its political action and other important nonmarket activities.

The nonmarket arena includes the social, political, and legal forces that shape interactions between a firm and broader society (Baron, 1995). Nonmarket strategy reflects a firm's view of its role in the nonmarket environment. Although firms can

respond to their nonmarket environment with passive acceptance, nonmarket strategy scholars are generally more interested in the strategic objectives firms develop to realize long-term success and competitive advantage through interactions in the nonmarket arena. Nonmarket strategy is composed of underlying strategies related to specific parts of the nonmarket arena, such as political strategy.

Political strategy is a firm's purposive view on how to engage with government to create lasting competitive success. I describe a firm's political environment as encompassing the political bodies that generate and enforce the government regulations that apply to a firm and the systems of law and regulation in which a firm enacts political tactics in pursuit of political strategies (Hillman & Hit, 1999). In this dissertation, I consider a range of proactive and reactive political actions including researching regulatory requirements, making regulatory filings, monitoring legislative and judicial changes, lobbying politicians directly or through grassroots networks, providing testimony to committees, drafting legislation, and making financial contributions to political actors

My dissertation contributes to an emerging niche of strategy-based research on corporate political activity. I position my work in particular alignment with two recent works (Jia, 2014; Jia & Mayer, 2016). In an empirical paper, Jia (2014) identified complementarity between collective and private political actions. In a theoretical paper, Jia and Mayer (2016) explored complementarity between market based strategy and political activity.

A key contribution of my dissertation is my representation of autonomy of political actions as a continuum. Researchers initially modeled firms' decisions to engage

in political activity privately or collectively as a dichotomous choice, suggesting that the two modes of action represent substitutes for each other. Jia (2014) introduced the alternative view that the modes represent complements, adding a potential third strategic choice of firms to pursue both. I push theory further by proposing that firms select a level of autonomy of CPA that reflects their use of private action relative to their total engagement in private and collective modes of political action. As public policy and regulation become increasingly important, I argue that firms will pursue political strategies through various levels of autonomy, and that purely collective and purely private approaches will be atypical. The data I analyze supports my claim; of the observed 21,329 firm/years when firms engaged in CPA, 66% of the observations reveal firms combining both collective and private approaches to CPA. This illustration of the varying levels of autonomy of CPA helps demonstrate that we need to know more about how firms configure their political actions, when they collaborate, and when they go it alone in order to better understand how firms shape public policy.

A second major contribution of my dissertation is integrating autonomy of political action with exploration of the connection between market and non-market capabilities. In recent theoretical work, Jia and Mayer (2016) propose one such connection, linking whether firms sell to business or consumers (market orientation) to the political tactics they employ. I build from these works as a foundation as I test whether firms' strategic attitudes toward collaboration in the marketplace (alliance activity) affect the degree of autonomy with which they pursue their political actions.

Drawing on theory from RBV, I argue that heterogeneity in firms' political strategies and tactics is a function of the heterogeneous resources and capabilities

possessed by a firm (Holburn & Zelner, 2010). Political resources are those valuable, rare, and difficult to imitate resources that give firms a competitive advantage when interacting with government, and help firms achieve their political strategies. Political capabilities constitute firms' "ability to know when and how to use particular political tactics to achieve a specific political outcome" (Jia & Mayer, 2016: 7).

Despite the frequent adoption of RBV terminology to define and describe political strategy (e.g., political resources and political capabilities), little work has actually addressed whether and how these resources and capabilities generate value. After all, just about any company can hire a lobbyist or join a trade association, so how can those be considered strategic resources specific to the firm (Bonardi, 2011)? In response, this dissertation argues two points. First, consistent with Jia and Mayer (2016), I argue that when firms integrate their political and market strategies to deploy political actions related to their strategically important market-based capabilities, the political capabilities they build may be more difficult to imitate. Second, I argue that some firms are endowed with innate characteristics that privilege firms with rare, valuable, and difficult-to-imitate political resources. Third, I argue that access to political resources and capabilities of trade associations, although not particularly rare, can provide firms important opportunities to develop proprietary resources and capabilities on which to build strategic advantage.

Observable heterogeneity of firms' political resources helps reinforce the view that political resources can constitute the basis for strategic value. Firms clearly engage in different combinations of political tactics and focus on different political resources. The fact that not all firms acquire the same ones implies that political resources' values are

uncertain, that there are not enough political resources to go around (rarity), that their value may be contingent on other resources, or that they are path-dependent in development. This dissertation explores different sources of political capabilities and considers how these origins may affect a firm's ability to derive strategic value from them. If, for example, a firm has strong alliance capabilities – a type of capability much researched for its strategic potential (Kale & Singh, 1999) – will it be better at advancing its political goals through membership in a trade association? I argue that some political resources may not be inherently valuable, rare, or difficult to imitate, but may offer strategic value when combined in certain discretionary combinations. Knowing what combinations and how to use them would constitute a valuable political capability for a firm.

In light of recent economic crises, the United States government has taken a renewed interest in the regulation of business. At the same time, recent judicial decisions such as the Citizens United ruling (Citizens United v. Federal Election Com'n, 2010) have focused increased emphasis on business's potential political role. As the political and regulatory landscape of business shifts, managers need to better integrate nonmarket strategies into their overall organizational strategy formulation. Even industries whose firms have not previously been particularly interested in their political environment will need to become more aware of public policy's potential influence. Yet, research on political strategy is still in its developmental stages. To increase our understanding, we may first need to explore industries that already experience regulatory scrutiny. We can learn a lot from firms in highly regulated industries, for whom the political environment has long been highly salient. This dissertation is set in the United States insurance

industry; insurance has a long history of regulation, providing an ideal setting to investigate how regulated firms configure the political actions that comprise their political strategies and evaluate if their actions and strategies in the market arena influence how they pursue political action. This setting enables the third key contribution of my study, to provide insight from firms that have well-developed understanding of the importance of policy due to their mature, highly regulated environment.

The rest of this dissertation continues as follows. First, in Chapter II, I review the relevant literature from which I draw to build and test my theory. Chapter III contains the theoretical development and statement of testable hypotheses. Chapter IV provides a description of the research method with which I test my theory, the data I gathered, and the variables I employed in my model. Chapter V presents the results of my empirical testing. Finally, Chapter VI concludes the dissertation and addresses implications of my findings.

The theoretical basis for this dissertation is synthetic in nature, drawing from and combining multiple streams of literature. In my literature review, I provide a curated review of each stream. First, I provide a review of the CPA literature, discussing its origins, key relationships, and findings. Next, I review the competitive action literature and its findings related to CPA and mode of political action. Last, I provide a brief review of the RBV and capabilities literature and its implications for understanding strategic advantage, with particular attention to the literature on alliance capabilities.

In Chapter III, I draw on the reviewed literature to evaluate how firms develop the political capabilities necessary that support successfully political action through private as well as collective means. I propose that firms may either draw on their related market-

based experience, build on their existing political resources, or learn first through engaging in collective political action to develop PCPA capabilities. I offer hypotheses related to each source, and include moderating variables to test for the potentially contingent nature of their influence.

In Chapter IV, I address my choice to set the study in the U.S. property/casualty insurance industry, describe the sources from which I gather data, explain the operational measures of my variables, and report the statistical framework I use to test my model. Insurance offers a promising context for a single industry study because of the long history of regulation (a condition research has shown important for the relevance of political strategy (Holburn & Vanden Bergh, 2008)). I gather data from multiple sources to compile a large panel data set of 21,329 firm/year observations over a period of ten years. My model includes one dependent variable, three main explanatory variables, two moderating variables, and carefully selected controls.

I estimate my model using fixed effects linear regression. In Chapter V I explain the different models I considered and how the nature of the data, issues of specification, and identification led me to select the fixed effects linear model. Hypothesis testing yields support for some but not all of my hypotheses. I present the results, summarize the findings, and discuss the explanations for my findings and non-findings.

Lastly, Chapter VI offers a concise summary of this dissertation. I highlight the most important information from each preceding chapter and present implications for theory, management practice, and public policy. The purpose of Chapter VI is to provide an extended abstract and executive summary of the dissertation.

CHAPTER II

LITERATURE REVIEW

2.1 - INTRODUCTION

This dissertation explores the conditions under which firms deploy varying degrees of autonomy with respect to their political actions. To this end, I draw on existing theory on CPA and collective action and the literature on resources and capabilities. In this chapter, I first review and synthesize the CPA literature, briefly summarizing key articles that integrate market and political strategies. Second, I review theory on collective action and briefly assess its application to firm behavior in market and nonmarket environments. Lastly, I summarize the main aspects of the RBV and the capabilities literature, briefly review alliance capabilities, and discuss current work on integrating RBV into CPA through identification of political resources and capabilities. Table 1 provides readers with definitions for key concepts and terminology used in this literature review. I incorporated this table for the benefit of with readers less familiar with the CPA literature.

2.2 - CORPORATE POLITICAL ACTIVITY

Overview of Political Strategy

Since the 1980s, scholars in economics, political science, and management and organizations have gradually built a body of theory on how and why business firms engage in political activity. Preceded by the work of Epstein (1969), the interrelationship between business and government has faced increasing importance since the gradual increase in the regulation of business since the 1970s (Mitnick, 1980). As businesses become more aware of opportunities posed by the political arena, strategy scholars have

TABLE 1
Definitions of Key Terms

Key Term	Definition	References
Corporate Political Activity (CPA)	The accumulated actions taken by a firm to shape, or in response to, its political and regulatory environment.	Hillman, Keim & Schuler, 2004
Collective CPA (CCPA)	Political activity pursued through collaboration with one or more independent firms; most commonly organized through an association.	Hillman & Hitt, 1999; Hillman, 2003
Private CPA (PCPA)	Political activity pursued independently by a firm or corporate group. Also known as individual political activity (Hillman & Hitt, 1999).	Jia, 2014
Corporate Political Strategy	A firm's purposive approach on how to engage with its regulatory and political environment to create lasting competitive success.	Baysinger, Keim, & Zeithaml, 1985
Political Tactics	The specific actions firms pursue within their political environment to advance their political strategy.	Hillman & Hitt, 1999
Private Interest	Goals or objectives that benefit solely the focal firm or the incremental advantage to the firm if it benefits more than firms that share the interest.	Olson, 1965
Shared Interest	Goals or objectives that benefit a group of more than two independent firms. Also known as collective interest (Olson, 1965).	n/a
Political Capabilities	A firm's ability to effectively identify political goals and identify and employ the appropriate political tactics to deploy to pursue political goals; may be composed of underlying political resources and underlying capabilities.	Jia & Mayer, 2016
Political Resources	The assets and attributes of a firm that have the potential to provide competitive advantage in the political arena.	Barney, 1991; Lawton, McGuire, & Rajwani, 2012;
Alliance Capabilities	Rare and difficult to imitate ability to manage alliance relationships to generate competitive success	Dyer & Singh, 1998; Kale & Singh, 2007
Regulatory Intensity	A construct employed in existing CPA research primarily to address differences in levels of regulation between industries and/or regulatory bodies, may be described as regulatory stringency	Holburn & Vanden Bergh, 2008
Regulatory Complexity	The difference in quantity and scope of regulation experienced by firms both within and between industries.	n/a

tried to develop a comprehensive understanding of corporate political strategy. Although firms may take proactive or reactive approaches to public policy, the strategy field is most interested in when firms proactively engage in political actions in pursuit of better overall performance. In this dissertation, I define political strategy as a firm's purposive view of how to engage government to create lasting success.

In the dominant theoretical framework on political strategy, Hillman and Hitt (1999) modeled political strategy formulation as a decision making process involving three decision points. The first decision involves the firm's choice of a transactional or relational approach to action. Of key interest to this dissertation, the second decision involves a firm's choice to pursue political action individually or collectively, which yields a distinction between collective corporate political activity (CCPA) and private corporate political activity (PCPA) (Jia, 2014). The third decision involves choosing between three generic strategies: information strategy, financial incentive strategy, and constituency-building strategy. Choice of generic strategy leads to a series of different possible political tactics. Political strategies describe the general formula for how firms intend to achieve their political goals, whereas political tactics describe particular actions a firm may take to support its strategy (Baysinger et al., 1985; Hillman & Hitt, 1999).

Objectives of CPA

Prior research has conceptualized the objective of CPA in a variety of ways. Ultimately, the goal of CPA is to enhance market strategies and create value for a firm (Schuler, Rehbein, & Cramer 2002). More specifically, firms apply CPA to create value by influencing the political process so external structure better matches internal objectives (Baysinger, 1984). Within this broader frame, CPA is viewed either as an

investment of the firm in uncertain future gains or agency on the part of individuals at the expense of the firm. Finally, in the face of highly uncertain payoffs, CPA may be a form of strong signaling aimed at preventing high regulatory costs (Gordon & Hafer, 2005).

The investment perspective of CPA suggests that firms incur the costs of engaging in political activity as an investment in shaping their political environment to create value for the firm and its shareholders. Early CPA scholars argued that firms invest in political actions that manage, defend, or maintain their political domain (Baysinger, 1984). Firms deploy domain management activities to pursue private gain at others' expense. Through domain defense, firms attempt to manage the legitimacy of the broad purpose of the firm and to counter threats to organizational goals and purposes. Domain maintenance is similar to defense of broad industry level goals, but firms apply it to maintain managerial autonomy and the legitimacy of the methods used to pursue strategy (Baysinger, 1984). Domain management seems to reflect a firm's private interests, where domain defense and maintenance reflect the interest a firm holds in common with other members of its industry.

Firs direct investments in CPA to various different targets of political action. Holburn and Vanden Bergh (2004) note that firms might seek to influence regulatory agencies charged with enforcing policy, the legislator or executive who sets the policy, or both. They further argue that the nature of a given political environment will vary depending on which institution is *pivotal* in helping a focal firm achieve its objectives. Their arguments derive from positive political theory, which views the discretion of regulatory agencies to oversee firms as subject to potential responses their actions may

trigger from legislators and managers. Firms may attempt to pursue their goals by approaching various political and administrative parties.

Gordon and Hafer (2005) proposed that firms invest in political activities to signal regulators that enforcing regulation on the firm would cost more than enforcing regulation on other firms, and to encourage regulators to focus their limited resources on other regulatory targets. Investing in these signals, firms seek to shift the regulatory burden to (presumably) competitor firms. If successful, this action stands to benefit the firm both directly by reducing regulatory costs and indirectly by increasing competitors' costs. Empirical support for this perspective consists of significant negative effects of corporate political spending on the intensity of regulation.

The agency perspective of CPA suggests that political spending reflects an agency problem (Jensen & Meckling, 1976) wherein managers allocate resources to political pursuits in order to achieve personal rather than organizational objectives. Prior research identifies several objectives of CPA that, when acted on by management, constitute an agency problem. In a classic manifestation of the agency problem, managers may support political initiatives that strengthen power of management relative to shareholders, or that generate short-term performance gains at the expense of long-term financial successes (Mathur & Singh, 2011). Political spending may constitute perquisite consumption by managers (Aggarwal, Meschke, & Wang, 2012; Ansolabehere, De Figueiredo, & Snyder, 2003). Examples of consumption motives of CPA include support of personal political ideologies not related to managers' economic duties to the firm (Mathur & Singh, 2011), "being part of the Washington establishment" (Ansolabhere et al., 2003: 127), and building political connections to advance political career aspirations (Mathur & Singh,

2011). In general, scholars have associated these motivations with excessive managerial power and entrenchment and viewed them as detrimental to shareholder value because they divert resources from potentially productive uses.

Results of empirical analyses of the agency perspective of CPA have been inconsistent. In a study of direct corporate contributions between 1991 and 2004, Aggarwal and colleagues (2012) find political spending is negatively associated with future abnormal returns, supporting the view that CPA presents an agency problem. Moreover, they find that firms that make (relatively) direct campaign contributions possess other characteristics traditionally associated with agency problems. On the other hand, in a study of corporate lobbying data between 1998 and 2003, Mathur and Singh (2011) find that large firms with powerful and entrenched managers actually engage in less lobbying than do managers at large firms with stronger corporate governance. In a subsequent study of the same data set, Mathur, Singh, Thompson & Nejadmalayeri (2013) find that firms with powerful and entrenched managers are *more likely* to lobby, but among those firms that engage in lobbying, greater entrenchment and weaker corporate governance are associated with *lower* lobbying intensity. As is common in CPA literature, synthesizing these findings is difficult because different authors study different types of CPA (e.g., lobbying vs. contributions). Although Mathur and Singh (2011) and Aggarwal et al. (2012) both test the effect of corporate governance, they operationalize this key variable in different ways.

Another perspective is that CPA may both serve individual interests of managers and create value for shareholders (Mathur et al., 2013). In this way, CPA may actually align the interests of management and shareholders and thus reduce agency concerns.

Empirically testing this supposition, however, may be particularly challenging. Farrell, Hersch, and Netter (2001) observed that executives with larger shares in their companies contribute more to PACs. Hadani (2007) found that publicly traded, founder-managed firms incurred higher total political expenditures than did other firms. Noting that founding family managers generally have a long-term presence in the firm (like entrenched managers), that founding family firms are less susceptible to agency problems, and that founding managers' interests aligned with the interests of the firm, Hadani's (2007) study provides indirect support of the alignment perspective.

Types of CPA

Among the three general political strategies (information provision, financial incentives, and constituency building) proposed by Hillman and Hitt (1999), the CPA literature primarily focuses empirical study on lobbying and campaign contributions as specific political tactics underlying information provision and financial incentives strategies pursued to influence policy. In the following section, in order to inform understanding of a review of these studies, I provide background information on how firms in the United States may enact CPA through lobbying or financial incentives.

Lobbying is the process by which an interest group (such as a firm) attempts to influence the behavior of a political officeholder (Baron, 2006) by providing information or exerting pressure (Getz, 1997). Scholars employing the political exchange perspective of CPA have argued that firms possess unique expertise, knowledge, and information that would be prohibitively expensive for politicians to develop on their own. This view suggests that politicians rely on firms and activist groups to provide information through lobbying in order to make well-informed decisions. Although descriptions of lobbying

often focus on the exchange or contact between a lobbyist and a political actor, scholars have theorized lobbying to include many activities that occur outside the exchange, including information gathering and mobilizing constituent networks (Kollman, 1998). Lobbying may be unilateral, preemptive, or counteractive (Baron, 2006).

Scholars view lobbying as the most instrumental form of CPA (Hansen, Mitchell & Drope, 2005), and argue that studying lobbying rather than political contributions provides greater insight into CPA (Baysinger & Keim, 1985). On the other hand, lobbying is less transparent than campaign contributions (Baron, 2006). Firms may engage in lobbying through several modes including individually or collectively (Hillman & Hitt, 1999; De Figueiredo & Tiller, 2001), through in-house or contracted lobbyists, or by mobilizing constituent networks (Kollman, 1998).

In the United States, campaign finance laws heavily regulate political contributions made directly by corporations. Laws prohibit direct monetary contributions from corporations to political candidates, so monetary incentives in CPA are generally provided through PACs. A firm may sponsor one or more PAC and pay the overhead costs associated with forming and administering the PAC. Contributions to the PAC are solicited from firm employees and key shareholders, and limits exist to how much any individual can contribute to the PAC. Regulations also limit the amount of money a PAC can contribute to a given candidate. Firms can use PACs individually (through a corporate PAC) or collectively (through a PAC sponsored by an association with which the firm is affiliated).

Firms may also provide financial incentives in less direct or less legitimate means. Such incentives may range from promises of future employment or employment for

family members (Hillman & Hitt, 1999) to soft-money contributions to so-called *527* organizations and/or to political parties for party development. Recently, the Supreme Court decision on *Citizens United v. the Federal Elections Commission* (2010) changed the landscape of campaign finance and raised renewed interest in political scholarship. The ruling reversed prior law, allowing corporations greater freedom to sway public opinion on political issues by paying for advertising in support of political candidates and issues. Changing public sentiment has been traditionally viewed as a form of constituency building (Lord, 2000), but the *Citizens United* ruling may blur the lines between constituency building and financial incentives as firms can take on costly campaign advertising expenses on behalf of candidates. Although academically interesting and politically charged, advocacy advertising and illicit incentives are beyond the scope of this dissertation.

CPA scholars often interpret financial contributions as attempts by firms to influence the composition of government in favor of politicians who are more receptive to their issues (Baron, 2006) or as a means for firms to effectively *buy* access to political actors (Schuler et al., 2002) in order to lobby them. Ansolabehere and coauthors (2002) find empirical support for the latter view in the form of significant relationship links between PACs and lobbying activity. However, Chin, Bond, and Geva (2000) argue that PACs may not be as useful in gaining access as popularly believed. Their study of scheduling by legislative staff revealed that being associated with a PAC provided greater access only to those politicians who rely heavily on PACs for campaign funds.

Antecedents of CPA

Prior research attempts to identify the determinants of firm CPA. Summarizing this literature is challenging due to the different ways CPA is measured and the inherently multi-level nature of the conditions surrounding firms' CPA decisions. Several excellent reviews exist that describe the complex landscape of this literature (e.g., Hillman et al., 2004; Lawton et al., 2013). In the following section I briefly identify the major institutional and industry-level antecedents that affect firm CPA, then summarize the firm-level determinants that are more salient to this dissertation.

***Institutional level*.** The political institutions that govern organizations strongly determine the ability and propensity of firms to engage in CPA (North, 1999). The receptivity of the court system to challenges to regulation (De Figueiredo & De Figueiredo, 2004) impact firms' likelihood of engaging in CPA. Prior CPA research (e.g., Hillman & Hitt, 1999) emphasizes the effect of corporatist versus pluralist political systems, arguing that corporatists systems that focus on ex-ante compromise make CPA more likely (Sawant, 2012). In addition to political institutions, economic institutions affect firm CPA through the influence of currency rates (Destler, Odell, & Elliot, 1987) and wage rates (Rehbein & Schuler, 1997). Jia (2014) found that strong market-supporting institutional environments made firms in emerging economies less likely to engage in private political action, though these results were not robust to addition of other variables.

Industry level. Building on Olson's (1965) theory of collective action, prior research frequently tests the effect of industry concentration on firm CPA (De Figueiredo & Kim, 2004; Lenway & Rehbein, 1991; Schuler, 1999). The results of these tests have

been largely inconsistent perhaps due to inconsistent and inaccurate measurement of the construct (Hansen et al., 2005). Industry characteristics such as unionization and employment rates (Lenway & Rehbein, 1991) also influence firm CPA. An industry's exposure to tariff and regulation (Rehbein & Schuler, 1999) can make a firm more or less likely to seek protection through political means. Regulatory intensity of an industry also influences firm CPA (Holburn & Vanden Bergh, 2008).

Firm level. Prior research has identified and tested several antecedents that vary at the firm level, although scholars been mischaracterized some firm facts as industry or institutional level factors. *Firm size* is perhaps the most frequently identified factor. Scholars measure firm size primarily as revenue (Brasher & Lowery, 2006; Drope & Hansen, 2006; Shuler, 2002) or number of employees (Masters & Baysinger, 1984; Rehbein & Schuler, 1999). Researchers argue that larger firms face greater exposure to policy and are more attractive to policy makers, and are therefore more likely to attempt to shape policies through political means. Relatedly, researchers note that differential resources influence firm CPA: wealthier (De Figueiredo & De Figueiredo, 2004) and more profitable (Masters & Baysinger, 1985) firms are more likely to possess *slack resources* (Lenway & Rehbein 1991; Rehbein & Schuler, 1999), which they can devote to nonmarket activities such as CPA. On the other hand, resource slack might not influence CPA because, increasingly, political action represents a critical and non-discretionary function of firms. Other scholars note that the relationship between financial performance and political activity may be somewhat endogenous.

Corporate governance mechanisms such as ownership structure (Brasher & Lowery, 2006) and long-term compensation (Ozer & Alakent, 2012) reduce CPA,

reflecting the perspective of CPA as managerial perquisite in the agency theory tradition. Although scholars generally believe that managers' personal interests influence firm CPA (Cook & Barry, 1995), Burris (2001) finds that contribution patterns of firms and their top managers differ, suggesting that the effect of managerial orientation is limited. Integrated strategy research (Baron, 1995) links firm CPA to its market-based strategies. Diversified firms are more likely to engage in CPA, particularly relational CPA (Brasher & Lowery, 2006; Hansen & Mitchell, 2001; Kim, 2008). Foreign ownership affects CPA (Getz, 1996; Hansen & Mitchell, 2001), although this firm-varying factor may more properly reflect the additional set of institutional conditions foreign-owned firms experience from their home country. Recent theoretical work suggests that firms' market-based capabilities influence CPA (Jia & Mayer, 2016), although this link has yet to be empirically tested.

Issue level. Not all political issues affect firms equally. Scholars recognize that issue-level factors influence firms' propensity to engage in CPA and the tactics and modes of action they choose. In general, scholars assume that firms are more likely to lobby on issues that are particularly salient to them. De Figueiredo & Tiller (2004) find that firms are more likely to lobby directly than through a hired external lobbyist when the issues are highly firm-specific and risk of information leakage is high, and more likely to use outside lobbyists when topics are less sensitive or require knowledge common in the industry. De Figueiredo & Tiller (2001) find that associations undertake a greater portion of total contacts on issues that reflect shared interests, and a lesser portion if firms have to share proprietary information with the trade association. The ability of an

association to exclude firms from benefiting from the association's lobbying efforts affects the mode of lobbying, but the direction of the effect depends on firm size.

Broadly stated, factors at multiple levels influence firm CPA by either making CPA more important or less costly. Factors that affect the perceived importance of CPA as a firm function include regulatory intensity, economic conditions, firm size, and dependence on government. Factors that make CPA less costly to a particular firm include differential resources, asset specificity, and political resources such as having a DC office or a large employee base in key electoral districts. Following this logic, I note that firms that perceive a high need for CPA are likely to organize in such a way as to make CPA less costly (Hedberg, Bystrom, & Starbuck, 1976). Firms for whom CPA is less costly may also perceive greater importance of CPA than other firms may (Grant, 1996). Adding to the puzzle, firm size, resources, and government dependence affect both the necessity of and the costs of CPA.

Outcomes of CPA

Scholars testing the effectiveness of CPA have generally focused one of two outcomes. The first group of scholars explores the relationship between CPA and firm financial performance. The second group studies the link between corporate political strategies and beneficial policy outcomes, the means by which they theorize firms achieve financial benefits from CPA.

Research on financial outcomes provides inconsistent findings on the value of CPA. Faccio (2006) finds that firms derive stock price benefit when firm officers or large shareholders enter politics, but not when politicians join boards. Hadani and Schuler (2013) find that corporate political spending positively affects the market value of

regulated firms, but has a slightly negative effect on a firm's return on assets. Hersch, Netter, and Pope (2008) find no significant relationship between political spending and capital market performance (Tobin's Q). In meta-analysis, Lux, Crook, & Woehr (2011) find a significant association between CPA and financial performance.

Alternately, several scholars have attempted to link CPA to policy outcomes. On one hand, this approach is beneficial because it avoids endogeneity issues associated with financial performance and illuminates the means by which CPA supposedly creates financial benefits. As Chen, Parsely, and Yang (2015) states, "any preferential treatment the firm receives should impact the firm's financial performance" (2015: 2-3). On the other hand, policy outcome studies potentially contain substantial noise because firms often invest political spending in many concurrent policy issues, and these studies may not capture CPA's effectiveness in fending off *negative* policy outcomes that never see light.

Research on the link between CPA and policy outcomes has been slightly more consistent than research on financial outcomes, although the results were still weak. Ansolabehere et al. (2003) study the connection between political contributions and legislator voting outcomes; of the 36 papers the authors surveyed, they found 10 that showed significance, and 4 that did not find significant results. The rest of the papers analyzed found only partial support for their hypotheses (p. 113). Strattmann (2002) found a positive association between contributions and policy votes. De Figueiredo and Edwards (2007) found a positive relationship between the financial contributions to state legislators and a favorable effect on regulated prices in the telecommunications industry. Bonardi, Holborn, and Vanden Bergh (2006) found that opposition from citizen activism

significantly weakened the relationship between CPA and policy outcomes, but that prior experience on the part of the firm strengthened the relationship.

Gordon and Hafer (2005) suggest that the weak empirical connections between political activity and policy outcomes may be because the activity does not actually attempt to influence legislation, but rather serve as a show of force to those who will enforce the regulation that firms engaged in CPA are willing to fight regulation in the political arena. Another plausible reason for the lack of consistent results is that contributions buy access to policy makers, not votes. Alternately, the benefit of contributions may be difficult to identify because organizational contributions account for such a small percentage of total campaign funds or because contributions support the election of preferred candidates rather than attempt to influence the voting of seated members.

Lord (2000) investigated perceived effectiveness of different forms of CPA. His survey of key congressional staff and corporate regulatory affairs officers shows that lobbying directly by firm executives and constituency building activities are more effective in influencing legislative outcomes than either professional lobbying or advocacy advertising and contributions through PACs. In addition, corporate respondents viewed CPA as significantly more effective than did congressional staff. Lord's findings suggest that corporations may overestimate the value of political investment, which might partially explain the lack of consistent findings of a link between CPA and financial or policy outcomes.

Studies of the outcomes of CPA are methodologically challenging. Both financial performance and policy are likely endogenous to several of the critical variables that

influence firm CPA. Interpretations of early research findings in the area are vulnerable to strong concerns about model mis-specification. Although researchers have recently taken strides to control for endogeneity, effective instruments are difficult to identify, and present challenges in interpreting the size of the effect. Instead of tackling outcomes, this dissertation explores firms' strategic choices of CPA involvement and the market-based and political resources and experiences that support their political action.

Integrating Political and Market Strategy

Within the community of CPA scholars, a niche of strategy researchers explore the inter-relationship between firms' political and market strategies. Looking beyond how political outcomes shape market opportunities, this research embraces the concept of integrated strategy as proposed in the literature on nonmarket strategy (Baron, 1995). In a relatively early work in this literature, Capron and Chatain (2008) adopt an RBV lens to argue that firms can take action in the political arena to weaken the value of competitors' market resources. Funk and Hirschman (2015) argue that when firms take market actions based on their interpretations of vague regulations or novel actions that are difficult to categorize in the existing regulatory framework, they influence public policy. In this way, market actions may constitute political activity. Holburn and Vanden Bergh (2014) investigate firms' campaign contributions in advance of merger and acquisition events to find that firms precipitated their market actions with increased political activity, likely in an attempt to ease the regulatory approval process. In a theoretical piece, Jia and Mayer (2016) draw on RBV to explore how capabilities that support firms' marketing strategy influence their choice of political tactics.

2.3 - COLLECTIVE ACTION

The full literature on collective action, ranging from political science and economics, through sociology and strategy, to management and organizations, is too expansive to review in a single dissertation. In this section, I provide a brief review of the literature on collective action, focusing on areas from which I later draw theory to build propositions. I begin with a discussion of Olson's (1965) theory of collective action and describe the nature of public goods. Next, I summarize market and nonmarket forms of collectives, and discuss the tensions that occur between competitive and collective strategies. I then provide a more detailed review of the compact literature on trade associations in management research, and conclude with a discussion of antecedents of collective action as they relate to political activity.

The Collective Action Problem

Early work on collective action (Olson, 1965) focused more on understanding *if* collective action *could* occur than how such action would occur. This research drew heavily on the assumption that collectives pursued public goods, and argued that the conflict between individual incentives and collective interest created a collective action problem resulting in an insufficient provision of public goods.

The classical statement of the collective action problem is that individual actors (firms, in this context) have insufficient incentive to invest resources in public good because they will be free to consume the public good whether they invested in its creation or not. Individual firms are thus incentivized to free-ride (McMillan, 1979), which introduces the heart of the collective action problem: If no firm(s) bear an incentive to invest in the public good, how will it be pursued? Olson's (1965) treatise on the problem

illustrates that when firms in an industry maximize their own profits, profits for the industry as a whole are lower. Competition among firms that seek to maximize their own profits drives down prices. Although this is the same principle on which the free market is assumed to prevent undue rents from accruing to industries, Olson (1965) and others argue that competition reduces the ability of groups to work together to achieve their common goals.

Olson (1965) describes the conditions under which the collective action problem will occur. These include individual actors (or firms) who seek to maximize their individual wellbeing, share an interest in a non-excludable public good, and together make up a group large enough that the contributions of an individual member will go unnoticed (Olson, 1965). Olson argued that only under certain conditions would groups successfully organize to provide a common good. He defined three broad classes of groups (privileged, intermediate, and latent) based on size and member characteristics. A privileged group is "a group such that each of its members, or at least some one of them, has an incentive to see the collective good is provided, even if he has to bear the full burden of providing it himself" (p. 50). An intermediate group is "a group in which no single member gets a share of the benefit sufficient to give him an incentive to provide the good himself, but which does not have so many members that no one member will notice whether any other member is or is not helping to provide the collective good" (p. 50). Finally, Olson defines a latent group as "a very large group… distinguished by the fact, that if one member does or does not help provide the collective good, no other member will be significantly affected, and therefore none has any reason to react" (p. 50).

A latent group can *mobilize* to provide a common good only if it offers a *selective incentive* sufficient to garner individual contribution.

One key point about Olson's (1965) treatment of collective action is that he equated the boundaries of a group as defined by shared interest. An industry is one such example, because presumably all members share an interest in the production and distribution of the product or service that defines the industry. Recognizing that firms share interests with entities on many levels other than just industry, including subsector, geographic region (e.g., clusters) or social ideology, may be important to understanding how firms engage in CCPA.

The presence of rivalry and excludability distinguishes between private and public goods. Public goods non-rival when consumption of a pure public good by one or more parties will not reduce the amount of that good available to others (Samuelson, 1954). Many mixed goods (Holtermann, 1972) fall between these polar extremes (Weisbrod, 1964), varying largely on the degree to which they are excludable (Margolis, 1955; Musgrave, 1964). Goods are excludable if some mechanism can prevent some individuals from consuming them (subject to monetary exchange). Even when otherwise private by exclusion or pricing, some goods maintain an element of publicness through an "option to consume in the future" (Weisbrod, 1964: 473).

Several scholars have identified and defined specific categories of mixed goods including joint goods (Oakland, 1972) and club goods (Buchanan, 1965). Joint goods are a subset of imperfect public goods, where the consumption by one individual (though rival) benefits at least one other individual. Oakland (1969) summarizes his point, stating that joint goods share some of the features of both private and public goods. Club goods

are a type of imperfectly public goods that are excludable and partially rivalrous in consumption (Cornes & Sandler, 1986, 1994). A club is "a voluntary collective that derives mutual benefits from sharing an impure public good, subject to congestion and crowding" (Cornes & Sandler, 1994: 382). The collective or group defines the boundary of the limited set of individuals who may consume the good (its excludability). The notion of crowding reflects Margolis's (1955) concept of capacity of availability such that a limit may exist to the amount of the good available or an incremental cost to provide more of a good past a certain point (rivalrous after a given point of consumption).

Scholars acknowledge that different individuals may hold different preferences for public goods. Samuelson (1954) assumes that different individuals may assign different value to (derive different utility from) different goods (both private and collective). Cornes and Sandler (1994) note that it is quite plausible that some individuals may place a positive value on a public good while others place a negative value on the same good. Largely, however, scholars in this stream of research focus on modeling individual utility curves to test the robustness of earlier work that models the optimal provision of public goods. Scholars should focus additional attention on what the differential value of public goods means for their development and consumption.

In contrast to neoclassical theory, Malkin and Wildavsky (1991) argue that the distinction between public and private goods is largely socially constructed and endogenous rather than arising from inherent properties of the good. They argue that the more relevant distinction is whether institutions *provide* the goods publicly or privately. Viewing public goods this way, and recognizing the politically-contested nature of social construction makes public goods those goods that provide benefit to a sufficiently large

group of individuals (or to a sufficiently influential individual or group), who socially construct them in a way that we traditionally recognize as being public goods (e.g., without excludability and/or rivalry in consumption). Malkin and Wildavsky (1991) argue that the distinction between public and private goods "should be abandoned" (1991: 355). Whether they abandon this view or not, scholars should recognize that classification of a good as public is most usefully viewed as an ex-post characteristic of the good, and not an ex-ante consideration in its development.

Although largely developed in the context of public finance and political economy, management scholars have adopted the concept of public goods have been invoked in various ways. Considering a firm's institutional environment, Barnett (2006) describes industry characteristics as a public good based on their non-rival application to all firms in an industry. For similar reasons, public policy is generally viewed as a public good. Olson (1965) argues that in nonmarket situations (such as policy setting), goods to be provided are public goods by nature of their non-excludability and non-rival nature. Tullock (1971) comes closest to tying public policy to a public good, arguing that a judge's decision contributes to the major public good that we call law enforcement. By extension, public policy and regulation can be viewed as aspects of law enforcement, a joint good (Oakland, 1972) that is consumed by the object of the regulation, the consumption of which creates positive benefits for other individuals (presumably consumers). Hansen et al. (2005) argued that government "selectively enforces a regime of regulation," (2005: 152) which increases the excludability of the good and takes it further from being a pure public good. At best, contrary to their general treatment as simple public goods, public policy and regulation are mixed goods that share

characteristics with both joint goods (Oakland, 1969) and club goods (Buchanan, 1965), depending on the nature of the policy or regulation.

Trade Associations

Trade associations are the dominant form of collective action in the nonmarket arena (Barnett, 2013). Management researchers are beginning to address these important organizations, but we still do not have much theory, and we have even less empirical evidence about them (Parmigiani & Rivera-Santos, 2011). Researchers argue that associations exist in order to manage shared problems such as the reputation commons (King & Lenox, 2000; Tucker, 2008) and act as mechanisms for information exchange (Kirby, 1988). Because of the high uncertainty in firms' shared environment, small and medium firms in particular join associations to learn about policy issues (Wilts & Meyer, 2005) and form perspective on the nature of shared problems (Barnett, 2013).

Firms join associations to share information about nonmarket issues (Barnett, 2013; Kirby, 1988) and to gain access to particular services (May, McHugh, & Taylor, 1998; Wilts & Meyer, 2005) and resources that transcend organizational boundaries (Collins & Roper, 2005). Similarly, firms join associations to access knowledge and expertise (Lawton et al., 2013) and to develop individual capabilities (Collins & Roper, 2005). Empirically, despite a trend in Europe toward trade associations focusing on service delivery rather than the firm/government interface (May et al., 1998), political concerns are the main driving force of trade associations, with managers reporting they are primarily motivated to join associations in order to shape public policy (Wilts & Meyer, 2005). Trade associations generate influence (Lawton et al., 2013) and reputational trust with political actors (Tucker, 2008). Schaefer and Kerrigan (2008)

argue that associations are more likely to form in the presence of external competition, state intervention, member complementarities, and/or high social cohesion. They echo Olson (1965) in arguing that a large pool of potential members makes the formation of an association less likely and add that association is also less likely if members possess unequal resources.

Trade associations are more likely to seek to improve industry conditions in the face of a powerful political and regulatory environment (Reveley & Ville, 2010) and public attention (Schaefer & Kerrigan, 2008). Trade association lobbying is influenced by industry factors such as competition, concentration, size, and government procurement (Drope & Mitchell, 2009) and association-level factors such as greater association income (May et al., 2005) and associative capacity (Reveley & Ville, 2010).

Although often perceived as existing to provide voice to shared interests of members and to improve industry conditions (Reveley & Ville, 2010), the extent to which trade associations may actually give voice to a mix of shared *and* private interests is unclear. Researchers have acknowledged that private interests may vary within a collective (Olson, 1965). A recent empirical study found that trade association actions better reflect the interest of the largest firms, rather than those of the entire industry (Barnett, 2013). Additional research can fill the gap in our knowledge of how tensions between private and collective interests shape association goals and actions.

When do Firms Act Collectively?

Scholars have theorized several factors at the firm, collective, institutional, and issue levels that encourage firms to act collectively. At the firm level, scholars suggest that firm size and slack resources make firms less likely to act collectively (Hillman &

Hitt, 1999; Olson, 1965). Organizations will act collectively when doing so provides an opportunity to reinforce inter-organizational and interpersonal relationships and when resources needed to complete the task are located in more than one firm, are relatively immobile, and are costly to recreate within a single organization (Peteraf, 1993).

Institutional and issue-specific factors together will likely influence a firm's decision to act collectively. Firms are more likely to take political action collectively in institutional environments with pluralist political systems (Hillman & Hitt, 1999), reflective of a political philosophy "private associations… and cooperatives, should have a larger constitutional role in society" (Olson, 1965: 111). In environments with lower regulatory intensity, firms may act collectively to develop private regulatory systems to manage their collective reputation and forestall costly government regulation (King & Lenox, 2000).

Finally, smaller groups are more likely to act collectively due to lower coordination costs and because they can better mobilize selective social incentives to prevent shirking (Olson, 1965). Scholars have tested whether industry concentration predicts collective action, but the studies have yielded mixed results (e.g., De Figueiredo & Tiller, 2001; Hansen et al., 2005; Ozer & Lee, 2009).

Just as some conditions make collective action more likely, so also do some conditions make firms more likely to act individually. Collective action may limit a firm's strategic flexibility and consume firm resources (Bresser, 1988; Lifton, 1989). It may also expose firm resources to risk of appropriation (Lavie, 2007).

Tension between Collective and Private Interests

The tendency when analyzing collective action is to focus on the shared interests that underlie the collective, but a firm's choice to act in the interest of the collective depends on both its shared interests and its private strategies. Collective strategies seek to improve firm performance by increasing the rents available to a group of firms, whereas competitive strategies seek to improve firm performance by capturing a larger share of available rents relative to other firms in the group (Demsetz, 1973). These strategies may conflict with one another (Bresser, 1988) and pose dynamic tension (Barnett, 2006) as firms choose how best to allocate resources between them. Firms can maintain a capacity to alternate between collective and competitive strategies (Bresser & Harl, 1986), attempt to balance them (Barnett, 2006), or combine them (Bresser, 1988).

Collective Action in CPA

Although scholars almost unilaterally invoke Olson's (1965) theory of collective action as the dominant view on CCPA, they characterize collective action differently than Olson. In the CCPA literature, scholars view collective action as actions organized and undertaken by a group of firms or an association. Olson (1965), on the other hand, viewed collective action as any action that generated a public good, regardless of whether undertaken privately or through a collective. From Olson's perspective, a large firm in a *privileged group* engaging in political action in pursuit of industry improvement would be as engaging in collective action by Olson (1965), but private action by CPA researchers. This distinction has likely contributed to the inconsistent empirical findings on collective action theory in CPA.

Few published papers have empirically tested when firms are likely to adopt individual or collective strategies. In a study of issues lobbied before the FCC, De Figueiredo and Tiller (2001) find that collective action theory correctly predicts the behavior of large firms, but not small firms. In a study of firm preference between private and collective use of PACs, Ozer and Lee (2009) find that firms use private PACs less in highly concentrated industries and more when they rely heavily on government contracts. Lastly, in a study of political action in China's emerging markets, Jia (2014) finds that entrepreneurs who belong to an association are more likely to seek political office, but that a prior political role or partial government ownership of the firm moderates this effect. This dissertation aligns closely with Jia's (2014) article. Both study private and collective CPA, and consider contingent variables that moderate a firm's use of collective and/or private action. Primary differences include context, theoretical foundation, and the level of collective action considered. Jia (2014) investigates the political action of entrepreneurs in an emerging economy, focuses on the complementarity and substitutability CCPA and PCPA offer, and studies participation in a large business association whose members are individuals and whose shared interests are very broad (akin to a Chamber of Commerce). In contrast, this dissertation explores CCPA as a source of learning that allows firms to develop the political capabilities necessary to engage in PCPA by studying differences in firm behavior within a single industry with a long history of regulation. It is my hope that this dissertation can complement findings of previous empirical work in expanding our understanding of, and empirical commitment to, firms' choice among and between PCPA and CCPA.

2.4 - THE RESOURCE BASED VIEW OF THE FIRM

This dissertation explores how firms develop political capabilities that allow them to choose among collective and private political tactics. I draw a theoretical foundation for my arguments from the capabilities literature, which in turn draws heavily from RBV in order to explain how the characteristics of resources that underlie a firm's capabilities affect its value potential. The development aspect of my capabilities story invokes dynamism of a firm's capabilities, which scholars address in the literature on dynamic capabilities and the capabilities lifecycle. In this section, I provide a brief overview of the key concepts and assumptions of RBV, the capabilities literature, and the theory of dynamic capabilities. I then briefly introduce the literature on market-based alliance capabilities.

Resource Heterogeneity

RBV arose from the central argument that heterogeneity of resources can explain and predict differences in performance between otherwise similar firms (Penrose, 1959). A resource is a firm attribute (Barney, 1991; Wernerfelt, 1984) or an asset or factor of production under a firm's control that contributes to the firm's effectiveness and efficiency (Barney, 1991) by enhancing value creation and/or capture (Leiblein, 2011). Resources afford these benefits when they possess desirable characteristics of value, rarity, imitability and substitutability (Mellewigt & Nothnagel, 2008). Although sometimes viewed as factors to acquire or trade, early work on resources emphasized heterogeneous resources endowed to firms due to their initial founding or chance events (Barney, 1991; Helfat & Lieberman, 2002). In order for acquired resources to provide strategic value, their benefits must be uncertain or variable, such as when they depend on

matching with complementary resources. Resources can afford persistent strategic value if they possess characteristics that act as isolating mechanisms (Rumelt, 1987).

Capabilities

Whereas resources are assets or characteristics of a firm, capabilities are a firm's ability to make use of its resources through action. An organizational capability is defined as "a high-level routine (or collection of routines) that, together with its implementing input flows, confers upon an organization's management a set of decision options for producing significant outputs of a particular type" (Winter, 2000: 983). A simpler definition is capability as "the capacity of a firm to perform a particular activity in a reliable and at least minimally satisfactory manner" (Helfat & Winter, 2011: 1244). The critical aspects that define capabilities are their purpose (Dosi et al., 2000; Winter, 2003), their function as performance or coordination of a task (Helfat & Peteraf, 2003), and their reliable repeatability (Helfat & Winter, 2011).

Heterogeneity among capabilities arises from aspects of the conditions in which a capability's purpose is realized (founding), developed, maintained, and potentially transformed. These stages comprise a capability lifecycle (Helfat & Peteraf, 2003). Heterogeneity due to special or rare resources that underlie capabilities arises during the developmental stage. Transformation of capabilities beyond their basic development occurs through dynamic capabilities.

Dynamic capabilities are a type of higher-order capabilities that reflect a firm's ability to adapt its resources and capabilities in anticipation of – or response to – changes in the environment. Research on dynamic capabilities emphasizes that resource allocation policies, organization structure, and managerial decision making determine how firms

alter their capabilities (Leiblein, 2011). Dynamic capabilities address a "firm's ability to integrate, build, and reconfigure internal and external competencies" (Teece, 1997: 516). Firms develop dynamic capabilities through the processes of knowledge accumulation, articulation and codification (Zollo & Winter, 2002).

Alliance Capabilities

As alliances have become an important feature of the market landscape, researchers have shown particular interest in the theory of alliance capabilities. Building on the concept that critical resources may span firm boundaries (Dyer & Singh, 1998), alliance capabilities researchers relax the assumption that strategic resources must be under the control of a firm in order for the firm to derive strategic benefits from them. Instead, alliance capabilities literature argues that firms can collaborate with other firms, embedding strategic resources in interfirm routines and processes. The routines and processes form the basis of alliance capabilities.

Alliance management capabilities are those skills and knowledge that enable firms to manage alliances successfully to create relational rents (Dyer & Singh, 1998; Kale & Singh, 2007) from alliance portfolios (Hoffmann, 2007) or individual alliances. Alliance management capabilities develop through the higher-order dynamic capability of alliance learning processes that that involve articulation, codification, sharing and internalization of alliance *know-how* (Kale & Singh, 2007).

Researchers identify several specific skills they argue comprise alliance capabilities. These skills include partner selection and establishing firm-level alliance monitoring mechanisms (Hoffmann, 2007). Other skills include addressing partner interdependence with the right coordination device, sharing information between firms,

and connecting with partners to develop interfirm bonds (Schreiner, Kale, & Corsten, 2009). Taken together, these skills enhance alliance success.

Political Resources and Capabilities in CPA Research

RBV offers a promising framework for understanding differences in political strategies between firms. Although CPA scholars frequently invoke the language of resources and capabilities, CPA research has not fully integrated the principles of RBV and capabilities research into its theories (Jia & Mayer, 2016). In this section, I review the specific political resources and capabilities CPA researchers have identified, and address their fit within the broader RBV and capabilities framework.

Political Resources. Scholars have identified special political resources and capabilities to explain differences in firm CPA (Oliver & Holzinger, 2008). Political resources are defined as "assets and skills utilized in the political arena" (Dahan, 2005: 43), and consist of both organizational and relational resources (Lawton et al., 2012). Specific political resources CPA researchers identify include access to policymakers, status, reputation, and legitimacy (Baron, 1995; Boddewyn & Brewer, 1994; Epstein, 1969). Other political resources include privileged information and expertise, wealth, and time (Boddewyn & Brewer, 1994) and relationships with pivotal political actors (Henisz & Delios, 2004; Holburn & Vanden Bergh, 2004), and political knowledge (Bonardi, 2014).

Common operational measures of political resources include the presence or size of a Washington, DC-based office (Lenway & Rehbein, 1991) or political consultants (Schuler, 2000). Firms can acquire these resources by activating political connections, or develop the resources as routines through prior CPA experience (Masters & Baysinger,

1984). One critique of resource-emphasizing CPA research is that it fails to address how the value potential of political resources is determined (e.g., through value, rarity, imitability, and substitutability conditions), whether political resources are protected by isolating mechanisms, and the extent they arise from innate endowments of firms.

***Political Capabilities*.** Political capabilities are a firm's ability to effectively identify and employ the appropriate political actions to achieve political objectives (Jia & Mayer, 2016). This definition highlights the *purpose* and *function as action* aspects that Helfat and Winter (2011) stress are critical to the concept of capabilities. Holburn & Zelner (2010) defined political capabilities as a firm's ability to deploy and leverage political resources on an ongoing basis, highlighting the critical *repeatability* of capabilities. Researchers adopt government contracts as a proxy measure of both political capabilities (Rehbein & Schuler, 1999) and home-country institutional constraints (Holburn & Zelner, 2010) CPA. Recently, Jia and Mayer (2016) argue that political capabilities may relate to and draw on a firm's market-based capabilities. They theorize that firm market orientation influences choice among general strategies (at the third decision point in Hillman and Hitt's (1999) model of political strategy formulation). This dissertation also seeks to connect political and market capabilities. I theorize that alliance capabilities will influence firms' choices at the second decision node, between private and collective action. I further recognize that capabilities develop and change over time (Helfat & Peteraf, 2003) by evaluating how political capabilities develop within firms.

2.5 SUMMARY

The preceding literature review highlights the principal theoretical constructs and findings of the literatures on CPA, collective action theory, alliance capabilities and political resources and capabilities. Two distinct themes link these literatures. First, the

theme of collaboration link collective action theory, alliance capabilities research, and CPA literature in the areas of modes of CPA action and the antecedents and outcomes of CPA. The second theme of political action unites the literature on resources and capabilities with the CPA and collective action literatures through the concept of political capabilities.

This dissertation contributes to management strategy and organizational theory by illuminating the connections between the above literatures and combining them to inform theory on firms' use of private and collective approaches to CPA. In the following section, I draw on the theories reviewed above to ground the development of hypotheses that predict the level of autonomy with which firms will pursue CPA. Because I ground my dissertation in these literatures, my dissertation findings will contribute insight on how each theory's constructs impact autonomy of CPA.

CHAPTER III

THEORETICAL DEVELOPMENT AND HYPOTHESES

The following chapter draws from and combines the reviewed literature to develop hypotheses that explore how market-based experience and heterogeneous political resources influence the autonomy of firms' corporate political activity (CPA). I begin by introducing the construct of autonomy of CPA. I then build the theoretical logic that serves as the foundation of my hypotheses and I formally state five hypotheses. Three hypotheses predict that alliance experience, political resources and prior collective CPA (CCPA) experience influence autonomy of CPA, directly or through the (unobserved) mechanism of capabilities development. The remaining two hypotheses predict that regulatory complexity and capacity for learning moderate whether prior CCPA enables greater autonomy of actions.

When selecting political actions, firms can choose to act privately, collectively, or through some combination of both. By investing in these actions, a firm determines the autonomy of its political actions. When engaging in private CPA (PCPA), a firm may engage directly with regulators, staffers, and politicians or can hire outside experts who take these actions on its behalf, reflecting a classic boundaries of the firm dilemma. CPA researchers almost unilaterally conceptualize CCPA as actions taken by or coordinated through trade associations of which a firm is a member. Firms can also act collectively through coordinating political actions in smaller informal groups, or by jointly hiring independent lobbyists to pursue their narrowly shared interest. Within the insurance industry, firms may employ other collective approaches to managing their regulatory

environment such as participating in rating bureaus and filing standardized policy forms generated by collective standards organizations.

Historically, researchers have modeled firms' decisions to engage in political activity privately or collectively as a dichotomous choice (Hillman & Hitt, 1999). And yet, just as we recognize that firms configure their CPA out of multiple tactics (Schuler et al., 2002), researchers are beginning to recognize that firms take part in CPA through some combination of both PCPA and CCPA. Over time, a firm will pursue multiple political actions either privately or collectively. I argue that when measured over time, the proportion of all CPA pursued privately represents a meaningful measure of the extent to which firms view their political environment as a potential source of strategic value. I introduce the construct of autonomy of CPA to reflect this relative emphasis on private action.

The dichotomous choice between private and collective action best matches analyses of CPA performed at the issue level of analysis, as it reflects a firm's mode choice for a particular issue. I argue that as strategy scholars we can better understand firm-level political strategies by evaluating a comparable firm-level construct that represents a firm's approach to using private and collective modes of CPA across multiple political issues and actions. Recent CPA research has recognized that firms combine multiple political tactics (Schuler, Rehbein, & Keim, 2009) and that collective and private modes of action may act as complements rather than as substitutes for each other. Combining these two insights with applied knowledge of the domain, I argue a need exists to understand not just the choice firms make *between* modes of action, but how they combine modes across an ongoing series of political actions. A continuum is

preferable to a categorical private/collective/both approach because I am interested in ways that firms combine modes rather than simply whether or not they combine modes. I construct autonomy as a proportion because a proportion-based measure is conceptually intuitive when considering how much firms emphasize one of two similar choices.

Because political capabilities reflect the ability of a firm to employ *the appropriate* political actions (Jia & Mayer, 2016), political capabilities themselves cannot directly predict a specific level of autonomy without full information on the issues at hand. To further my theory, I unpack political capabilities and identify categories of underlying capabilities that support collective (CCPA capabilities) and/or private (PCPA capabilities) CPA. I assume that the resources and capabilities that support CCPA are common; a firm with no existing political knowledge or experience need only join a trade association to pursue CCPA. In such a case, the trade association provides the specialized resources and capabilities (which will be discussed in more detail in the following section) to pursue action on its members' behalf. In order to pursue PCPA, on the other hand, firms must possess some degree of political resources and PCPA capabilities. By extension, PCPA capabilities enable firms to choose between both CCPA and PCPA, leading to greater autonomy of CPA.

Researchers have sometimes treated public policies as public goods on grounds that laws apply to everyone, although even early researchers recognize that policies can have asymmetric impact on firms (e.g., Olson, 1965). Public policies apply to firms at multiple levels. Some laws apply to all firms within an institutional sphere; others apply only to single industries or sectors. Still others may narrowly affect only firms that use certain factors of production and/or that produce specific goods or services. Governments

can use laws and regulations to incentivize behavior of a targeted group, as described in the literature on policy and innovation (e.g., Zhao & Ziedonis, 2012). Firms, in turn, can pursue not only policies from which they and their industry stand to benefit, but also policies that impair competitors' positions by affecting the value of competitors' resources (Capron & Chatain, 2008) and raising rivals' costs by blocking the use of substitute resources (McWilliams, Van Fleet, & Cory, 2002). Incumbent firms with particularly efficient regulatory management and compliance routines may oppose regulatory changes that could reduce their costs if changing the system could take away their relative advantage over competitors.

Realistically, firms can have dramatically different preferences for policies. Although some policies may affect all firms relatively symmetrically, other policies can privilege some firms and constrain others. Some firms may be better able to organize in to appropriate the benefits of public policies. Firms actively pursue political actions to create collective and private benefit as well as to pursue competitive agenda. Where policies have asymmetric impact on firms, we should anticipate the firms will have different interests in the policies and may take different approaches to their pursuit. In general, a greater interest in a policy may drive firms to pursue the policy through private rather than collective means.

On the other hand, the natural inclination to lump together collective and private interests with their corresponding modes of action may obscure how firms use political action to create strategic advantage. Being attentive to the distinction between interest and action can also provide a fresh understanding of classic theories. For example, Olson's (1965) *privileged groups* are able to overcome the free-rider problem principally

because one or more group members judge that they will gain sufficient benefit from pursuing the shared interest to justify shouldering the entirety of the cost (i.e., through private action). In this case, *collective action* is essentially synonymous with pursuit of shared interest, irrespective of mode of action taken.

In general, CCPA offers greater efficiency and legitimacy than PCPA. Because a trade association pools member firm resources, CCPA makes political action less costly (Hillman & Hitt, 1999). Policymakers likely view CCPA as more legitimate than PCPA because it purports to represent to wishes of a greater number of parties and should be less likely to impair competition. On the other hand, public policy interests may be more difficult to coordinate collectively, as members with differing preferences must work to develop consensus or compromise. If collective action is always more efficient and more effective, pursuing collective interests privately does not make sense. Similarly, if firms only pursue shared interest through collective action, firms must pursue their private interests privately, or by identifying competitors who share the interest with whom to collective action.

We generally assume that CCPA pursued by trade associations reflects only those interests shared by the collective. Yet recent research finds that trade associations act in the interest of a small subset of firms in the industries they represent, rather than in the shared interests of the industries as a whole (Barnett, 2013). A firm that pursues its private interests collective is able to pass on some of the cost of pursuing their interests to other members of the collective; to the extent that firms *can* shape CCPA to reflect their private interests, they can pursue their private interests most efficiently through CCPA. Then again, few firms are likely to have the power to shape the collective agenda around

all their private interests. If the private interests are competitive in design, a firm may not want to show its hand by pursuing these interests collectively. Logically, firms must pursue at least some private interests privately.

Despite the potential cost sharing and legitimacy collective action offers, I argue that CCPA is not always preferred, even for collective interests. If firms invest in political resources and build firm-specific capabilities, scale efficiencies may make pursuing both private and collective interests through a single PCPA channel the better alternative. Such combined pursuit is likely if the private interest(s) seems more legitimate when firms package them with a collective interest (potential legitimacy spillover) or if a firm's investment in the political resources needed to pursue private interest(s) offers sufficient capacity to support collective interests at little or no additional cost. For example, a firm with internal lobbyists and support staff may have enough private interests justify bringing the function inside the firm, but not enough to utilize the full amount of staff time. In order to consider all the strategic opportunities present in the political landscape, we should assume that firms engage in political actions that pursue some combination of private and/or shared interests by engaging in some combination of private and/or collective action.

3.1 MAIN EFFECT HYPOTHESES

To pursue its political interests, a firm can draw on its political capabilities as well as its core competencies in the market (Jia & Mayer, 2016). In the rest of this chapter, I develop testable hypotheses that propose that the experiences and resources that underlie these capabilities will affect the overall autonomy of its CPA. First, I explore how a firm's alliance experience may make it more efficient and effective at CCPA, resulting in

less autonomy of CPA. Next, I address that a firm may naturally possess valuable political resources that give it a relative advantage at PCPA, pushing it to greater autonomy of CPA. Third, I consider that trade associations provide not just a mechanism for pursuing CCPA, but also access to potentially appropriable political resources. A firm engaging in CCPA might choose to internalize these resources as the foundation of firm-specific political capabilities that support increased PCPA. By providing access to valuable appropriable resources, investment in CCPA may enable PCPA, leading to greater autonomy of CPA over time. Finally, I address whether the relationship between prior CCPA and greater autonomy of CPA is contingent on the firm's learning capacity and its level of regulatory complexity.

Alliance Experience

Integrated strategy recognizes that market-based and nonmarket actions are highly interrelated (Baron, 1995). Scholars recognize that nonmarket actions such as political tactics influence market conditions, as when legislation and regulation influence what and how firms can produce and sell products and services. Similarly, market-based activities can influence the political arena, as when market failures trigger demand for increased regulation or industry protection. One the other hand, we know little about how knowledge and skills developed through operating in the market can be applied to nonmarket contexts – such as the political arena – in pursuit of favorable public policy and regulation. In particular, I discuss how a firm's alliance capabilities, which involve successfully managing collaboration and cooperation with other firms in the market, can serve as a source of political capabilities that lead a firm to emphasize collective political tactics.

Basing CPA on a foundation of skills and experience gained in the competitive market may provide greater strategic advantage because "imitating a firm's market capabilities and market resources is more difficult than simply gaining experience with a particular tactic" (Jia & Mayer, 2016: 10). By drawing on its market-relevant skills and experience, a firm may be capable of enacting a greater variety of political actions than if it depends on skills and experiences derived from the political arena alone. As Bonardi (2008) notes, aligning market-based and political competencies can create organizational efficiency as the relatedness between the activities decreases cost of development, allowing market and political actions to share rather than compete for resources. Specifically, I argue that firms that know how to coordinate alliances effectively in the market should also be better at coordinating political interests collectively than firms that lack this knowledge. The mechanism supporting this relationship is the ability of the knowledge and skills embedded in human resources such as knowledge of relational governance, and organizational routines to on to cross functional boundaries, as they inform strategic priorities and are passed on to others employees and divisions.

Firms with strong alliance capabilities are skilled at building and managing relationships with collaborators, as alliances between competitors can be problematic (Park & Russo, 1996). Alliance capabilities arise from alliance experience, through which firms develop the skills and abilities that comprise alliance capabilities. Critical skills include developing rapport and other relational resources (Dyer & Singh, 1998). In order to identify opportunities for collaboration, firms must have strong search and evaluation capabilities. These capabilities allow firms to identify potential collaborators who have a shared interest in some possible outcome. They also help firms evaluate which potential

collaborators have complementary resources and capabilities that will help achieve the shared interest most effectively and efficiently. These skills would be particularly useful in developing collectives (such as trade associations) and for selecting what associations to join in collective action. Even in the case of an established collective, these skills would be useful in identifying and recruiting additional members.

A primary risk in market collaboration is the risk of appropriation of valuable firm-specific assets. Firms with strong alliance capabilities are adept at collaborating in ways that leverage and build on their valuable resources and capabilities without exposing them to capture or imitation. CCPA likewise bears the risk of exposing a firm's political and market-based capabilities to appropriation. A fundamental function of lobbying through trade associations is to pool and combine resources of its members. Although the associations' efforts may be as simple as pooling funds, associations may also draw on, and potentially expose, members' valuable political resources such as access to and relationships with key politicians, technical information used in information provision, and other specialized knowledge. Firms with strong alliance capabilities can draw on their market-developed knowledge of how to collaborate effectively without exposing their most critical resources to appropriation.

Alliances, even those with formal structures, contain dimensions of relational governance. Relational contracting (Macneil, 1977) uses social contracts to govern inter-organizational relationships. Through alliance experience, the managers and staff responsible for a firm's contracting, such as its legal department, learn how relational contracts can complement and to some extent supplement formal legal contracts (Poppo & Zenger, 2002). Even when a firm's functional management of alliances is very

separate from its political affairs, knowledge of relational contracting can flow across the separation through the firm's legal function, whose managers are very likely to be involved in developing political strategy and enacting CPA.

In summary, alliances involve identifying complementary resources across firms, safeguarding firm resources against appropriation, and capturing private benefit from collaborative endeavors. Each of these skills plays a role in the effective management of collective political strategies. I argue that firms with strong alliance capabilities are likely to emphasize collective political actions, and pursue less private political action. As such, I propose:

Hypothesis 1: The greater a firm's market-based alliance experience, the less autonomous will be its overall CPA.

Political Resources

Firms may possess valuable political resources on which they can draw to build and support PCPA capabilities. Although the benefit of cost sharing generally makes CCPA a lower-cost alternative to PCPA, strong PCPA capabilities can make PCPA relatively more effective and efficient, reducing firm reliance on CCPA and making firms better able to pursue private modes when deemed appropriate. Even though the presence of PCPA capabilities does not fully predict choice of CCPA or PCPA for every action, firms with greater PCPA capabilities will generally have greater autonomy of CPA overall than firms with weak or no PCPA capabilities who may be more constrained to use of CCPA.

Just as the RBV explains differences in market strategies based on the heterogeneity of firm resources and capabilities, differences in political strategies may

arise from heterogeneity of firms' political resources and capabilities. Although much of this chapter focuses on the ways firms *acquire* political resources and capabilities, I recognize that some political resources may be inherent to a firm. In particular, some firms may possess organizational characteristics and relational assets that provide them with difficult to imitate resources such as privileged access and influence.

Access to policymaker networks is an important political resource that serves as the foundation of many other political activities. Access is an intermediate political goal that must occur before firms can hope to achieve influence with policymakers and on policy outcomes. Firms can attempt to gain access to politicians through the campaign contributions of a company-organized PAC. They can also gain access through private unofficial networks and by leveraging political resources of the firm. These latter forms of access hold greater strategic potential, as they are more difficult to imitate. Research suggests that they are also more valuable; PAC funds only influence policymakers who rely heavily on PACs to fund their campaigns, and lobbying efforts of constituents have greater influence on policymakers (Lord, 2000). As an example, firms based in policymakers' home states have greater access to and influence with policymakers because their business activities may generate economic benefits for constituents of that state.

Political resources are embodied in firms' employees, directors, and owners, especially when these persons are former politicians and/or friends and family members of active politicians. Firms owned by, or that employ, former policymakers may have valuable access to members of the former policymakers' network of influential political relationships. Although these relationships may constitute conflicts of interest, politicians

whose close friends or family members own or work for a given firm may be naturally sympathetic and inclined toward the political interests of that firm. These informal political connections can provide improved access and, more importantly, greater influence with key policymakers, serving as a foundation on which a firm can build its political capabilities (Schuler, et al., 2002). Through supporting development of PCPA capabilities, political resources enable firms to engage in political activity privately, leading firms with greater political resources to have greater overall autonomy of CPA than firms whose weak political resources allow them less opportunity to act privately. Thus, I predict:

Hypothesis 2: The greater a firm's political resources, the more autonomous will be its overall CPA.

Prior Experience with Collective Corporate Political Activity (CCPA).

A firm can use CCPA both as a means of collectively engaging its regulatory environment and as opportunity to learn and develop the knowledge and capabilities to allow it to pursue CPA on its own. Firms gain direct experience by participating in collectively organized political activities. Participating in CCPA also provides a firm access to the collective's knowledge and capabilities, which it may seek to replicate within its organization. Over time, learning from experience and internalizing externally housed resources can serve as the foundation of stronger PCPA capabilities that allow a firm to pursue both PCPA and CCPA, increasing overall autonomy of CPA.

Capabilities develop through the dynamic capability of learning through experience (Teece, 2007; Teece & Pisano, 1994). Firms acquire knowledge and capabilities through experiential learning (Nelson & Winter, 1982; Argot, 2012).

Through engaging in a function, firms accumulate experience and develop operational routines (Nelson & Winter, 1982). Nonmarket capabilities such as political capabilities may be especially difficult to develop and imitate and learning by first participating in CCPA offers firms low initial costs.

The primary means through which firms engage in CCPA is the trade association. Trade associations act as a nexus of boundary spanning capabilities (Dyer & Singh, 1998) that pool and combine member resources. They also act as storehouses of resources most efficiently organized and held within a single organization. Trade associations represent an efficient means of engaging in the political environment and gaining access to externally held political resources and capabilities. For this reason, many firms make their first forays into the political arena through trade associations. A firm can engage with an association both to manage its political environment collectively, to gain experience by directly engaging in political action coordinated by the association, and as a means of appropriating the collective's political knowledge and resources.

As part of an association, a firm gains direct experience of CPA through participating in legislative action, receptions, fundraisers, and meetings. For example, by participating in a coordinated legislative action day, sometimes called a *hill day*, a firm participates in and observes an association's well developed lobbying routines. A firm's representative can meet legislative staff and learn the processes through which interested parties can interact with legislators and their staff. Through participation and observation of the collective's routines, firms can replicate them within their own organizations. By learning from these experiences, a firm can develop its own PCPA capabilities and proprietary political resources.

CCPA provides firms access to the externally held resources of the association. Although a firm may choose to leave resources stored within the association, it can also attempt to appropriate them through replication or capture. Trade associations possess large stores of specialized knowledge about the legal and regulatory environment in which members operate. Trade associations also possess extensive networks of access to policymakers and other political actors. A firm can internalize the association's knowledge resources much more efficiently and affordably than it could build them on its own. A firm is more likely to internalize the resources if its regulatory environment is especially salient to management or if the firm has a general tendency toward learning and building firm knowledge and resources.

Through prior experience of CCPA, firms have the opportunity to gain direct CPA experience and to replicate valuable political knowledge and resources. Important technical and political knowledge can be absorbed readily and at great cost savings. Firms can acquire other, less tangible resources such as routines and relationships by observing and participating in CCPA. In this way, trade associations may house learning routines that support learning at the firm level (Kahl, 2014). By learning from these experiences, a firm can develop its own PCPA capabilities and political resources, which enable it to pursue private as well as collective political actions. As described above, increased PCPA capabilities predict an increase in the overall autonomy of firms' CPA. Thus, I predict:

Hypothesis 3: The greater a firm's prior experience with CPCA, the more autonomous will be its overall CPA.

3.2 MODERATING EFFECT HYPOTHESES

Hypothesis 3 proposes a main effect of prior collective action on the autonomy of a firm's political tactics. It argues that a firm can develop the PCPA capabilities needed to support private political action from experience participating in CCPA and through knowledge transfer of the collective's externally held political resources. However, as mentioned above, a firm may also engage in CPA purely to address its regulatory environment through collective action, and may not be motivated to use CCPA as a means to develop PCPA capabilities. To generate the remaining two hypotheses, I discuss how aspects of inter-organizational knowledge transfer affect the likelihood that a firm will use CCPA as a means of building political capabilities within its organization.

The core logic of Hypothesis 3 is one of inter-organizational learning and knowledge transfer. Easterbury-Smith, Lyles, and Tsang (2008) described inter-organizational knowledge transfer as a function of the characteristics of the knowledge donor, the nature of the knowledge, and characteristics of the knowledge recipient. Many of the characteristics thought to impede knowledge transfer between firms are less likely to impair learning between a firm and an association of which it is a member. Kale and Anand (2006) noted that once a recipient firm has learned the knowledge available from the donor firm, it will no longer have a reason to collaborate and the relationship will erode. Unlike the situation Kale and Anand (2006) describe, I argue that because associations are both a potential source of knowledge acquisition and a means of coordinating CCPA, the association/firm relationship will not be characterized by the type of protections against appropriation that typify market alliances. Because the relationship between an association and a member firm is less likely to erode after

knowledge transfer takes place, associations are likely to be more willing to provide knowledge in a way the firms can easily learn. Turning to the characteristics of the firm as learner, I focus on how the firm's capacity and motivation to learn makes knowledge transfer in the association/firm relationship more likely.

Learning Capacity.

In the lead up to Hypothesis 3, I suggested that the means by which prior CCPA leads to greater autonomy of political action is through the knowledge and capabilities firms learn and develop by participating in CCPA. Both the RBV and the literature on alliance learning recognize that firms must have available learning capacity in order to organize and retain the knowledge and resources learned through CCPA.

Learning capacity relates directly to the related concept of a firm's learning capabilities. A firm's learning capabilities reflects the ability to assimilate and imitate knowledge (Kim, 1998). Learning capacity may reveal a firm's dynamic capabilities because it reflects a firm's ability to pursue strategically oriented organizational change (Teece, Pisano, & Shuen, 1997). A firm's capacity to use knowledge gained through participation in CCPA to pursue greater autonomy of CPA depends on its ability to find, assimilate, and translate political actions learned through the collective into PCPA capabilities that support private political actions.

Learning capacity is akin to absorptive capacity (Cohen & Levinthal, 1990), a theoretical construct linked to research and development that has many variants and is often used to describe firm learning from the external environment (Lane & Lubatnik, 2008; Zahra & George, 2002). Absorptive capacity generally relates to technical knowledge and market-based activities, and has a recursive relationship with

organizational learning (Lane, Koka, & Pathak, 2006). I adopt learning capacity as a parallel concept to absorptive capacity, differentiating primarily to reflect the non-technical and nonmarket domain through which learning capacity affects the development of political knowledge. I argue that learning capacity underpins the dynamic capability of learning that enhances firm political capabilities.

A firm with greater learning capacity will be more likely to use CCPA as an opportunity for inter-organizational knowledge transfer for two reasons. First, as learning capacity grows as a function of a firm's prior learning endeavors, the firm will become more aware of opportunities to learn from its inter-organizational learning relationships, and better at scanning for appropriable knowledge. Second, greater learning capacity means that a firm will have the technological and human resources needed to assimilate and internalize knowledge and resources within its organizational boundaries. Increased learning capacity will allow firms to absorb much more of the resources and capabilities they encounter through participation in CCPA, increasing the value of their prior experience with CCPA. Thus, I predict:

Hypothesis 4: Learning capacity will positively moderate the relationship between prior experience with CCPA and autonomy of CPA.

Regulatory Complexity

The salience of its regulatory environment will affect a firm's motivation to learn and develop internal PCPA capabilities. CPA has a stronger influence on firm performance among highly regulated industries (Lawton & Rajwani, 2012) and firms facing hostile regulatory regimes target different political actors (Holburn & Vanden Bergh, 2008). Firms that engage in collective CPA in regions of emerging economies

where stronger institutional infrastructure reduce regulatory obstacles are more likely to also pursue private political action (Jia, 2014), making their overall approach to CPA more autonomous.

A firm's regulatory environments can differ from the regulatory environment of others on several dimensions. In particular, regulatory environments can exhibit different levels of complexity, intensity and stringency. Regulatory complexity reflects the quantity and scope of regulation experienced by firms. Regulatory stringency reflects the difficulty of meeting the regulatory requirements imposed. Prior CPA research has only explored regulatory intensity (e.g. Holburn & Vanden Bergh, 2014), which reflects the fervency with which regulators enforce regulations, and the relative stringency of regulations. I focus on regulatory complexity as a more objective, observable, and stable measure of the differences in the regulatory environments that firms face.

Greater regulatory complexity manifests as increases in the scope and quantity of regulation. A firm governed by a larger number of regulatory agencies experiences greater regulatory complexity. Similarly, regulatory complexity is greater for a firm that must comply with a broader scope of regulatory requirements, such as when a firm produces and sells different types of regulated products and services. For example, different products may have different testing standards, and different financial service offerings may require differing degrees of licensing. Greater regulatory complexity increases firms' costs of regulatory compliance, leading to increased managerial attention to regulatory issues, reflecting their greater salience.

Firms that experience greater regulatory complexity are more likely to face different political issues and challenges, decreasing the overlap in policy interests that

they share with other firms. The decreased similarity of interests may make some interests more difficult to coordinate collectively, reducing firms' incentives to collaborate. If firms cannot pursue some issues collectively, firms have a greater need to develop proprietary PCPA capabilities to support private political action, increasing their incentive to learn from their CCPA experience.

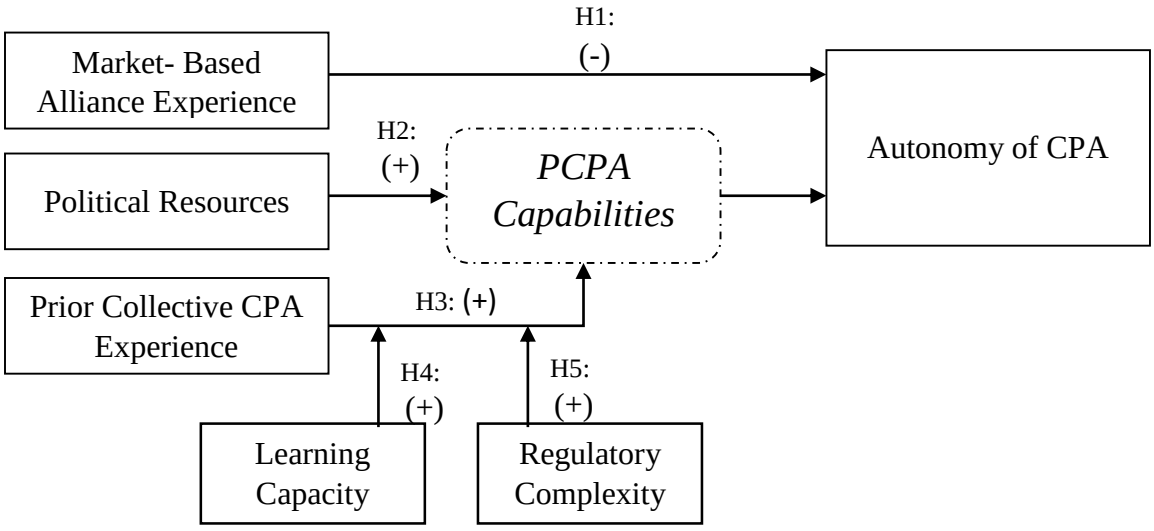
Increased regulatory complexity also affects the potential value of the opportunities firms have to learn through CCPA. Because of the higher costs associated with its regulatory compliance, a firm with greater regulatory complexity may have more at stake in seeking to proactively change its regulatory environment to reduce its costs. In contrast, a firm facing lower regulatory complexity may have a higher threshold of acceptance for the current role of regulators and have less interest in trying to change its regulatory environment. Because interests in changing regulatory policy diverge at opposite ends of the complexity continuum, political action may be more difficult to coordinate collectively, causing a firm with greater regulatory complexity to be motivated to build its own PCPA capabilities so that it has greater ability to pursue CPA privately as well as collectively, leading to greater autonomy of CPA. Thus, I predict:

Hypothesis 5: Regulatory complexity will positively moderate the relationship between prior experience with CCPA and autonomy of CPA.

Figure 1 illustrates the relationship between the constructs in my theoretical model, and provides a visual summary of my hypotheses.

FIGURE 1

Theoretical Model



CHAPTER IV

RESEARCH METHODOLOGY & DATA

Despite a fair amount of theoretical attention to collective action, very few empirical studies have tested what factors influence a firm's choice to pursue collective action, private action, or both when pursuing political tactics. This chapter explains the empirical setting in which this dissertation tests the hypotheses presented in the previous chapter. The chapter begins with a brief description of the basic research method proposed. I then discuss the empirical context in which I based my study, and I describe my sample selection and sample frame. Next, I describe the sources from which I draw data and summarize my data collection and management process. Following the section of data sources, I list and describe how I constructed an operational measure of each conceptual variable. Next, I present the statistical model I use to estimate my conceptual model, before turning to the discussion of the actual data analysis and results in the next chapter.

4.1 DESCRIPTION OF RESEARCH METHOD

This dissertation takes a quantitative approach to studying the phenomenon of interest, testing the hypothesized causal relationships on a large panel of archival data. Because I am interested in isolating firm-level effects, I will conduct my analysis on data of a single industry in a single institutional context. The panel data format allows me to explore differences both across firms and within firms over time. I estimate models using econometric methods and analyze data using *Stata*, a statistical analysis software program.

Empirical Setting

I conduct my analysis in the empirical setting of the United States insurance industry. In the following section, I provide a brief summary of the United States insurance industry and its regulatory framework. I then show how insurance makes an ideal setting to explore my research on autonomy of CPA.

In 2014, the United States insurance industry (including related activities) accounted for 2.5% of the United States gross domestic product (Insurance Information Institute, 2016). In the same year, insurance carriers wrote $1.1 trillion of net written premium (the total direct written, less amount reinsured). Insurance carriers employed an annual average 1,448,700 persons in 2014. Agencies, brokers, & other insurance related activities employed an additional 1,017,100 persons (Insurance Information Institute, 2016).

Under the federal McCarran Ferguson Act (1945), insurance companies are regulated by each state rather than by the federal government.[1] The National Association of Insurance Commissioners is an association of state insurance regulators, formed to coordinate regulation of insurance companies operating in multiple states. In 2014, the NAIC recognized 6,118 insurance companies as holding licenses in one or more states and/or territories. Insurance companies fall into one of two categories: Property & Casualty (P&C) and Life & Health (L/H). Because the statutes that enable and constrain insurance operations differ between these categories, states license an insurance company as only one type of insurer. An insurer may form, for example, under a state's life

[1] In 2008, U.S. Congress repealed sections of McCarran Ferguson as part of the process of healthcare reform. This repeal does not apply to P&C insurance and so is beyond the scope of relevance for this paper.

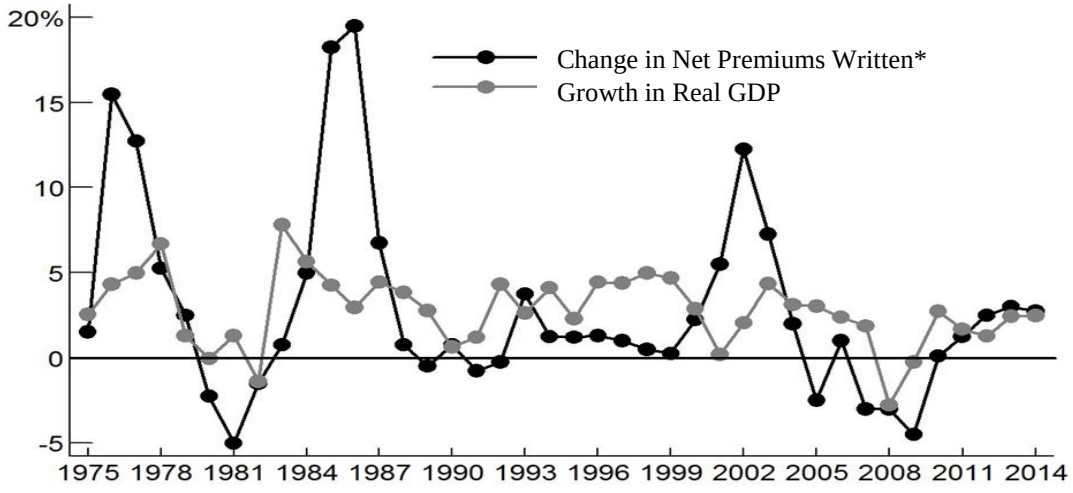
insurance statute, or the state's P&C statute, but not both. Insurance groups, made up of a holding company and subsidiaries, may contain companies licensed under different statutes, but each company licenses pursuant to only one statutory category. The P&C Insurance sector accounted for 2,891 of licensed companies in 2014 and the L/H sector comprised the remaining 3227 companies (National Association of Insurance Commissioners, 2016). The NAIC further breaks these categories down into five reporting groups including Property & Casualty Insurers; Title Insurers; Health Entities; Life, Accident & Health Insurers; and Fraternal Societies.

The insurance market is cyclical in nature, shaped by soft and hard market conditions. The insurance market cycle is different from, but related to, the business

FIGURE 2

Insurance Market Cycle

Percent change from prior year, P&C Net Premiums Written & 1975-2014



Excludes State Funds and other residual market insurers.
(*) GDP implicit price deflator adjusted
Source: ISO®, a Verisk Analytics® business & U.S. Bureau of Economic Analysis

economic cycle. Figure 2 illustrates the insurance market cycle as a function of yearly change in Net Premiums Written (Insurance Standards Office, 2015). In a soft market, insurance availability increases as market competition between insurers increases. As premium prices drop, the amount of risk assumed per the amount of capital available to support the risk increases, until some inflection point where the market begins to harden. In a hardening market, insurance prices increase and availability decreases as insurers exit some markets or reduce the amount or types of risks they are willing to assume. Eventually, the market turns again as potential profitability driven by high premium costs attracts additional capital. Market competition is not the only influence on the insurance market cycle. Major catastrophes and general economic factors affect the quantity and value of capital held by insurers that is available to support risks they assume.

The insurance industry has a substantial impact on the economic institutions in the United States and internationally. Yet, the insurance industry is a relatively novel empirical setting in the field of strategy research where few scholars have used insurance as an empirical context (for exception see Schimmer, 2012), although it supports an active body of research in the applied economics of risk and risk management. This relative lack of management research may be an artifact of the intricacies such as those presented by the industry's use of non-GAAP statutory accounting principles (SAP), and the industry's highly specialized technical language. These intricacies may make the industry less appealing to outside researchers and those interested in cross-industry comparability.

Despite its proprietary language, the insurance market functions similarly to the markets for other goods and services in which management scholars more commonly

conduct research. Insurance *products* relate to the transfer and distribution of risks. Risks are future hazards whose frequency and severity are uncertain. Insurance companies that operate in the market enter into (sell) contracts called insurance policies through which they agree to indemnify (meaning to compensate for harm or loss) the insured or affected third-party for losses that may incur as a result of future hazards during the period of time specified by the policy. Insurance companies require many of the same resources as industrial organizations and service firms, such as human and capital resources. Like other industries, differences in the strategies and performance of insurance companies can be explained by heterogeneous resources and capabilities possessed by the company and its management.

The insurance industry offers an incredibly rich source of publicly available data. All insurers must file detailed annual reports with state insurance regulators. As a result, researchers can test hypotheses on the full spectrum of companies, not just large and publicly held corporations. I describe the novel and extremely rich data available through insurance company statutory filings in the section on sources of data.

Insurance is an excellent industry in which to study CPA, as its highly complex regulatory system makes regulation and the political environment particularly salient issues for insurance managers. The insurance industry's history of political spending evidences this salience. In 2014, the insurance industry reported over $151.4 million in lobbying expenditures, making it the second largest source of lobbying dollars behind the pharmaceuticals industry (Center for Responsive Politics, 2016). In context, this amount represents 0.8% of the premium taxes paid by insurers in that year (Insurance Information Institute, 2016) or 11.64% of the 2014 aggregate budget of insurance departments. With

over twenty national trade associations (Insurance Information Institute, 2016) and substantial political activity on the part of individual companies, the insurance industry presents an ideal setting to study autonomy of corporate political strategies and the configuration of collective and private approaches to CPA.

My prior work experience helps me understand the complexities of the insurance industry and navigate the complicated web of data the industry provides. To complete this dissertation I draw on both my training as a management scholar and researcher and my knowledge of the insurance industry's political environment. Before pursuing my PhD, I worked for a corporate insurance group for seven and a half years, during which I learned to speak the industry's unique and technical language and the inner workings of the industry. In particular, my experience with insurance governance, variations in state insurance law, regulatory compliance, and the multi-state regulatory framework of the National Association of Insurance Commissioners provides me particular insight into the empirical and practical setting of my dissertation.

To validate that my perspective on autonomy of CPA and my hypotheses were correct, I spoke with several of my former contacts and other industry experts. My insurance company contacts included the CEOs of one regional and one national insurance company and the CFO of a national insurance company. My trade association contacts include the following people from two national associations: one data specialist, three current and former vice presidents of legislative affairs, and one vice president of financial policy. My contacts confirmed that firms pursued both private and collective strategies, provided additional insight into alliances in the insurance industry, and validated that insurance was a good context to study autonomy of CPA.

Sample Selection

I set my dissertation analysis in the P&C industry sub-category to focus my study, reduce variation in financial statement data formats, and control for issue-related differences in the volatility of the political environment (not theorized in this dissertation). Of the five NAIC industry subcategories (Property & Casualty Insurers; Title Insurers; Health Entities; Life, Accident & Health Insurers; and Fraternal Societies), P&C presents the largest block of insurers reporting on a common statement format. Additionally, the regulatory environment of health-related insurers has been particularly volatile over the past decade; regulation of health insurance has been the subject of much debate and alteration as part of the United States national health-care reform movement.

My sample consists of the full population of P&C companies operating in the United States insurance market between 2005 and 2014. These years represent a relatively complete insurance cycle, reflecting both decline and gain in percent change of premiums by year (Insurance Information Institute, 2016). The period also corresponds with good availability of electronic data. My sample consists of the full population of during the sample time period. Because filing with the NAIC is compulsory, I am able to observe an unusually complete panel of insurance companies.

4.2 DATA COLLECTION AND MANAGEMENT

Data Sources

The archival data analyzed in this dissertation come from several sources, including proprietary data repositories and publicly available datasets. In the following section, I will identify the various types and sources of data I collected.

My primary data source is the statutory financial statements filed by all United States-licensed and authorized insurance companies and collected and compiled by the NAIC. Insurers file quarterly and annual statements that contain a vast array of financial, managerial, and demographic information. The NAIC maintains a data repository that includes quarterly and annual filing data, updated annually. Firms file annual and quarterly financial statements on one of five types of statement *blanks* tailored to the different categories of insurance. These categories include Property & Casualty (P&C) insurance; Life, Accident & Health insurance; Fraternal insurance; Title insurance, and Health insurance. The P&C annual statement is affectionately known within the industry as the *Yellow Peril* in recognition of the bright yellow cardstock cover in which print versions of the statement were historically bound.

Under the federal McCarran Ferguson Act (1945), each state regulates the insurance companies that operates in its boundaries, but the National Association of Insurance Commissioners (NAIC) facilitates and has largely standardized reporting requirements across states. The NAIC formed in 1871 to coordinate regulation of insurance companies operating in multiple states. The association is governed by insurance regulators from 56 states, territories, and districts and maintains offices in three United States cities. The NAIC's stated mission is (National Association of Insurance Commissioners, 2015: para. 5):

> to assist state insurance regulators, individually and collectively, in serving the public interest and achieving the following fundamental insurance regulatory goals in a responsive, efficient and cost effective manner, consistent with the wishes of its members: Protect the public interest; Promote competitive markets; Facilitate the fair and equitable treatment of insurance consumers; Promote the reliability, solvency and financial solidity of insurance institutions; and Support and improve state regulation of insurance.

For this dissertation, I acquired all P&C annual statement filing data for the years 2000 through 2014.[2] The database includes both quantitative and qualitative data formatted as .csv (text saved as a spreadsheet) files. Each year of data includes between 263 and 432 separate .csv files containing data from specific statutory page, supplement, and exhibit numbers. Each .csv file corresponds to a separate .pdf file describing the record layout. The database is comprehensive for quantitative data across all years, but the amount of qualitative data included in the database varies over time, improving with advancements in filing formats. In earlier years, not all qualitative fields were converted and included in the electronic repository. For example, the first page (known as the jurat, or signatory, page) of the P&C annual statement lists the names of each of the company's officers, directors and trustees. In 2005 and 2006 only, the first three names were stored in the electronic data repository. In 2007, the format of the repository's record layout for the first page data expanded to record all officers' and directors' names.

I supplemented the NAIC database with insurance company information from A.M. Best Company. A.M. Best provides insurance company ratings, financial data, and industry-focused news among other insurance information products and services (A.M. Best, 2016). Through their insurance data custom projects service, I acquired the names and titles of P&C insurance company officers and directors for 2005 and 2006, and the calculated quick liquidity ratios for P&C insurers from 2005 through 2014.

[2] The data I acquired excludes filings made by captive insurers. Captive insurance is a special type of insurance where the captive insurer is a wholly owned subsidiary of an existing business entity for the specific purpose of insuring only the risks of the insurer's parent and affiliate companies. Because captive insurers do not offer insurance in the primary insurance marketplace, the NAIC has ruled that the demographic and other information contained in their statutory statements are not publicly available.

I further supplemented the NAIC database with data on alliance formations from the SDC Alliance and Joint Ventures Database. The SDC data I acquired includes data on alliances formed by one or more companies in 4-digit SIC Code classification 6331 (Fire, Marine, & Casualty Insurance), 6351 (Surety Insurance), and 6361 (Title Insurance). The data includes 233 observations of alliances and joint ventures during years 2000 through 2014. In order to better understand the nature of alliances in the insurance industry, I conducted informal interviews with two expert informants in December 2015.

I collected data on national and state political office holders from several publicly available primary and secondary sources. This data extends further back in time than my primary dataset to allow me to observe political experience gained by individuals prior to becoming directors and/or officers of companies in my sample. For state political office-holders, I combined data on state legislators from the *Individual State Legislator Shor-McCarty Ideology Data* (Shor & McCarty, 2015) and the *State Legislative Election Returns (1967-2010)* database (Klarner et al., 2012). The Klarner et al. (2012) database is a panel of 308,125 election outcomes by state and year that includes individual-level data on elected and seated legislators. The Shor-McCarty (2015) database provides individual-level data on 20,783 legislators from 1993 through 2004. I supplemented the state legislator data with the *Governors Dataset* (Klarner, 2013) and data on state Governors gathered from official state websites. The *Governors Dataset* includes a panel of 7,818 observations by state and year of information on the Governors of 50 states from 1925 to 2016.

For data on national political office holders, I collected demographic data on members of the United States Senate and House of Representatives from the Biographical

Directory of the United States Congress website (bioguide.congress.gov). For data on members of United States Senate and House committees I combined the *Committees in the U.S. Congress, 1947-1992* dataset (Nelson, 2005) and the *Congressional Committee Assignments, 103rd to 112th Congresses, 1993—2011* dataset (Stewart & Woon, 2011) with the House and Senate Committee Rosters for the 113th Congress (CQ Press, 2015).

Data Management

A major contribution of this dissertation is the novel data used to test hypotheses, but the scope and complexity of the data presented distinct challenges in terms of data management. In the following section, I summarize my data management process. First, I discuss the process by which I extracted the data of interest from the NAIC dataset. Next, I describe my process for coding the SDC alliance data, and for combining the political datasets. I then briefly address the issue of record linkage and data disambiguation. Finally, I describe my protocol for managing the code used to create my dissertation dataset.

In order to test my hypotheses, I had to extract the specific data of interest from the large quantity of data contained in the NAIC Annual Statement data. My first step was to create a series of tables that mapped the location of critical data items in the collection of .csv files, copies of which I attach as Appendix A. The map was required because the format of the statement *blank* changed over time as the NAIC modified the statement to improve the information collected for regulators, to reflect changes in insurance laws and regulation, and in response to emerging issues. As a result, a given piece of information (e.g., the value of a company's total liabilities) may correspond to a different line number and/or page number in different years. The .csv files arrived with

data organized in long format (few columns but many rows), where two or more columns created a matrix of line identifiers and values. To add to the complexity, the record layout document did not record changes in line number. I acquired a .pdf or print version of each statement year in order to verify manually the line number and location of the information of interest.

The variables are located in cells nested in varying columns, identified by line numbers within numbered files. Although the files are numbered in a roughly sequential order, some exhibits (or pages) are broken out into multiple files (or combined into single files) across years, and may appear in a different order within the statement. Each file number is comprised of eight digits including the letter *P* denoting the P&C statement form, a four-digit year identifier, and a three-digit file identifier. The conversion sheet allowed me to generate code in Stata to extract common information from different record locations and combine them into a tractable wide-format data file.

Calculating autonomy of CPA, described more fully in the next chapter, provides an example of the challenge presented by the data mapping process. To calculate the variable, I use data from the *Other* section of the statements' general interrogatories. The content and format of this section was unchanged between 2000 and 2014, but the three digit file identifier of the appropriate file changed nine times and the range of line numbers associated with the data changed nine times (but not parallel with the change in file identifiers) from 40a through 42b in 2000 to 33.1 through 35.2 in 2014. The numeric values of the data are in two different columns and the qualitative detail in a third column. The number identifying each of the three columns in the record layout changed

either two or five times between 2000 and 2014. Appendix A includes select tables from the conversion sheet.

To get from data embedded in a series of .csv files to a single dataset on which I could run analysis, I generated a series of Stata .do files. To help organize these files and to make sure the process was replicable I created a data management protocol in Microsoft Excel. The protocol describes a workflow where separate branches, associated with data from different parts of the statement form, go through separate do-file sequences before converging into a single process branch. I chose this more complex workflow protocol rather than a single sequential process to allow me to update changes to the data management code in any given branch to by rerunning just the code in the given branch and from the convergence point forward. In general, each branch process contained two convergence stages, which I describe as an "append" stage and a "post-append" stage, and generated between two and sixteen intermediate data files. Appendix B provides a copy of the protocol summary.

Because the SDC database returned only 232 records of alliances in the SIC codes associated with my sample (6331, 6351, and 6361), I coded the SDC Alliance data by hand. The data I used consisted of three fields of data including a quantitative field listing the date the alliance was announced, a qualitative list of the participants' short names, and a short text description of the deal. I first reviewed each deal description to verify it involved one or more property/casualty insurers and to extract names of parent companies not listed among the participants. I generated a list of deal participants for each year across observations and eliminated any that were clearly not property/casualty insurance companies (such as manufacturers or life insurers). I next matched this list of

deal participants to companies in my dataset on a year-by-year basis, to prevent falsely attributing alliances to firms who later merged with the true alliance participant.

The SDC data reported deal participants at either corporate or business unit levels, whereas the observations in my NAIC-based dataset are at the business unit level. I drew on my experience in the insurance industry, consulted the A.M. Best and website and performed Google searches to link business units and corporate parents and affiliates. When the SDC deal participant matched my dataset at the business unit level, I recorded both the NAIC Company Code and Group Code (if applicable). When the SDC deal participant did not match to a business unit in my data set, but matched at the corporate level, I recorded the NAIC Group Code. Finally, I calculated a sum of alliances by firm year and by group year.

The data management protocol includes two branches related to the political data I use. This group of data required the least transformation, most likely because it comprised data sets whose authors have processed and formatted the data for use in prior studies. In terms of the Senate and House Committees' data, data management primarily consisted of merging the data sets, extracting the committees of interest and transforming the data from a committee by year panel to a state by year panel. Similarly, combining the Shor-McCarty (2015), and Klarner et al. (2012) state legislator databases with the Klarner (2013) governors' database primarily involved recoding some variables for consistency across data sets and converting the files to a common, merge-able format. For instance, the Shor-McCarty database is in a wide panel format with many columns and a single row per individual. The Klarner et al. (2012) legislator database, on the other hand, is in a long panel format with many rows (168,262) each representing a legislator

elected in a given state year. For this dissertation, I was only interested in time as an attribute of the political office-holder's tenure, so I transformed the data sets into cross-sectional data and combined the files. The most time-consuming aspect of working with individual name-identified data involved standardizing the names to facilitate record linkage and disambiguation.

To manage my dissertation data, I adopted a number of record linkage techniques. Record linkage is the process of matching data on one entity across multiple databases, or eliminating duplication in a single data set by connecting all observations on that entity (Christen, 2012). Data scientists also call the process data disambiguation because prior to linking, ambiguity exists as to whether or not the data relate to the same entity. Unique data identifiers for each entity facilitate record linkage. The NAIC data I analyze uniquely identifies my unit of analysis (the insurance companies) by numeric company code (CoCode), and I could easily match data across data files using merge commands.

Low quality data identifiers make record linkage more challenging when they are not completely unique or provide inconsistent and/or insufficient information. Individual names are a common record linkage challenge; names are poor data identifiers because they are rarely unique, are entered in inconsistent and often incomplete formats, are frequently misspelled, and may change over the course of a person's life. Unfortunately, individual names are the most commonly used individual identifier, and my political resource hypotheses rely heavily on coding individual-level data.

The process of record linkage involves several steps. The first step involves reducing ambiguity by standardizing the data fields. The second step, known as indexing, involves identifying what other attributes associated with an observation can be used to help

confirm or disconfirm a match. Next, the process involves grouping possible matches together (frequently in pairs if matching datasets), and finally qualitatively evaluating the linkage (Christen, 2012). Ultimately, record linkage tools cannot be relied on to match data; they can only narrow the field to make qualitative matching faster and easier, and even this capacity relies on the researcher's ability to identify and design meaningful indexing criteria.

Stata offers multiple programs to assist researchers with data linkage, including the user-written programs *reclink* and *reclink2*, and the soundex command. *Reclink* (Blasnik, 2010) uses bigram-type string comparators and user-defined indexing weights to match a "best" pair of records one to one across separate data files. *Reclink2* (Wasi & Flaaen, 2015) builds on and generalizes *reclink* to allow many to one matching between data files, which can help when adding an additional year of data (for example) or when matching an entity in one file to more than one potential "best match" in another file. Stata's soundex command uses a phonetic algorithm to convert string data by replacing heterographic homophones (groups of letters spelled differently but pronounced the same, e.g., *ph* and *f*) with a numeric code. Soundex is useful for removing spelling errors and data ambiguity that may occur when a name has multiple common spellings. Soundex can generate potential matches both across files and within a single data file.

I used both reclink variants and soundex in aggregating and de-duplicating my dissertation data. To combine the Klarner et al. (2012) and Shor-McCarty (2015) state legislator datasets I first standardized the legislator's name field so that each dataset used the same format. I selected the following four variables common to both datasets to use as additional matching attributes: state, first year in office, party affiliation, and

legislative chamber. Next, I merged the files to identify perfect matches. After removing the perfect matches and saving them to a new file, I ran reclink and exported the results to a spreadsheet, which I reviewed by hand, keeping qualitatively good matches and rejecting matches I assessed as type two errors by deleting the fields added from the *using* file. I imported the resulting file of matched data and unmatched data from the master and using files and appended it to the saved perfect matches. As a last step, I merged the file to the reclink *using* file in order to add back the data from the *using* file that I had deleted in rejecting the type two errors.

The largest data disambiguation project in my data was undoubtedly cleaning the directors and officers (D&O) data fields and preparing them for match to the political data files. The NAIC dataset contains D&O data for every filing company from 2007 through 2014, which I appended into a single file. This data file contained the following fields: first name, middle name, last name, suffix, title, company code, and year. The A.M. Best file of D&O data for 2005 and 2006 listed name, title, and company code in three fields. I cleaned and standardized the datasets separately due to issues of data availability timing, format, and iterative learning, but generally applied the same basic process to both files, as recorded in Stata .do files listed in my data management protocol.

The cleaned and standardized data presented distinct challenges to disambiguation. First off, the primarily company-level dataset provided no additional individual-level attributes to support name matching. Second, names had potential to vary across multiple intersecting fields. The name of an individual could vary within a single company across years if the data were entered inconsistently or misspelled in some years. For individuals who served multiple companies, names could also vary across companies within and

across years. Finally, some name data even varied within a single company year when an individual who served as both a director and an officer's name appeared multiple ways. I capitalized on the relative stability of company directors and officers over time by first disambiguating within company code across years then across companies and years.

I ended up using a combination of soundex and relatively basic Stata commands rather than the more sophisticated record linkage tools, because I was concerned about record ambiguity within a file rather than across files. I used *duplicate tag* and *egen/group* syntax to group potentially duplicate names in multiple stages. At each stage I used multiple approaches, including matching on soundex-transform or first letter of a name field and excluding whole fields from the duplicate criteria. I attempted to preserve name variants that provided more information and were most commonly used and automated as much of the string replacement as feasible. For example, I first coded the length of a middle name string, and then tagged the number of duplicates that matched using the full middle name and the number that matched using just the first initial. I grouped the potentially matching names if the number of duplicates were unequal, and ordered the observations within the group by the length variable. After quickly scanning to look for exceptions (such as when a father and son who share first and last names but have different middle names work for the same company), I executed code that replaced all middle name strings in a group with the full middle name listed in the first observation. When matching across companies and years, I used company-level attributes including company name, group name, and domicile state to assess potential qualitative matches.

After disambiguating D&O names within both the NAIC and A.M. Best files, I appended the files and repeated the process, again removing variation within companies and across years first, then between companies and years. Although this added one more step than would have been needed if I had been able to combine the files before starting the disambiguation, I was able to reuse much of the code I used on the previous files that sped up the process. Finally, to prepare to match the D&O data to the political data, I generated a unique ID number for each distinct name in the D&O data, saved the full firm by year by individual panel, and created a reduced file containing just the cross-section of D&O individuals. To create the political resource data, I used reclink2 to match the individuals in the D&O cross-sectional file on a one to one basis to individuals in the political data, indexing on state where appropriate and using various date data to assess the quality of potential matches.

The trade-off to data disambiguation is the potential to introduce type one measurement error in the process of eliminating (or drastically reducing) type two measurement error that exists when multiple observations of a single person are treated as separate individuals because the name data is ambiguous. In general, data disambiguation should reduce total measurement error. If the remaining error is as good as randomly (AGAR) distributed, I can reasonably ignore its effect on my analysis (Rubin, 1976). Despite the possibility that I may have been more accurate in reducing duplication among names of people I recognized from my experience working in the insurance industry, and the reality that soundex is better at matching names originating from English-language cultures, I assume that type one and type two data are AGAR in my D&O and political datasets.

4.3 VARIABLES AND OPERATIONAL MEASURES

My theoretical model predicts effects of three main explanatory variables and two moderating variables on a single dependent variable. In the following section, I describe how I constructed operational measures of each conceptual variable for use in hypothesis testing. Table 2 provides a summary of the operational variables.

Dependent Variable: Autonomy of CPA

The dependent variable in this dissertation is *Autonomy of CPA.* Unlike most prior work on CPA, I follow De Figueiredo and Tiller (2001) and Ozer and Lee (2009) in measuring a firm's mode of political action on a continuum rather than as a dichotomous or categorical choice. Autonomy measures the proportion of total CPA pursued through private means, and reflects the degree to which firms pursue strategic value from their regulatory environment. I observe firm level of spending on CPA, recorded as private (PCPA) or collective (CCPA). I calculate Autonomy of CPA as:

$$\frac{PCPA_{i,t}}{PCPA_{i,t} + CCPA_{i,t}}$$

As stated in Chapter III, my definition of autonomy as a continuum provides distinct benefits. First, it allows us to observe both a firm's use of CCPA and PCPA in a single measure. Next, it captures and summarizes a dynamic construct that varies over time. A continuum provides additional measurement-based benefits in that it brings all observations onto a common scale, providing many of the benefits associated with normalizing variables and allowing improved inter-firm comparison.

I measure autonomy as a proportion rather than as another type of continuum for several reasons. First, a proportion-based measure is conceptually intuitive when

TABLE 2
Summary of Operational Definitions of Variables

Variable	Operational Definitions
Dependent Variable	
Autonomy of CPA	Private Political Spending as Proportion of Total (Private and Collective) Political Spending
Explanatory Variables	
Alliance Experience	
Non-Equity Alliance Experience	Log of the Count of Reinsurance Alliances Partners and SDC Alliances Announced Within the Prior 5 Years
Equity Alliance Experience	Log of the Count of Equity Investments made in Alliances and Joint Ventures Within the Prior 5 Years
Political Resources	
National Political Resources	Number of Directors and/or Officers of a Company who Served in U.S. Congress
State Political Resources	Log of Number of Directors and/or Officers of a Company who Served in State Legislatures or as State Governor
CCPA Experience	
Prior Collective CPA Experience	Lagged Collective Political Spending (CCPA at Year *t*-3)
Moderating Variables	
Learning Capacity	
Learning Capacity	Total Payroll & Employee Welfare Expense
Regulatory Complexity	
Quantity of Regulators	Log of the Number of States in Which the Company is Licensed
Scope of Regulation	Log of the Number of Lines of Insurance the Company is Authorized to Offer
Control Variables	
Senate Access	Square of the Number of Senators from a Company's State of Domicile Assigned to the Senate Banking Committee
House of Rep. Access	Log of Representatives from a Company's State of Domicile Assigned to House Financial Services Committee
Market Share	Company Premium as a Proportion of All Premiums
Firm Age	Years Elapsed Since Company Commenced Business
Corporate Group	Whether Company is a Members of Insurance Holding Corporation System
Slack	Quick Liquidity Ratio

considering how firms configure two similar actions, and scales easily to correspond to another easy to understand continuum such as percentage. Most importantly, it maximizes statistical power by including all observations where the company engaged in either or both modes of action, allowing more firms to be included in the analysis than a would be allowed by a ratio of one mode to the other. Firms with a higher level of autonomy place greater emphasis on PCPA than do firms with lower levels of autonomy. If observed continually, firm level of autonomy shifts with each additional action taken. Given a set level of autonomy not equal to one, an additional privately pursued action will always increase autonomy; although both the numerator and the denominator increase, the numerator increases at a greater rate than the denominator.

If firms engage in either only CCPA or only PCPA, the firm will have an autonomy score at one of the ends of the range. Firms that only pursue CCPA will have a zero autonomy score, and additional collective actions will not affect their scores. Similarly, firms that only pursue PCPA will have an autonomy score of one, and additional private actions will not affect their scores. How substantially autonomy changes with an additional political action depends on the relationship between the frequency and expense of a firm's actions. Firms that take few, expensive actions will experience greater turbulence in autonomy scores, while firms that engage in more frequent, less costly actions will have autonomy scores that change more incrementally.

I measure autonomy using data from the NAIC P&C annual statement general interrogatories. The *Other* section of the general interrogatories contains data on firm's regulatory expenditures. The NAIC provides filing companies with the following

instructions for responding to this interrogatory (National Association of Insurance Commissioners, 2015b: 14):

33. The purpose of this General Interrogatory is to capture information about payments to any trade association, service organization, and statistical or rating bureau. A service organization is defined as every person, partnership, association or corporation that formulates rules, establishes standards, or assists in the making of rates or standards or the information or benefit of insurers or rating organizations.

34. The purpose of this General Interrogatory is to capture information about legal expenses paid during the year. These expenses include all fees or retainers for legal services or expenses including those in connection with matters before administrative or legislative bodies. It excludes salaries and expenses of company personnel, legal expenses in connection with investigation, litigation and settlement of policy claims, and legal fees associated with real estate transactions including mortgage loans on real estate. Do not include amounts reported in General Interrogatories No. 33 and No. 35.

35. The purpose of this General Interrogatory is to capture information about expenditures in connection with matters before legislative bodies, officers or departments of government paid during the year. These expenses are related to general legislative lobbying and direct lobbying of pending and proposed statutes or regulations before legislative bodies and/or officers or departments of government. Do not include amounts reported in General Interrogatories No. 33 and No. 34.

I code autonomy of CPA by automatically assigning expenditures reported in the first interrogatory as CCPA, and expenditures reported in the second interrogatory as PCPA. I individually code responses to the third interrogatory to either CCPA or PCPA depending on the information provided in the response detail. I drop data with no detail in responses to the third interrogatory because I am unable to code it as collective or individual.

The statutory reporting requirements of my empirical setting allow me to observe more about firms' CPA expenditures than is common for all industries, including participation in formal associations. Although trade associations represent most collective political action on companies, not all collective CPA need be organized through formal

channels. My measure of autonomy captures only those collective actions organized through formal associations.

Explanatory Variable: Alliance Experience

I measure alliance experience separately for equity and non-equity alliances, in response to scholars who argue that focusing exclusively on equity alliances forms an incomplete picture of their effect (Cullen Johnson & Satako, 1995; Zollo Reuer, & Singh., 2002). One of the key features of my dissertation is the extremely rich data on which I test my hypotheses. To both ground my study in prior literature and take advantage of the unique data, I drew from existing measures of alliances in the management literature and interviewed industry experts about how alliances manifest in the insurance market.

Equity Alliance Experience. I operationalize *Equity Alliance Experience* in a manner consistent with the alliance literature in management research. Research employing archival data relies primarily on counts of prior alliances to serve as a measure of the accumulation of alliance experience (Anand & Khanna, 2000). Because archival data sources primarily record alliance formations, this measure often takes the form of cumulative counts of alliance formations (e.g. Sampson, 2005; Wang & Zajac, 2007). To eliminate left censoring of data caused by observing alliances formed after a specific year (such as the beginning of a data set), researchers count cumulative alliance formations over a rolling prior five-year period (Heimeriks & Duysters, 2007) or calculate the average number of alliances formed per year over a period (e.g., Villalonga & McGahan, 2005). I adopt this measure as it reflects a firm's opportunities to learn from its alliance

experience over a meaningfully recent period and because alliance termination data is not consistently available for all of my alliance measures.

For my measure of equity-based alliance experience, I observed investments in Affiliates, Joint Ventures, and Partnerships as reported in Schedule BA Parts 1 and 2 (depending on year) of the NAIC P&C statutory annual statement. An affiliate is defined by regulators as any company that shares common ownership, control, operation, or management with an insurer, where common control is presumed to exist if the insurer owns 10% or more equity in the affiliate (NAIC, 2015c). I excluded investments reported as having characteristics of fixed income instruments, real estate, and collateral loans; collateral loans are a form of securities lending rather than an indicator of alliance activity. Further, I eliminated investments in mutual funds to eliminate measurement error associated with their misclassification. For each firm year, I calculated the number of alliance investments reported ($A_{i,t}$) and summed this value over a five-year window ending in the observation year. Because I anticipate diminishing returns to the knowledge acquired as firms' number of alliances increase, I report the natural log of the five-year sum as Equity Alliance Experience.

Non-equity Alliance Experience. Because much of the existing literature on alliance experience studies the bio-tech industry, I interviewed insurance industry experts to make sure I understood if alliance concepts articulated from that setting had corollaries in the insurance industry. I asked each interviewee to read a short summary of concepts from the alliance literature via email. I then gave them examples of alliances in biotech and R&D, and asked them to think of similar relationships insurers pursued related to market activities. The interviews revealed two primary types of alliances insurers form:

MGAs (managing general agency relationships) and reinsurance fronting. I reviewed the NAIC annual statement data and determined that I would be able to observe reinsurance fronting arrangements consistently over the sample period.

Reinsurance fronting involves one insurance company (the front) issuing policies that it then fully (or close to fully) reinsures to another insurance company. Such arrangements exist to allow companies to pool complementary resources to serve insurance consumers that neither firm could currently serve given their individual resource endowments. In the case of reinsurance fronting, one company has capacity and appetite for a particular type of risk, but lacks the regulatory resources (usually in the form of license to provide insurance in the given jurisdiction) to pursue the business on its own. Reinsurance fronting is not a simple market activity like partial cessions and quota-share reinsurance, but relies instead on relationships built between partner insurers with complementary resources and interests.

Insurers are required to report reinsurance contracts that involve cession of 75% or more of direct premiums written in Exhibit F Part 3 of the statutory annual statement. For each firm year, I observe each such fronting relationship reported. I calculate the number of distinct fronting/alliance partners a firm reports in a given year. I then calculate the number of distinct fronting/alliance partners reported during a moving window of five years ending with the observation year. I chose to include distinct partners listed rather than repeat count partners with each year because I view relationships that spill over from year to year as continuations of the same alliance rather than formations of new alliances.

To ground my study in the alliance literature, I supplemented my NAIC data with data from the SDC Alliance and Joint Ventures Database, a data source frequently used to study alliance experience (add cite). As described in the data sources section above, I code the SDC data at both the firm and group levels. For each firm that does not belong to a corporate group, I recorded alliance at the company level. For each firm that belongs to a corporate group, I recorded alliances at the group level, reflecting alliances formed by any member of their corporate group. I next compared each firm's SDC alliance announcements to its equity alliance investments made in the year before through the year following the alliance's announcement, and calculated the sum over five years of alliances not already observed as equity alliances. Finally, to calculate a firm's non-equity alliance experience, I combine the five-year sums of the number of non-equity alliances from the SDC database with the five-year sums of number of unique fronting alliance partners from Schedule F, and take the natural log of the total.

Explanatory Variable: Political Resources

I measure political resources as the political experience of a company's officers or of members of its Board of Directors. I measure this experience two ways to reflect the different levels that make up the insurance regulatory environment: state and federal governments. The political experience of a company's directors and officers acts a proxy for the political knowledge and know-how of the firm's strategic decision makers. This experience also encompasses the political relationships and influence held by directors and officers that a firm may hope to use to its own advantage or activate through affiliation with the given director. This study *does not* assume that the a politically

connected director or officer directly performs the activities and tactics that make up a firm's corporate political strategy.

State Political Resources. Historically, insurance has been part of a primarily state-based regulatory environment. Per the McCarran–Ferguson Act (1945), insurance companies in the United States are regulated at the state level. States empower regulatory agencies, generally known as Insurance Departments, and establish insurance laws and regulations through state legislative processes. I measure each firm's state-based political experience as the number of its directors and officers that served as a state Governor or in the legislature of its state of domicile. Because I anticipate diminishing marginal returns to the knowledge and relationships gained through additional directors' experience, I take the natural log of the count.

National Political Resources. In addition to the official state-based regulatory framework, insurers must attend to the national political environment. Although health insurance is outside the scope of this study, readers may be familiar with the Patient Protection and Affordable Care Act (2010), the most widely recognized and successful attempt to govern (health) insurance at the federal level. Within the context of property and casualty insurance, examples of federal insurance regulation include the Federal Liability Risk Retention Act (1986) and several recent attempts to create an optional federal charter. I measure a company's national level political experience as the number of its directors and officers who served in the United States Congress.

Explanatory Variable: Prior Collective CPA

To measure the opportunities a firm had to learn and develop firm-specific political capabilities through prior CCPA experience, I record the amount the firm spent

on CCPA three years prior to the observation year. To evaluate the measure, I compared the effect of measuring three-year versus five-year lags; the results were similar. Ultimately, I chose the three-year lag because three years reflects a meaningful window of prior experience's influence on current strategy (Parmigiani & Holloway, 2011) and the length of time a firm might invest in deliberate learning through the association. To better match the scale of the dependent variable, I scale and report dollars spent are in hundreds of millions. As with my measure of autonomy of CPA, my measure of prior CCPA captures only collective actions organized through formal associations. This measure appropriately reflects a firm's access to the knowledge, skills, and routines embedded in formal organizations of collective action.

Moderator Variable: Learning Capacity

Learning Capacity. In Chapter III, I propose that a firm's ability to internalize political knowledge and capabilities it develops through participation in CCPA and translate that knowledge into increased autonomy depends on the firm's capacity for learning. Although firm knowledge can be stored in many formats, the ability of a firm to encode and make use of new knowledge is embedded in a firm's human resources. Assuming that greater human resources provide increased capacity to learn, encode, and apply new knowledge, I measure a firm's expenditures on payroll and employee welfare as a proxy for its learning capacity. Payroll and employee welfare expenditures are the best measure of learning capacity in a service industry where R&D is not a meaningful measure.

Moderator Variable: Regulatory Complexity

In Hypothesis 5, I propose that the complexity of a firm's regulatory environment moderates the relationship between prior CCPA experience and increased autonomy of CPA. I argue that the costs, risks, and potential opportunities posed by regulation make CPA more salient and strategically important. Prior CPA research has tested the related construct of regulatory intensity instead of complexity. I assume that the stringency of laws and regulations are relatively constant across states as a function of the NAIC's efforts toward uniformity. I measure regulatory complexity in two ways: as the number of state regulators to whom a company is accountable, and as the number of lines of insurance, which determines the scope of rules and regulations to which their operations expose the company. These measures best reflect the differences between firms in how much regulation they face, and how many different regulatory regimes with which they may need to gain access and interface.

Quantity of Regulators. I measure the quantity of regulators to whom a company is accountable as the log of the number of states in which a company is licensed. Each state has its own primary insurance regulator that holds authority to regulate all companies licensed in its jurisdiction. Each state also has its own legislative body and process that determines the laws, rules and regulations that insurance departments enforce. The greater the number of states in which a firm is licensed, the greater is the number of regulatory regimes and potentially idiosyncratic state laws the firm must manage. To reflect likely diminishing marginal complexity, I take the natural log of the count of state licenses.

Scope of Regulation. I use the number of lines of business a company is authorized to sell as a proxy for the variety and scope of rules and regulations that inform regulatory complexity. The NAIC categorizes thirty-five lines of insurance under the P&C umbrella, including three types of reinsurance. A list of the different lines of insurance is included in the tables in Appendix A. Firms must file rates and forms for different lines of insurance (such as homeowner's insurance or professional liability), exposing the firm to different scopes of regulation. States may also adopt laws and regulations particular to different lines of insurance. Because of increased filing requirements, rules and regulations, and line-specific laws, a firm that offers many lines of insurance has a more complex regulatory environment. Although the amount of distinct regulation imposed by each line varies, number of lines serves as a rough proxy for the scope of a firm's regulatory requirements. To reflect that some amount of similarity will likely apply between any pair of lines, resulting in decreasing marginal complexity, I take the natural log of the number of lines a firm offers.

Control Variables

In order to isolate the effects of my explanatory and moderator variables, I include several control variables in my statistical model. Prior empirical research on factors that influence the autonomy of CPA are extremely limited. Both De Figueiredo and Tiller (2001) and Ozer and Lee (2009) draw on Olson's (1965) theory of collection and emphasize industry concentration. My single industry context setting allows me to automatically control for between-industry effects. The broader literature on the antecedents of CPA adds institutional and firm-level factors worth considering. Again,

because my data came only from U.S.-licensed companies, I implicitly control for institutional factors.

I control for a set of time variant state-level political variables associated with firms' potential alternate access to political influence. Because political office holders are more responsive to their constituents than to non-constituents (Long, 1997), I control for possible constituency access effects that might accrue to firms through the Senators and Representatives of their state of domicile. The Senate Banking and House Financial Affairs committees act as gatekeepers of important insurance policy issues in United States Congress. I control for access to the ***Senate Committee*** by measuring the natural log of the number of seats on the committee held by Senators from a firm's state of domicile. I control for Access to the ***House Committee*** by measuring the square of the number of seats on the committee held by Representatives from a firm's state of domicile.

I include several additional firm level controls. I measure a company's quick liquidity ratio as control for firms' level of available ***Slack*** (Bourgeois & Singh, 1983), a variable that CPA researchers commonly observe (e.g., Lenway & Rehbein, 1991). Here, slack represents resources that are easy to access and deploy, rather than resources that are absorbed or unabsorbed (Borgeois & Singh, 1983). The quick liquidity ratio measures an insurance company's quick assets divided by net liabilities plus ceded reinsurance balances payable, making it a meaningful measure of slack in the insurance context (Schimmer, 2012). Quick assets are the sum of cash, unaffiliated short-term investments, unaffiliated bonds maturing within one year, government bonds maturing within five years, and 80% of unaffiliated common stocks (A.M. Best, 2016).

I measure ***Market Share*** as a firm's total premiums for a given year (left-censored at zero) as a proportion of the sum of total premiums for all firms in that year to control for effects of firm size and market power. The conventional measures of firm size in management research are total sales and total assets (e.g. Waddock & Graves, 1997). In my empirical setting of P&C Insurance, statutory accounting principles unique to the industry complicate measurements of firm size. For example, firm size measured as total assets includes not only the firm's assets, but also assets held by the firm in reserve for future payment of losses to policyholders. Because of statutory accounting standards, firm size measured as sales can quite possibly be negative. In insurance, written premiums are the equivalent of sales. However, in insurance, firms must *earn* premiums over the life of the policy; if the insurer or insured cancels policies sold in the prior period sales in the current period may be negative. I left censor my measure of market share at zero to make the notion of market share more intuitive. Market share is fully correlated with firm size measured as total premiums written $r(21,327) = 1.00$, $p<0.01$. Both market share and firm size are significantly correlated with Learning Capacity $r(21,327) = 0.88$, $p<0.01$.

I calculate the years transpired since the company commenced business to control for ***Firm Age***. Lastly, I include a dummy indicator of whether or not the company reports to the NAIC as a member of a ***Corporate Group***.

Statistical Estimation

In order to analyze the effect of my explanatory and moderator variables on firm level of autonomy in CPA, I model the following regression equation:

$$\begin{aligned} Autonomy_{it} = {} & \beta_0 + \beta_1 AllianceCap_{it} + \beta_2 PolResources + \beta_3 PriorCCPA_{it} \\ & + \beta_4 Learning\ Capacity_{it} \times PriorCCPA_{it} \\ & + \beta_5 Regulatory\ Complexity_{it} \times PriorCCPA_{it} + \beta_n x_{it} + \alpha_i + \gamma_t \\ & + u_{it} \end{aligned}$$

where *i* = firms, *t* = year, χ is a vector of n time-variant controls, α_i is fixed effects of firm, and γ_t is a vector of year indicators. Including firm and year fixed effects allows me to further control for time invariant firm-level effects and time trends. In the following chapter, I discuss how aspects of the data and available econometric tools influenced my testing of the model.

CHAPTER V

EMPIRICAL TESTING AND RESULTS

I test my statistical model on a panel of 21,329 firm years, composed of 2,779 firms observed over ten years. My unit of analysis is the firm year. Because I study autonomy of CPA, I observe only firm years in which the firm engaged in CPA, and take great care to ensure that missing data is not a problem. I evaluate several methods of statistical estimation, taking into account the atypical distribution of the dependent variable, issues of identification, and robustness of specification before selecting fixed effects linear regression with clustered standard errors. Counter to my predictions in Hypothesis 1, I find a significant positive effect of equity alliance experience, and no significant effect of non-alliance experience. For Hypothesis 2 I find support for state, but not national, political resources. The analysis reveals that CCPA (Hypothesis 3) does not affect autonomy on its own, but has a significant effect when interacted with learning capacity (Hypothesis 4). For Hypothesis 5 I find a significant positive effect when prior CCPA is interacted with regulatory complexity as quantity or regulators, but find no effect for the interaction of CCPA and scope of regulation.

In the following section, I describe the process by which I tested my hypotheses on the P&C insurance dataset. I start by detailing my analysis and resolution of potential missing data issues. Next, I provide a brief analysis of descriptive statistics, before explaining how I selected a statistical model to interpret. I provide a summary of the results of my hypothesis testing and describe robustness checks I applied. Finally, I discuss the results and address limitations of this study. Table 3 provides a summary of the findings regarding Hypotheses 1-5 from Chapter III.

TABLE 3
Summary of Results

Hypothesis	Operational Variable	Significance	Direction of Effect
H1: The greater a firm's market-based alliance experience, the less autonomous will be its overall CPA.	Non-Equity Alliance Experience	$p = 0.30$	N/A
	Equity Alliance Experience	***p* = 0.01**	Opposite Predicted
H2: The greater a firm's political resources, the more autonomous will be its overall CPA.	National Political Resources	$p = 0.27$	N/A
	State Political Resources	***p* = 0.05**	As Predicted
H3: The greater a firm's prior experience with CPCA, the more autonomous will be its overall CPA.	Prior CCPA (Lagged 3 years)	Conditioned	N/A
H4: Learning capacity will positively moderate the relationship between prior experience with CCPA and autonomy of CPA.	Prior CCPA x Learning Capacity	***p* = 0.04**	As Predicted
H5: Regulatory complexity will positively moderate the relationship between prior experience with CCPA and autonomy of CPA.	Prior CCPA x Complexity (# of Regulators)	***p* = 0.01**	As Predicted
	Prior CCPA x Complexity (Scope)	$p = 0.08$	Opposite Predicted

5.1 PANEL SUMMARY AND MISSING DATA ANALYSIS

The data panel describes data for years 2005 through 2014. The unit of analysis is the firm-year, with a firm identifier as the cross-sectional (panel) variable, and year time variable. The panel consists of N = 21,329 firm-years of 2,779 firms. Not all company cross-sections include data for all 10 years, resulting in an unbalanced panel. The main limiting factor in my panel is my dependent variable, as I can only apply my statistical model to observations with values of the dependent variable.

The unbalanced nature of my data panel necessitates careful evaluation of potential missing data and possible introduction of bias. Data can be missing from the data set for several reasons including attrition, entry, theoretical exclusion (undefined value of DV), or failure of the data set to record a true value of a variable. Both attrition and entry result in monotonic missing data (Little & Rubin, 2014). In the case of attrition, firms may have exited the sample prior to 2014 because they merged or ceased operation, resulting in right-tail monotonic missing-ness. On the other hand, newly formed firms may have entered the sample after 2005, resulting in left-tail monotonic missing-ness. Table 4 lists the number of firms that entered or exited the panel and the total number of firms observed by year.

TABLE 4
Attrition and Entry of Firms from/to Sample

Year	Firms in Panel (CPA)	(-) Exits (CPA)	(+) Enter (CPA)	Firms in Panel (Autonomy)	Firms w/ Gaps	(-) Exits (Autonomy)	(+) Enter (Autonomy)
2005	2751		2743	2062	348		2062
2006	2774	71	94	2105	308	44	184
2007	2816	39	82	2168	316	42	128
2008	2834	34	54	2216	316	40	101
2009	2822	66	51	2204	313	90	80
2010	2782	74	36	2174	295	78	59
2011	2762	65	45	2169	312	87	51
2012	2731	66	37	2126	311	106	49
2013	2693	71	32	2070	306	126	38
2014	2663	51	22	2035	327	131	27
Total	3,205	2659		2,779		2035	
Firms with Gap:			9				476
Total Firms w/o Gap:			3,196				2,779
Exits before 2014:			537				744
Enter after 2005:			453				717

Non-monotonically missing data presents as gaps in the panel cross-section, with valid data present in both an earlier and a later year. These gaps are of most concern if true values of the variables exist but are unobservable, for various reasons that can include measurement error. The other cause of data gaps is theoretical exclusion, where there no *true* value of the variable exists. Theoretical exclusion is responsible for at least some of the missing data in this panel. Because my dependent variable is a calculated ratio, it is undefined for observations where the denominator is zero. Recall that the denominator of my dependent variable is Total CPA; if a firm does not make any CPA expenditures in a given year, autonomy is undefined and will result in a gap in the firm's data cross-section. In the latter case, the missing data is generally ignored. In the former, non-random missing data can bias the results.

To determine the cause of the gaps in the dataset, I coded an additional variable (CPA) as a dummy indicator of whether a firm made any investment in CPA (either collective or private) in the observation year. Table 5 shows the analysis of missing data, listing the number of observations in the sample by their tenure in the panel. Column 1 lists the number of firms, and column 2 lists the number of firms with no missing values of CPA between their first and last year in the panel.

Out of the 27,628 firm year observations that comprise my sample frame, 61 were missing values for the CPA dummy (less than 0.2%). To verify that this data is missing completely at random (MCAR), I coded a gap indicator and regressed it on the explanatory, moderating and control variables of my main model using probit regression. The likelihood ratio of the probit was not significant, F (chi2, 24) = 121.45, p=.25, failing to reject the hypothesis (H_0) that the data were missing at random. I dropped the 61 firm

years from the panel, ensuring that gaps in the dependent variable arose from theoretical exclusion rather than incomplete data.

TABLE 5
Firm/Year Observations by Year

Years in Panel	CPA # of Obs	CPA w/o Gap	Autonomy # of Obs	Autonomy w/o Gap	Autonomy w/ Gap
10	22870	22870	13,100	13,100	0
9	1044	1026	2,502	1197	1305
8	992	976	1,608	976	632
7	665	658	1,358	889	469
6	618	612	780	570	210
5	515	505	660	465	195
4	416	412	544	388	156
3	219	219	369	246	123
2	178	178	266	204	62
1	111	111	142	142	0
Total Firm Years	27,628	27,567	21,329	18,178	3,152

5.2 DESCRIPTIVE STATISTICS

Table 6 provides summary descriptive statistics for the dependent, explanatory, & control variables. For each variable, the table includes the mean, the standard deviation, the minimum and maximum values, and the variable inflation factor (VIFs). I transformed variables as described in Chapter 4 to account for non-linearity in their theoretical distribution and improve the linearity of the model; the transformations are noted in the table as superscript following the variable name. All variables, except the DV, are scaled by a factor of 1/10.

The mean value of Autonomy of CPA for firm/years in the sample is 0.37. As discussed in Chapter 4, I measure Autonomy as the proportion of PCPA to Total CPA. A mean of 0.37 tells us that on average, firms in my sample spent 37% of their total CPA expenditures on PCPA. The remaining 63% represents spending on CCPA.

TABLE 6
Descriptive Statistics

	Mean	SD	Min	Max	VIF
Autonomy of CPA	0.37	0.37	0.00	1.00	
Non-Equity Alliance Experience[a]	0.06	0.33	0.00	4.54	1.01
Equity Alliance Experience[a]	0.03	0.19	0.00	3.22	1.10
Nat'l Political Resources	0.01	0.12	0.00	2.00	1.01
State Political Resources	0.16	0.45	0.00	4.00	1.03
Prior CCPA Experience[c]	0.05	0.28	0.00	11.17	46.40
Senate Committee[b]	0.31	0.35	0.00	1.10	1.02
House Committee[a]	13.22	20.25	0.00	100.00	1.04
Firm Age[e]	41.97	41.05	-1.00	262.00	1.25
Corporate Group	0.66	0.47	0.00	1.00	1.36
Learning Capacity	0.02	0.07	0.00	1.56	6.33
Market Share	0.04	0.19	0.00	4.29	4.71
Regulatory Complexity (# of Regulators)[a]	2.06	1.35	0.00	4.03	1.48
Regulatory Complexity (Scope)[a]	5.78	5.31	0.00	30.00	1.59
Slack	154.84	253.64	0.00	999.90	1.09
Prior CCPA x Complexity (Regulators)[d]	0.00	1.09	-0.17	43.97	49.69
Prior CCPA x Complexity (Scope)[d]	0.00	0.74	-0.12	25.60	7.87
Prior CCPA x Payroll[d]	0.00	0.31	-0.02	16.20	7.33

All variables except Autonomy of CPA scaled by 1/10
[a] logged, [b] squared, [c] lagged, [d] 2nd variable mean centered, [e] negative firm age reflects firms that filed an annual statement the year before the commenced business (began issuing policies)

Alliance Experience is a relatively rare organizational attribute among firms in my sample. Ninety-nine percent of firms in my sample had no recorded Non-Equity Alliance Experience in at least one firm/year in the panel, resulting in a Non-Equity Alliance Experience of zero in 95% (20,345) of firm/years. Similarly, only 126 firms in my sample had non-zero equity-based alliance experience in at least one firm/year, resulting in non-zero Equity Alliance Experience in only 1.79% (505) of firm/years.

Unsurprisingly, both alliance experience variables display heavily right-skewed distributions. Among the limited number of firms in my sample that employed strategic alliances, the largest number of alliances experienced (in a prior 5-year window) were 93 non-equity alliances and 24 equity-based alliances.

The political resource variables are also heavily right-skewed. Twenty-one thousand fifty-two firm/years have National Political Resources and 18,458 firm/years have State Political Resources equal to zero. Unlike the alliance variables, the political resource variables have a much narrower range of observed values. The maximum number of officers and directors of a single company who held state political office is four, and this number in just in 16 firm/years. Only two companies, in a common corporate group, had more than one director and/or officer who served in United States Congress.

The 3-year lagged measure of CCPA ranged from zero (4,921 observations) to $111.69 million, but 95% of the data were under $1.7 million. Fifty percent of firm/years had lagged CCPA of less than $425,700. With such heavily skewed data, the median is a better indicator of central tendency than the mean (with a reported average lagged CCPA of $4.85 million).

A staggering 21% of firm/years incurred no payroll. Possible explanations for firms with no employees include inactive firms and small firms that outsource all their functions, either to a corporate affiliate or to professional management companies. Slightly more than 50% of the observations with zero payroll are of firm members of a corporate group, compared to the 66.13% of all observations in the panel of firms that belong to a corporate group.

The Regulatory Complexity variables are the least heavily right-skewed of the explanatory variables. Regulatory complexity as number of regulators is bi-modally distributed, with firms cluster around one (7,587 firm/years) and 51 (1,316 firm years), with 51 state licenses held just barely edging out 2 (1,302) as the second–most frequent value. The two modes correspond with the concept of the classic single-state and multi-state insurers. Specialty insurers make up the majority of my sample; 50% of observations are of firms that sell four or fewer lines of insurance, with 6,987 firms offering only one or two lines.

Table 7 provides the correlations between variables used in the model. Despite being mean centered, the interactions of Prior CCPA with Regulatory Complexity (States), Regulatory Complexity (Lines) and Payroll are highly correlated with their underlying terms and each other. Analysis of the variable inflation factors (VIFs) listed in Table 6 reveals a similar pattern. High collinearity among interaction terms is mathematically expected. I mean-center the interactions to reduce the VIFs associated with the interactions and their underlying terms (Kennedy, 2008). The primary consequence of multicollinearity is lower statistical power that results in reduced p-vales and overall model fit (R^2) as the shared variance is drawn into the error term. Since none of the non-interaction explanatory variables demonstrate high correlations or VIFs, multicollinearity does not appear to be a problem outside the expected interactions.

TABLE 7

Correlations for Explanatory, Control, and Interaction Variables

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1) Non-Equity Alliance Experience	1.00																
2) Equity Alliance Experience[a]	-0.01	1.00															
3) Nat'l Political Experience[a]	-0.02	0.03	1.00														
4) State Political Experience	0.01	0.03	0.06	1.00													
5) Prior CCPA Experience[c]	0.00	0.22	0.01	0.01	1.00												
6) Senate Committee[b]	0.00	0.00	0.04	0.04	0.02	1.00											
7) House Committee[a]	0.03	0.04	-0.02	-0.04	0.02	0.09	1.00										
8) Firm Age	0.01	0.07	0.06	0.08	0.14	0.08	0.03	1.00									
9) Corporate Group	0.01	0.08	0.04	0.10	0.10	0.04	0.05	0.05	1.00								
10) Learning Capacity	0.01	0.28	0.01	0.01	0.81	0.01	0.03	0.17	0.14	1.00							
11) Market Share	0.03	0.23	0.00	0.03	0.75	0.02	0.03	0.16	0.14	0.88	1.00						
12) Regulatory Complexity (States)[a]	0.05	0.10	0.03	0.03	0.22	0.04	0.05	0.17	0.32	0.23	0.29	1.00					
13) Regulatory Complexity (Lines)[a]	0.06	0.10	0.08	0.12	0.25	0.02	0.00	0.39	0.32	0.30	0.33	0.34	1.00				
14) Slack	-0.04	-0.06	-0.03	0.01	-0.07	0.00	0.00	-0.09	0.03	-0.10	-0.09	-0.09	-0.19	1.00			
15) Prior CCPA x Complexity (States)[d]	0.00	0.21	0.01	0.01	0.99	0.01	0.02	0.12	0.09	0.80	0.74	0.25	0.23	-0.05	1.00		
16) Prior CCPA x Complexity (Lines)[d]	0.00	0.20	0.01	0.02	0.90	0.02	0.02	0.16	0.09	0.80	0.74	0.21	0.34	-0.06	0.91	1.00	
17) Prior CCPA x Learning Capacity[d]	-0.01	0.17	0.00	-0.01	0.90	0.00	0.01	0.06	0.04	0.70	0.64	0.94	0.09	-0.02	0.90	0.75	1.00

[a] logged, [b] squared, [c] lagged, [d] centered

5.3 METHOD OF STATISTICAL ESTIMATION

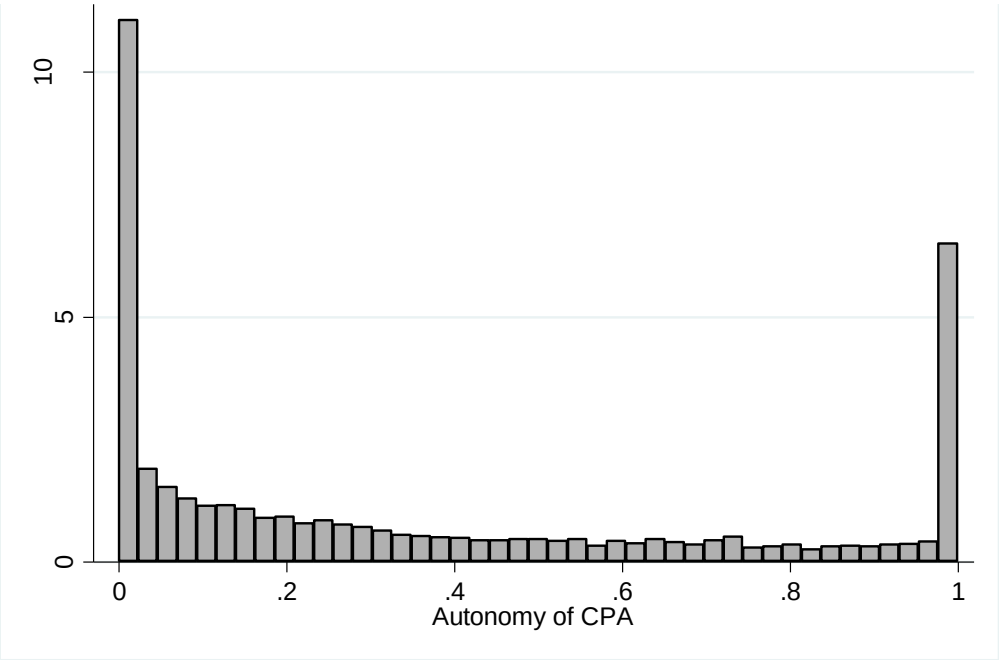
To choose the correct statistical model to estimate my theoretical model, I considered several factors and weighed the strengths and weaknesses of multiple models. To avoid mis-specifying the model, I consider potential issues arising from the atypical distribution of the dependent variable, identification and endogeneity, and adherence of my data to critical assumptions that underlay the models. In the following section, I provide a brief review of the possible estimation methods I evaluated, and explain why I choose to use and interpret the fixed effects general least squares (GLS) regression model.

Distribution of the Dependent Variable

Autonomy of CPA is a limited dependent variable. As a proportion, it is theoretically bounded between zero and one. The distribution of proportional data presents challenges as it does not conform strictly to either a linear or a fully non-linear distribution. Figure 3 provides a graph of the density distribution of Autonomy of CPA. The graph shows that most of the observations combined collective and private CPA, but that large portions of the data fall at the extremes of the Autonomy proportion. Sixty-six percent of the time, firms combined collective and private approaches to CPA. The other 34% of the time firms are either fully collective (Autonomy = 0) or fully Private (Autonomy = 1). Firms are fully collective in 4,334 firm years (20.33% of the panel). Firms are fully autonomous in 2,912 firm/years (13.67% of the panel). For the remaining 66% of observations, CPA Autonomy falls between zero and one (14,083 firm years). Excluding values at the extreme bounds, the distribution of Autonomy of CPA is roughly continuous.

FIGURE 3

Distribution of the Dependent Variable: Autonomy of CPA



Econometricians categorize limited dependent variables are either censored or truncated. Data is truncated if observations where a variable exceeds a defined boundary are excluded from the sample. Data is censored if defined boundaries are imposed on observations and naturally occurring values that exceed the limits are replaced by the boundary value (Long, 1997). An example of censored data in this dataset was the QL Ratio measure of available slack. The function defined by the ratio formula diverges, but A.M. Best imposes a maximum value of 999.90, thus censoring the larger values of firms with an extremely large amount of highly liquid resources.

Although CPA Autonomy is technically neither censored nor truncated, it has a similar atypical distribution with values loaded at the outer bounds of the value. Like truncation, my sample includes only observations where the value of CPA Autonomy naturally occurs within the limits and results in a restricted sample of the population of all

firm years. Unlike truncation, however, the restriction occurs because CPA Autonomy is mathematically undefined for some observation, as discussed previously in the section on missing data. Unlike censored data, the formula for CPA Autonomy naturally converges on one as the numerator and denominator increase toward infinity. On the other hand, CPA Autonomy evidences the non-continuous jumps in data density at boundary limits that characterize both truncation and censoring. The discontinuity jumps make linear estimation of the variable problematic.

Linear regression of a non-linear dependent variable is inefficient when the limitations on the variable distribution cause biased and inconsistent estimators of the slope and intercepts. Non-linearity of the dependent variable violates the assumptions that underlie the Gauss-Markov theorem and interpretation of regression parameters (Greene, 2003). The preferred solution to limited dependent variables is the tobit model (Long, 1997).

The tobit model applies maximum likelihood (ML) rather than least squares (LS) to estimate parameters of the regression equation, and can provide consistent results in the presence of censoring (Greene, 2004a). Unfortunately, fixed firm effects are potentially biased in MLE due to the incidental parameter problem (Neyman & Scott, 1948), although the bias is understudied in tobit models (Greene, 2004b). In addition, ML estimators are inconsistent in the presence of heteroscedasticity and non-normal errors.

Identification and Causal Inference

Endogeneity, as used in causal inference, can mean many things. Broadly, it means that a relationship in observed data can be explained multiple ways (Hamilton & Nickerson, 2003; Simcoe, 2014). Sources of endogeneity are the general ways a person

could argue in favor of an explanation of the relationship different from the explanation presented. These alternate arguments can be described as arising from one or more general classes of issues including omitted variable bias, simultaneity, self-selection (Sorensen, 2012), and reverse causation (Simcoe, 2014). In order to claim a causal relationship between my explanatory and dependent variables, I attempt to prevent alternate explanations by eliminating the conditions on which critics could draw alternate explanations.

Self-selection is a special case of omitted variable bias, where the *omitted variable* reflects that, in selecting a firm's attributes and strategies (which become measurable variables), firm managers select levels of these variables based on what they expect to generate the greatest benefit. In making these decisions, managers most likely have access to a more complete understanding of the firm than can be observed from data collected. Simultaneity is a special case of reverse causation where we anticipate that both a causal and reverse causal effect are at play. I base my identification strategy for dealing with omitted variable bias on the use of firm fixed effects to control for unobserved heterogeneity between firms and its potential to bias my results. My identification strategy with respect to reverse causation is primarily theory development and careful articulation of logically consistent causal mechanisms.

Endogeneity problems arise in studies of archival data because they lack the level of control offered by randomized study designs. Observational researchers cannot ensure that firm strategies are not driven by systemic heterogeneity between firms, which in turn shapes the characteristics we use as controls. This study is not prospective in that I could not observe the autonomy of a firm's political actions prior to firms selecting those

actions. I attempt to control for the initial conditions using fixed effects in panel data to control for within-firm variation in the strategic choices make about combining approaches to CPA over time.

I apply Rubin's Causal Model (RCM) (Rubin, 1990) of observational studies in order to approximate the ideal control offered by random trials. Following the RCM, I focus on theoretical evaluation of potential outcomes (rather than just observed outcomes) and careful analysis of the *assignment mechanism* by which firms select their strategies. This dissertation specifically addresses how firms *assign* themselves to a level of CPA Autonomy by selecting modes of participation in political actions (the strategic choice), rather than how those choices influence performance outcomes.

Fixed effects estimation is appropriate when unobserved heterogeneity between firms affects the dependent variable and correlates with explanatory variables included in model. These correlated omitted variables may bias parameter estimates and cause researchers to incorrectly interpret the direction and/or magnitude of an explanatory variable's effect. To explore whether my data contains meaningful panel effects that would generate omitted variable bias, I model both a fixed effects and random effects GLS regression. A Hausman specification test (Hausman, 1978) comparing random and fixed effects GLS models generated a significant test statistic (ch2, 25) = 248.87 (p = 0.00). A significant Hausman statistic contradicts the null hypothesis (H_0) that the random effects estimator is consistent, confirming that a fixed effects model is preferred.

Violations of Key Assumptions

Because the dataset includes observations across ten years, the data are likely serial correlated. The Wooldridge Test (Woolridge, 2002) for autocorrelation in panel

data provides conclusive evidence of serial autocorrelation; the significant F-statistic $F(1, 2436) = 388.5$ supports rejecting the null hypothesis that firms are uncorrelated across years (H_0: $\sigma_\gamma^2 = 0$). Autocorrelation presents a problem because it violates the independence assumption underlying many regression models. Autocorrelation of a macro panel with a substantially greater cross-section (I = 2,779) than number of observed years (T = 10) is not too concerning, and corrections can be made in the regression model. Ultimately, I correct for serial correlation by employing clustered standard errors that mitigate serial correlation of form AR(1).

Heteroscedasticity is present in a model when the estimated model systematically predicts some data more accurately than it does other data, resulting in non-constant variance of the error term. A modified Wald test of the fixed effects linear regression model F(1, 2779) is significant at $p = 0.00$, leading me to reject the null hypothesis that the variance of the error term is constant across observation and conclude that my data is heteroscedastic in linear regression. Under conditions of heteroscedasticity, least squares regression models are inefficient but still consistent. The clustered standard errors that correct for serial correlation also correct for conditions of heteroscedasticity. Graphs of the predicted and residual values that provide visual confirmation of the heteroscedasticity are included as Appendix C.

Heteroscedasticity is model dependent, as it reflects systematic difference in the way the estimated model corresponds to the observed values. The presence of heteroscedasticity in the linear model suggests that heteroscedasticity is likely also present in tobit, but to be certain I perform a random-effects GLS regression and investigate the distribution of the errors. As of the date of this study, Stata does not have

a pre-packaged or user-written program available to test for heteroscedasticity in panel tobit; instead I compare the graphs of the dependent variable plotted on predicted and residual values to the comparable graphs of the fixed effects GLS regression found in Appendix C. The similarity of the graphs supports the presence of heteroscedasticity, under which conditions tobit is both biased and inconsistent. Although not quantitatively confirmed, the non-constant errors lead me to eliminate tobit as a viable model, especially when taking into consideration the inability to correct for omitted variable bias with fixed effects.

Before concluding in favor of fixed effects GLS, I explore a relatively new non-linear model designed specifically for similarly distributed dependent variables. I test a non-linear form of the model using two-sided censored regression (Alan, Honore, Hu & Leth-Petersen, 2011). The two-side censored regression uses the moment condition from re-censored and/or re-truncated residuals to construct a uniquely minimized objective function. In lieu of MLE, which fits the model by matching distribution of the data, two-sided censored regression reconstructs residuals that fit the assumptions about the error term and relies on OLS and least absolute deviation (LAD) to fit the model. The primary appeal of two-sided censored regression is that it allows me to include firm fixed effects while correcting for censoring and avoiding the potential bias of MLE.

The results of the two-sided censored regression are very similar to those of the fixed effects GLS regression. Because of this similarity, and drawbacks of the two-sided censored regression model, I conclude fixed effects GLS is the best model use to estimate my theoretical model. The main drawbacks of the two-sided regression are that it does not generate an estimate of the constant, uses only 2,637 of the company-identifying

grouping units, and has no existing post estimation programs available. Given the similarity of the results, I view it primarily as a robustness check to verify that potential inconsistency of my linear model does not substantially affect my coefficient estimates. I include the result of the two-sided censored regression in the last column of Table 7 for readers who are interested in the newer model.

Table 7 provides results of the fixed effects estimation of my regression model run on the full panel of data. Column 1 introduces the control variables. Columns 2 through 6 introduce the explanatory and moderator variables I use to test the hypotheses proposed in Chapter III. Column 7 presents the model with all variables. Column 8 provides the results of the two-sided censored regression model.

5.4 RESULTS

Hypothesis Testing

In the following section, I summarize the results of hypothesis testing conducted using the results on the fixed effects GLS model. I present the results in the order the hypotheses are numbered. Statistical significance tests the likelihood that, on hypothetical resampling from the same population, I would estimate an effect at least as extreme as the effect I currently estimate. Technically, I do not need to observe statistical significance in order to interpret my coefficients since my sample constitutes the full population and would not change if resampled. (Schwab, Starbuck, Bergh & Ketchen, 2009). On the other hand, the technique I adopt to correct for serial autocorrelation and heteroscedasticity modifies the standard errors rather than the point estimates of my regression coefficients. Thus, I observe statistical significance as a conservative approach to recognizing potential bias of my estimates.

TABLE 7

Fixed Effects Regression of Predictors on Autonomy of CPA

		Model (1)	Model (2)	Model (3)	Model (4)	Model (5)	Model (6)	Model (7)	Model (8)
Non-Equity Alliance Experience	H1 (-)		-0.035 (0.068)					-0.035 (0.068)	-0.085 (0.106)
Equity Alliance Experience	H1 (-)		0.288* (0.129)					0.307** (0.130)	0.426** (0.170)
National Political Experience	H2 (+)			0.157 (0.248)				0.155 (0.253)	0.090 (0.314)
State Political Experience	H2 (+)			0.013* (0.007)				0.013* (0.007)	0.023* (0.013)
Prior CCPA Experience	H3 (+)				0.240 (0.166)	-0.096 (0.230)	-0.736 (0.610)	-0.802 (0.590)	-0.656 (0.734)
Prior CCPA x Learning Capacity	H4 (+)					5.417* (2.560)		5.414* (3.100)	5.465* (3.520)
Prior CCPA x Complexity (Regulators)	H5 (+)						0.887** (0.328)	0.775** (0.323)	0.756* (0.391)
Prior CCPA x Complexity (Scope)	H5 (+)						-0.506 (0.394)	-0.563 (0.386)	-0.555 (0.519)
Learning Capacity		-2.166 (1.658)	-2.144 (1.709)	-2.208 (1.663)	-2.409 (1.629)	-3.280* (1.623)	-2.312 (1.620)	-3.176 (1.684)	-3.304 (1.968)
Regulatory Complexity (States)		-0.014 (0.009)	-0.014 (0.009)	-0.014 (0.009)	-0.014 (0.009)	-0.014 (0.009)	-0.015 (0.009)	-0.015 (0.009)	-0.023 (0.016)
Regulatory Complexity (Lines)		-0.055*** (0.012)	-0.056*** (0.012)	-0.056*** (0.012)	-0.055*** (0.012)	-0.055*** (0.012)	-0.054*** (0.012)	-0.054*** (0.012)	-0.113*** (0.023)
Market Share		-0.060 (0.051)	-0.057 (0.052)	-0.059 (0.051)	-0.063 (0.051)	-0.078 (0.052)	-0.067 (0.052)	-0.077 (0.052)	-0.084 (0.059)
Senate Committee		0.110 (0.077)	0.112 (0.077)	0.110 (0.077)	0.110 (0.077)	0.106 (0.077)	0.110 (0.077)	0.109 (0.077)	0.155 (0.125)
House Committee		-0.001 (0.002)	-0.001 (0.002)	-0.001 (0.002)	-0.001 (0.002)	-0.001 (0.002)	-0.002 (0.002)	-0.001 (0.002)	-0.003 (0.003)
Firm Age		-0.023 (0.018)	-0.023 (0.018)	-0.023 (0.018)	-0.023 (0.018)	-0.023 (0.018)	-0.023 (0.018)	-0.023 (0.018)	-0.061*** (0.005)
Corporate Group		-0.023 (0.017)	-0.023 (0.017)	-0.023 (0.017)	-0.023 (0.017)	-0.022 (0.017)	-0.022 (0.017)	-0.024 (0.017)	-0.031 (0.027)
Slack		0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)
Constant		0.610*** (0.072)	0.610*** (0.072)	0.608*** (0.072)	0.610*** (0.072)	0.611*** (0.072)	0.612*** (0.072)	0.611*** (0.072)	
Observations		21329	21329	21329	21329	21329	21329	21329	21329
R^2		0.016	0.017	0.016	0.016	0.016	0.017	0.018	

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Because my hypotheses are directional in nature, I use one-tailed tests of significance. Unless otherwise stated, p-values reported are from the fixed effects linear regression model that contains all predictors, as shown in column 7 of Table 7. Lastly, I provide a brief summary highlighting the significant findings and interpreting their marginal effects. As previously presented, Table 5 provides a summary of the results.

***Direct Effect of Alliance Experience on Autonomy of CPA*.** Hypothesis 1 states that, the greater a firm's market-based alliance experience, the less autonomous will be its CPA. This predicts a negative coefficient of the alliance experience variables in the estimated model. The results do not support the hypothesized effect.

As shown in columns 1 and 7 of Table 7, the coefficient of Non-Equity Alliance Experience is non-significant ($p = 0.30$), providing insufficient evidence to reject the null hypothesis that greater alliance experience increases or does not affect the autonomy of the firm's CPA. In contrast, the coefficient of Equity Alliance Experience is significant but positive, providing insufficient evidence to reject the null hypothesis that greater alliance experience increases or does not affect the autonomy of the firm's CPA. The significant coefficient would actually provide enough support to reject ($p = 0.01$) the opposite (not stated) null hypothesis that greater equity alliance experience reduces or does not affect autonomy of CPA. The model suggests that, on average, a 10% increase in the number of equity alliances in which a firm invested in the last five years will increase the level of autonomy of the firm's CPA by 0.004. The effect is small, even given that I measure autonomy on a fractional scale between zero and one.

***Direct Effect of Existing Political Resources*.** Hypothesis 2 states that the greater a firm's political resources, the more autonomous its political actions. This predicts a

positive coefficient of political resources in my estimated model. As shown in columns 2 and 7 of table 7, the coefficient of National Political Resources in non-significant (p = 0.27), failing to provide sufficient evidence to reject the null hypothesis that existing political resources increase or do not affect autonomy of CPA. On the other hand, the coefficient of State Political Resources is positive and significant (p = 0.05), providing sufficient evidence to reject the null hypothesis that political resources decrease or have no effect on autonomy of a firms' political actions. On average, having one more director or officer who has held state political office will increase autonomy by 0.001, again a very small magnitude of effect. Interestingly, the non-significant estimate of the effect of National Political Resources would be ten times greater than the effect of State Political Resources.

Main Effect of Prior Experience Collective Corporate Activity (CCPA).

Hypothesis 3 predicts that the greater a firm's prior experience with CPCA, the greater will be its autonomy of CPA. When introduced on its own, as shown in column 4 of Table 7, the coefficient of Prior CCPA Experience was positive and marginally significant (p = 0.07), providing weak support to reject the null hypothesis that Prior CCPA decreases or has no effect on autonomy of CPA. On introducing the interaction terms (columns 5, 6, & 7), the direct effect of Prior CCPA becomes negative (p = 0.09), demonstrating that the support for Hypothesis 3 is conditioned by the interaction terms. After accounting for interaction effects, the main effect of Prior CCPA is negative; on average an additional $100,000 invested three years prior in CCPA decreases autonomy of CPA by 0.0008. The magnitude of the main effect of Prior CCPA is extremely small,

but researchers must always evaluate conditional main effects in the context of their related moderator variables.

Moderating Effect of Firm Learning Capacity on the Relationship between Prior CCPA and Autonomy of CPA. Hypothesis 4 states that firm learning capacity will positively moderate the relationship between prior experience with CCPA and autonomy of political action. This predicts a positive coefficient of the interaction term in my estimated model. The coefficient of the interaction is positive and significant ($p = 0.02$) when it is the only interaction included in the model (column 5 of Table 7). The coefficient remains positive and significant ($p = 0.04$) when other interaction terms are introduced (column 7), inflating the standard errors due to the high collinearity among the interactions. These results provide sufficient evidence to reject the null hypothesis that the interaction reduces or does not affect autonomy of CPA. The positive significant interaction absorbs the positive effect of the main effect, indicating that when learning capacity and prior CCPA are both high, autonomy is increased.

Moderating Effect of Regulatory Complexity on the Relationship between Prior CCPA and Autonomy of CPA. Hypothesis 5 states that regulatory complexity will positively moderate the relationship between prior experience with CCPA and autonomy of political actions. This predicts a positive coefficient of the regulatory complexity interaction terms. The coefficient of the interaction of CCPA with Regulatory Complexity is marginally significant ($p = .08$) and negative, in opposition to the proposed effect, providing insufficient support to reject the null hypothesis that the interaction decreases or has no effect on autonomy. On the other hand, the significant coefficient of the interaction of Prior CCPA and Regulatory Complexity as number of regulators ($p =$

.01) is positive and in the direction predicted in all models, refuting the null hypothesis that the interaction reduces or has no effect on autonomy of CPA, and supporting Hypothesis 5.

Because the interaction variables are de-meaned interactions of one logged and one conventional variable, full interpretation is difficult. As with Hypothesis 4, I interpret that when quantity of regulators and prior CCPA are both large, autonomy of CPA increases. However, when prior CCPA and scope of regulation are both large, autonomy of CPA decreases.

In summary, hypothesis testing provides full support for Hypothesis 4, partial support for Hypotheses 2 and 5, no support for Hypothesis 1, and fully conditioned support for Hypothesis 3. The data support Hypothesis 2 for the effect of state-level political resources, but not national-level political resources. The data support Hypothesis 5 for regulatory complexity as quantity of regulators, but not as scope of regulation, where the direction of the effect was opposite what I predicted. Despite disconfirming Hypothesis 1, the estimated model finds a small but significant effect of alliance-based equity experience, but no effect of non-equity alliance experience.

Robustness Testing

I evaluate the robustness of my results in several ways. First, I tested the robustness of the model to inclusion of additional controls including percentage of foreign ownership, regulatory standing, and collective ideology associated with the organizational form. None of the alternate controls were significant or significantly improved the model. Second, based on findings by Holburn and Vanden Bergh (2014) that firms alter their CPA in advance of mergers, I reran the regression excluding all

observations of firms that exited the sample before 2014. Restricting the panel did not change the results. Next, I tested the model substituting Firm Size measured as total written premium (the measure equivalent to sales in the insurance industry) for Market Share. The substitution did not affect the results sufficiently to change the direction or significance of any of the estimated effects presented above. I tested the robustness of my findings to time-invariant differences in the stringency of regulation between domiciles by testing a model including indicators for State of domicile. Adding fixed effects of domicile did not change the direction or magnitude of any significant effects.

5.5 DISCUSSION AND LIMITATIONS

Discussion of Results

As detailed above, regression analysis supported some but not all of the hypotheses developed in Chapter 3. In the following section, I will discuss the results by drawing on the theory behind the hypotheses. I will address both significant and non-significant results, and in the latter case, theorize why results were not as expected. I organize the discussion by hypothesis numbers.

Hypothesis 1. The lack of a negative relationship between alliance experience and autonomy of CPA suggests that a firm's experience in the market may not translate to supporting related non-market activities. In Hypothesis 1, I theorized that the knowledge and routines associated with managing collaboration in alliances would make firms better at, and more likely to, engage in proportionally more collective political actions. Several plausible reasons may explain why the data failed to support my theory. First, alliances in the market may be a fundamentally different organizational function than collective action in politics and may require unrelated managerial competencies. Second, the

theoretical connection may be true, but the firms are missing out on opportunities to leverage market competencies to shape non-market activities. Baron (1999) argues that management scholars have insufficiently integrated their strategy with regard to market and non-market environments. This dissertation tests the strategic choice involved in CPA, not effectiveness of those choices; its results cannot provide guidance on whether firms can achieve greater non-market effectiveness by leveraging alliance capabilities to support collaboration in non-market arenas.

The significant positive effect of Equity Alliance Experience on CPA Autonomy is particularly worth discussing. To make sense of the result, I reviewed the nature of the partnerships that comprise the equity alliances in the dataset. A large portion of these alliance investments are in insurance-related alliances and joint ventures, which suggests interesting implications to agency theory (Jensen & Meckling, 1976). The positive relationship suggests that equity alliance experience may provide not just collaborative know-how, but align the interests of alliance partners through common governance. Aligning interests through ownership may reduce the need to collaborate on non-market issues; the aligned interests ensure that each firm's political actions will support the other firm's interests. Put another way, firms may be defining their *common interest* (Olson, 1965) in small clusters of groups by forming systems of interlocking ownership. By deploying this mechanism, firms may circumvent the collective action problem by first defining their interests narrowly enough to produce meaningful social incentives. Further, their independent actions may constitute action in pursuit of this narrower collective interest, much as described by Olson's (1965) privileged groups.

Hypothesis 2. My analysis support Hypothesis 2 for state-level political resources, but not national-level political resources. Regulation can occur at multiple levels, and different types of political resources may be better suited for supporting political action at different levels. The nexus of regulation for the United States insurance industry is primarily the state; the support of Hypothesis 2 for state but not national political resources may reflect that state-level political resources are more appropriate for addressing state regulation. The analysis finds that increased state-level political resources increases the autonomy of CPA. When a firm possesses valuable political resources of their own, they can engage more directly with their political environment, and choose a proportionally larger amount of PCPA. National political resources likely did not significantly affect autonomy of CPA in my estimated model because they did not match the level at which most insurers engage with their political environment. They might also have not been significant because too few firms possess them, causing too little variance in the explanatory variable to support statistical significance.

Careful alignment of measures of political resources with the levels at which regulatory institutions exert control and at which firms attempt to exert influence may be important in future studies of political resources. Firms may invest in political resources at the level of regulation and use these resources to attempt influence at other levels as a form of domain defense (Baysinger, 1984).

Hypothesis 3. The conditioned support of a positive main effect of prior CCPA is consistent with my theory. Although on overall average, prior investments in CCPA increases autonomy of CPA, firms with greater learning capacity and for whom

regulation is highly salient because they respond to a large number of regulators experience most of the effect.

Hypothesis 4. The support of Hypothesis 4 provides evidence of the moderating influence of learning capability on the relationship between prior CCPA and autonomy of CPA. The results suggest that although CCPA can provide firms access to appropriable resources and the opportunity to internalize them to support PCPA, not all firms may be equally able to appropriate them. Firms with fewer human resources may not have sufficient attention or learning capacity to encode the resources effectively within the firm in a meaningful way that actually makes them useful, but under conditions of sufficient learning capacity, appropriation is likely to occur.

Hypothesis 5. Similarly, the support of Hypothesis 5 for regulatory complexity as number of regulators indicates that although CCPA provides access to appropriable resources, firms may have varying levels of motivation to try to internalize them. When more regulators govern firms, the greater complexity may make managing their regulatory environment more salient, directing attention to potential opportunities the firm has to pursue private action. A greater interest in PCPA can redirect the firm's priorities and encourage firms to create internal repositories of political knowledge and resources they develop through CCPA.

Regulatory complexity increases both the burden of compliance and the opportunities for influence. The negative significant effect of regulatory complexity as scope of regulation (as measured by the number on lines an insurer is authorized to offer) runs opposite predictions. This opposite effect suggests that complexity that manifests primarily as increased compliance does not motivate firms to use CCPA as source of

organizational learning. In the context of my sample, an increase in the number of rates and forms a firm must file with regulators, which primarily increases the firm's burden of compliance, actually reduced firms' tendency to leverage their prior investments in CCPA toward increased autonomy.

Limitations

As does any empirical study of management strategy, this dissertation has limitations. In the following section, I discuss these main limitations. I identify and describe each limitation, before offering suggestions on how future research may seek to overcome it.

The most obvious limitation of my dissertation is that the empirical setting imposes boundary conditions to the generalizability of my findings. In order to generalize my findings outside the U.S. insurance industry, I must be careful to identify how differences in other industries and in the regulatory environments of other countries could eliminate or reduce my causal mechanisms. One such difference may be in levels of regulation between industries and institutions. In particular, regulatory complexity may not be a meaningful construct in less regulated industries, and/or when regulations apply equally to all firms. If regulation is of low salience, or provides fewer opportunities to engage with regulators, firms may have less incentive and opportunity to influence and/or capture their regulatory environment. The U.S. insurance industry exhibits both price and entry regulation. Future research should explore whether the findings of this dissertation are replicable in other industries that exhibit price and entry regulation.

A potentially major boundary condition is an institution's political ideologies with respect to collaboration. Corporatist and collectivist political systems hold widely

different expectations as to the nature and timing of collaboration and compromise in setting public policy (Hillman & Hitt, 1999). These expectations will shape the degree of access firms have to both private and collective political approaches. Future research may explore these boundary conditions by testing the theoretical model in other industries and in other political systems. If researchers can identify sources of data that provide sufficient information consistently across industries and political institutions, they can test the model across institutions and industries.

The methods used in my dissertation limit its ability to identify fully the causal relationships at work in determining autonomy of CPA. Future research using quasi-experimental or dynamic modeling techniques may be able to identify more precisely the circumstances under which firms engage in active learning through CCPA in order to pursue additional PCPA in the future.

Another limitation of this dissertation is my inability to measure political capabilities directly. At best, I am able to infer capabilities based on the presence of certain resources or from observations of a firm's prior experience. However, the capabilities literature shows that not all firms that engage in specific activities or that possess similar resources build capabilities around them. As research on strategic alliances demonstrates, scholars may need to adopt survey methods that use multi-item scales to uncover the capabilities that exist within firms.

As is widely acknowledged in the CPA literature, the nature of specific policy issues may drive firms' choice of political actions. Although my model intrinsically controls for the relevance of issues across industries and institutions, issues may be more or less salient to firms within the industry, and I am unable to observe the issues toward

which firms take specific political action. When firm heterogeneity of issue salience is constant over time, my model controls for issue effects through firm fixed effects. However, if firm heterogeneity of issue salience is time-variant I cannot control for its effect. I argue that both firms and issue are important levels of analysis of CPA. Hopefully, by increasing understanding of heterogeneity among firms of capabilities that support CPA autonomy, my dissertation can inform firm-specific controls to include in future studies performed at the issue level of analysis.

My analysis observes differences in regulatory complexity but does not control for differences in the intensity or stringency of regulation imposed by different states of domicile. Although my results were robust to alternate specification including fixed effects of domicile, the intensity and/or stringency of regulation imposed by any given state may also vary across time. My analysis relies on an assumption that significance effect of intensity found in prior work is primarily a function the interindustry context in which researchers conducted those studies. I also assume that the stringency of laws and regulations governing insurance do not vary meaningfully between states because the NAIC has actively pursue regulatory uniformity through creation of uniform standards and model laws and regulations. Future research should evaluate these assumptions by exploring if differences in the intensity and stringency of regulators effects the autonomy of CPA.

A final limitation of my dissertation is the ability of my proxies to represent the full effect of their related constructs. In particular, my operationalization of national political resources as officers or members of the board who served in United States Congress may not fully capture the sources of national political resources available to

firms. The current model may not adequately identify the causal relationship between political resources and autonomy of CPA. The relationship is most susceptible to claims of reverse causality and self-selection; firms that employ greater autonomy of CPA may purposely recruit directors and officers with political connections to give them greater political credibility and to facilitate more direct PCPA.

CHAPTER VI

CONCLUSION

6.1 RESEARCH QUESTION AND MOTIVATION

This dissertation investigates how a firm's alliance experience, political resources and prior collective CPA affect the autonomy of its CPA. It explores the strategic choice firms make when deciding whether to combine private and collective approaches to political action, and when selecting a level of autonomy with which to pursue CPA.

A very broad literature exists on CPA, but little theory or empirical research addresses how and why firms choose between or combine collective and private approaches to CPA. This gap is despite the collective/private action choice being identified as a key stage in the corporate political strategy decision making process (Hillman & Hitt, 1999). Early theory treated CCPA and PCPA as substitutes for each other, but recent empirical work has shown them to be compliments (Jia, 2014). Of the three prior empirical studies that model choice of PCPA and CCPA, two emphasize industry concentration, finding that Olson's (1965) theory of collective action explains some but not all of when firms choose CCPA. I build on the foundation laid by the work of De Figueiredo and Tiller (2001), Ozer and Lee (2009), and Jia (2014) to develop and test theory on how political resources and political and market-based experience influence the autonomy of a firm's overall CPA.

The influence firms seek over public policy is coming under increasing scrutiny, but beyond the implicit assumption that firms act collectively to pursue public goods and privately to pursue private benefit, we know very little about why firms engage in CCPA versus PCPA. Understanding what motivates collaboration and private action in political

activity gives us a clearer perspective on whether firms view regulation as a constraint or a source of opportunity. Investigating autonomy of CPA is important because it can help us understand the evolving roles of industry's collective voice and private influence in the changing political/business interface.

6.2 CONTRIBUTIONS

This dissertation contributes to the CPA literature by developing the construct of autonomy of CPA. The articulation of autonomy as a continuum bounded by purely private and purely collective political actions gives researchers a lens through which to evaluate collective action relative to private action and vice versa. Although combined measures of CCPA and PCPA are not new (e.g., De Figueiredo & Tiller, 2001; Ozer & Lee, 2009), my autonomy construct is theory driven and mathematically sound.

This dissertation also contributes to the growing literature connecting market and non-market strategies by linking collaboration in the political arena to the related market activity of alliance experience. Surprisingly, this study finds that collaboration is not synergistic across the market/nonmarket divide, and suggests future research to uncover if this lack of relationship is missed opportunity or an indication that market and nonmarket spheres do not integrate well.

A third contribution of this dissertation is to unpack the effect of prior learning from collective experience. This study finds experience within a collective provides opportunities for learning, but that taking advantage of this opportunity depends on a firm's learning capacity, and the complexity of its regulatory environment. This finding adds insight to the literatures on inter-organizational learning, collective action and trade associations.

6.3 THEORETICAL MODEL & HYPOTHESES

I test the following five hypotheses that predict how alliance experience, political resources, and learning through prior CCPA affect the autonomy of a firm's CPA:

H1: The greater a firm's market-based alliance experience, the less autonomous will be its overall CPA.

H2: The greater a firm's political resources, the more autonomous will be its overall CPA.

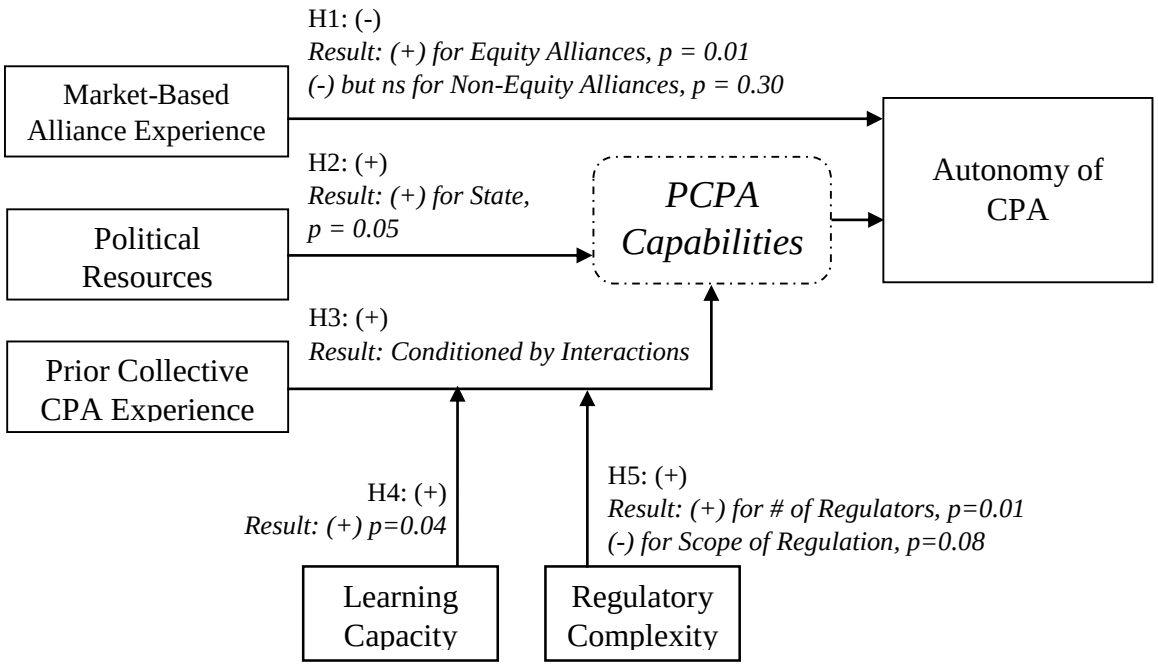
H3: The greater a firm's prior experience with CPCA, the more autonomous will be its overall CPA.

H4: Learning Capacity will positively moderate the relationship between prior experience with CCPA and autonomy of CPA.

H5: Regulatory complexity will positively moderate the relationship between prior experience with CCPA and autonomy of CPA.

Figure 4 shows the hypothesized and estimated effects of the model.

Figure 4
Theoretical Model and Results



6.4 RESULTS AND ANALYSIS

I used fixed effects GLS regression with clustered standard errors to test my statistical model on a panel of 21,329 firm/year observations of 2,779 US property casualty insurance companies over the ten-year period between 2005 and 2014. My findings support H2 for state-level political resources. Support for H3 is conditioned fully by the interactions. I find support for H4 and for H5 for regulatory complexity as quantity of regulators. Although my analysis did not support H1, I found a significant positive affect of equity-based alliance experience on autonomy. Similarly, my analysis found a significant but opposite predicted (negative) effect of the interaction of prior CCPA and regulatory complexity in the form of increased scope of regulation.

6.5 IMPLICATIONS FOR THEORY

My results suggest the following implications for theory. First, the evidence that firms do not integrate strategies of collaboration across the market/nonmarket divide has implications for integrated strategy, and prompts future research to evaluate if the lack of connection is a neglected opportunity or if the nature of collaboration is just too different in the different domains. Second, although the relationship is moderated, firms use trade associations as a means of developing firm-specific political resources and capabilities. This finding has potential implications for inter-organizational learning and theory on institutional fields. Third, the support of H2 for state political resources but not national political resources indicates the importance of matching political resources to the level of the firm's primary regulatory interface and prompts future research to consider what we can learn about firms that invest in resources at a different level. Lastly, this dissertation provides a step toward future research exploring whether different levels of autonomy

have performance implications, whether there is an optimal level of autonomy, whether maintaining flexibility to pursue both collective and private action pays off, or whether firms are better off focusing their efforts through a single approach.

6.6 IMPLICATIONS FOR PRACTICE

The findings suggest the following implications for practice. First, trade association resources are vulnerable to appropriation. However, it is unclear if the long-term effect is detrimental to the association or not. Additional research should explore whether firms that replicate association resources reduce collective spending, or if they just increase the number of political action. Second, the finding backs up prior work (Jia, 2014) that shows that collective and private approaches to CPA are complements rather than substitutes, but managers should understand that we do not yet know if different levels of autonomy lead to improved performance.

6.7 IMPLICATIONS FOR POLICY

The main implication for policy is that firms are taking multi-mode approaches to CPA. The question remains whether this constitutes a shift from a more collective approach to a more independent/competitive approach. The mixed effects of regulatory complexity provides an interesting second implication for policy; it suggests that firms view greater scope of regulatory complexity as constraining, but view increases in the number of regulators as an opportunity.

In summary, this dissertation affirms the importance of prior market and political experience in shaping how firms carry out their political strategy. I hope future scholars conduct additional research in this area.

APPENDIX A

DATA CONVERSION SHEET

TABLE A1

Company Basic Demographic File Conversion

P(year)000.csv

Data Type & Length						Line Description & Number			
2008-14	len	2007	len	2005-06	Len	Line	2008-2014	2007	2005-2006
NUM	5	NUM	5	NUM	5	CoCode	1	1	1
ALPHA	36	ALPHA	36	ALPHA	36	Co_Nm_Shrt	2	2	2
ALPHA	244	ALPHA	244			Co_Nm_Full	3	3	
NUM	5	NUM	5			Surviving_CoCode	4	4	
ALPHA	1	ALPHA	1	ALPHA	1	Bus_Type	5	5	3
ALPHA	100	ALPHA	75	ALPHA	75	Bus_Type_Desc	6	6	4
ALPHA	2					Bus_S_Type	7		
ALPHA	100					Bus_S_Type_Desc	8		
ALPHA	1	ALPHA	1	ALPHA	1	Filing_Type	9	7	5
ALPHA	10	ALPHA	10	ALPHA	10	Filing_Type_Desc	10	8	6
ALPHA	2	ALPHA	2	ALPHA	2	Co_Type	11	9	7
ALPHA	50	ALPHA	35	ALPHA	35	Co_Type_Desc	12	10	8
ALPHA	2					Co_S_Type	13		
ALPHA	50					Co_S_Type_Desc	14		
ALPHA	11	ALPHA	11	ALPHA	11	FEIN	15	11	9
ALPHA	2	ALPHA	2	ALPHA	2	ST_Domicile	16	12	10
				ALPHA	50	Address			11
				ALPHA	40	City			12
				ALPHA	2	State			13
				ALPHA	10	Zip			14
				ALPHA	30	Contact_First			15
				ALPHA	30	Contact_Middle			16
				ALPHA	30	Contact_Last			17
				ALPHA	20	Phone			18
				ALPHA	30	Officer1_First			19
				ALPHA	30	Officer1_Middle			20
				ALPHA	30	Officer1_Last			21
				ALPHA	30	Officer1_Suffix			22
				ALPHA	50	Officer1_Title			23
				ALPHA	30	Officer2_First			24
				ALPHA	30	Officer2_Middle			25
				ALPHA	30	Officer2_Last			26
				ALPHA	30	Officer2_Suffix			27
				ALPHA	50	Officer2_Title			28

Company Basic Demographic File Conversion continued

P(year)000.csv									
Data Type & Length						Line Description & Number			
ALPHA	11	ALPHA	11	ALPHA	11	Comm_Bus_Date	17	13	29
NUM	5	NUM	5	NUM	5	Group_Code	18	14	30
ALPHA	50	ALPHA	50	ALPHA	50	Group_Name	19	15	31
NUM	5	NUM	5			Group_Code_PY	20	16	
ALPHA	50	ALPHA	50			Group_Name_PY	21	17	
ALPHA	1	ALPHA	1	ALPHA	1	Status	22	18	32
ALPHA	50	ALPHA	50	ALPHA	50	Status_Desc	23	19	33
ALPHA	50	ALPHA	25	ALPHA	25	Country	24	20	34

TABLE A2

Directors & Officers Individual Data Conversion

		Data Line Numbers						
Year	Fileno	CoCode	First	Midde	Last	Suffix	Title	Description
2014	P2014001	1	2	3	4	5	6	7
2013	P2013001	1	2	3	4	5	6	7
2012	P2012001	1	2	3	4	5	6	7
2011	P2011001	1	2	3	4	5	6	7
2010	P2010001	1	2	3	4	5	6	7
2009	P2009001	1	2	3	4	5	6	7
2008	P2008001	1	2	3	4	5	6	7
2007	P2007001	1	2	3	4	5	6	NA
2006	P2006000	1	19/24	20/25	21/26	22/27	23/28	NA
2005	P2005000	1	19/24	20/25	21/26	22/27	23/28	NA

TABLE A3
Balance Sheet - Assets Data Conversion

Data Line Numbers							
Year	File_Ext	Total NoPC	Total (w/PC)	Line_No	Assts CY	Net Admtd CY	Net Admtd PY
2014	P006	26	28	2	3	5	6
2013	P006	26	28	2	3	5	6
2012	P006	26	28	2	3	5	6
2011	P006	26	28	2	3	5	6
2010	P006	26	28	2	3	5	6
2009	P006	24	26	2	3	5	6
2008	P004	24	26	2	3	5	6
2007	P004	24	26	2	3	5	6
2006	P001	24	26	2	3	5	6
2005	P001	24	26	2	3	5	6

TABLE A4
Balance Sheet - Liabilities Data Conversion

Data Line Locations								
Year	File Exten.	Liab No PC	Liab Line	Unassigned Surplus	Surplus as Regards Pol.hldrs	Line_No	Current Year	Prior Year
2014	P008	26	28	35	37	2	3	4
2013	P008	26	28	35	37	2	3	4
2012	P008	26	28	35	37	2	3	4
2011	P008	26	28	35	37	2	3	4
2010	P008	26	28	35	37	2	3	4
2009	P008	24	26	33	35	2	3	4
2008	P006	24	26	33	35	2	3	4
2007	P006	24	26	33	35	2	3	4
2006	P003	24	26	33	35	2	2	4
2005	P003	24	26	33	35	2	2	4

TABLE A5
Income Statement Data Conversion

Data Line and Column Locators					
Year	File Exten.	Line_No	Net Income	Current_Yr	Prior_Yr
2014	P010	2	20	3	4
2013	P010	2	20	3	4
2012	P010	2	20	3	4
2011	P010	2	20	3	4
2010	P010	2	20	3	4
2009	P010	2	20	3	4
2008	P008	2	20	3	4
2007	P008	2	20	3	4
2006	P005	2	20	3	4
2005	P005	2	20	3	4

TABLE A6
Lines of Business Data Conversion

Line Descriptions and Locations			
Line Description	2005-2007	2008	2009-2014
Fire	1	1	1
Allied Lines	2	2	2
Farmowners multiple peril	3	3	3
Homeowners muiltiple peril	4	4	4
Commercial multiple peril	5	5	5
Mortgage Guaranty	6	6	6
Ocean Marine	8	8	8
Inland Marine	9	9	9
Financial Guaranty	10	10	10
Medical Professional liability -occurrence	11.1	11.1	11.1
Medical Professional liability - claims made	11.2	11.2	11.2
Earthquake	12	12	12
Group accident and health	13	13	13
credit accident & health (group and individual)	14	14	14
Other accident & Health	15	15	15
Workers' Compensation	16	16	16
Other Liability - occurrence	17.1	17.1	17.1
Other Liability - claims made	17.2	17.2	17.2
Excess Workers Comp	.	.	17.3
Products Liability - Occurrence	18.1	18.1	18.1
Produicts Liability - Claims Made	18.2	18.2	18.2
Private Passenger Auto liability	19.1,19.2	19.1, 19.2	19.1,19.2
Commerical Auto Liability	19.3,19.4	19.3,19.4	19.3,19.4
Auto Physical Damage	21	21	21
Aircraft	22	22	22
Fidelity	23	23	23
Surety	24	24	24
Burglary & Theft	26	26	26
Boiler & Machinery	27	27	27
Credit	28	28	28
International	29	29	29
Warranty	.	30	30
Reinsurance - Nonproportional Assumed Property	30	31	31
Reinsurance - Nonproportional Assumed Liability	31	32	32
Reinsurance – Nonprop.tional Assumed Fin. Lines	32	33	33
Aggregate Write-in for other lines	33	34	34
Total	34	35	35

TABLE A7
Lines of Business
Data Conversion

File Identifiers		
Line of Business File Numbers		
Year	File Ext	Total
2014	P018	Line 35
2013	P018	Line 35
2012	P018	Line 35
2011	P018	Line 35
2010	P018	Line 35
2009	P018	Line 35
2008	**P016**	Line 35
2007	P016	Line 34
2006	**P013**	Line 34
2005	P013	Line 34

TABLE A8
State Licenses Data Conversion

File Identifiers and Summary Data					
Year	File No	Line_No	Status	Licensed	Total
2014	P2014261	2	3		59
2013	P2013236	2	3		59
2012	236	2	3		59
2011	232	2	3		59
2010	227	2	3		59
2009	227	2	3		59
2008	224	2	3		59
2007	227	2		3	59
2006	224	2		3	59
2005*	224	2		3	58

* Excludes No 56 - Northern Marianas

TABLE A9
State Licenses Data Conversion

State Codes

ST Num	State Abbr	State Name	FIPS Code	FIPS Classification
1	AL	Alabama	1	State; counties
2	AK	Alaska	2	State; boroughs
3	AZ	Arizona	4	State; counties
4	AR	Arkansas	5	State; counties
		Baker Island	81	Minor outlying island territory
5	CA	California	6	State; counties
		Canal Zone *	7	(FIPS 5-1 reserved code)
6	CO	Colorado	8	State; counties
7	CT	Connecticut	9	State; counties
8	DE	Delaware	10	State; counties
9	DC	District of Columbia	11	Federal district[4]
10	FL	Florida	12	State; counties
	FM	Fed. States of Micronesia	64	Freely Associated State
11	GA	Georgia	13	State; counties
12	HI	Hawaii	15	State; counties
		Howland Island	84	Minor outlying island territory
13	ID	Idaho	16	State; counties
14	IL	Illinois	17	State; counties
15	IN	Indiana	18	State; counties
16	IA	Iowa	19	State; counties
		Jarvis Island	86	Minor outlying island territory
		Johnston Atoll	67	Minor outlying island territory
17	KS	Kansas	20	State; counties
18	KY	Kentucky	21	State; counties
			89	Minor outlying island territory
19	LA	Louisiana	22	State; parishes
20	ME	Maine	23	State; counties
			68	Freely Associated State
21	MD	Maryland	24	State; counties
22	MA	Massachusetts	25	State; counties

State Codes Continued

23	MI	Michigan	26	State; counties
			71	Minor outlying island territory
24	MN	Minnesota	27	State; counties
25	MS	Mississippi	28	State; counties
26	MO	Missouri	29	State; counties
27	MT	Montana	30	State; counties
		Navassa Island	76	Minor outlying island territory
28	NE	Nebraska	31	State; counties
29	NV	Nevada	32	State; counties
30	NH	New Hampshire	33	State; counties
31	NJ	New Jersey	34	State; counties
32	NM	New Mexico	35	State; counties
33	NY	New York	36	State; counties
34	NC	North Carolina	37	State; counties
35	ND	North Dakota	38	State; counties
36	OH	Ohio	39	State; counties
37	OK	Oklahoma	40	State; counties
38	OR	Oregon	41	State; counties
	PW	Palau	70	Freely Associated State
		Palmyra Atoll	95	Minor outlying island territory
39	PA	Pennsylvania	42	State; counties
40	RI	Rhode Island	44	State; counties
41	SC	South Carolina	45	State; counties
42	SD	South Dakota	46	State; counties
43	TN	Tennessee	47	State; counties
44	TX	Texas	48	State; counties
		U.S. Minor Islands	74	Minor outlying island territories (aggregated)
45	UT	Utah	49	State; counties
46	VT	Vermont	50	State; counties
47	VA	Virginia	51	State; counties
		Wake Island	79	Minor outlying island territory
48	WA	Washington	53	State; counties
49	WV	West Virginia	54	State; counties
50	WI	Wisconsin	55	State; counties
51	WY	Wyoming	56	State; counties
52	AS	American Samoa	60	Outlying area under U.S. sovereignty
		American Samoa *	3	(FIPS 5-1 reserved code)
53	GU	Guam	14	(FIPS 5-1 reserved code)

State Codes Continued

		Guam*	66	Outlying area under U.S. sovereignty
54	PR	Puerto Rico	72	Outlying area under U.S. sovereignty
		Puerto Rico *	43	
55	VI	U.S. Virgin Islands	78	Outlying area under U.S. sovereignty
		Virgin Islands of the U.S.*	52	(FIPS 5-1 reserved code)
56	MP	Northern Marianas	69	Outlying area under U.S. sovereignty
57	CN	Canada		
58	OT	Aggregate Alien		
59	.S	Subtotal		

TABLE A10
CPA Data Conversion Sheet

CPA Line and Column Locations								
Year	File Number	CCPA	PCPA	Legisl.	Line Col.	Amt Ln	DetNm Ln	DetAmt Ln
2014	P2014065	33	34	35	2	3	4	5
2013	P2013040	33	34	35	2	3	4	5
2012	P2012040	33	34	35	2	3	4	5
2011	P2011040	33	34	35	2	3	4	5
2010	P2010036	32	33	34	2	4	14	15
2009	P2009036	31	32	33	2	4	14	15
2008	P2008034	30*	31*	32*	2	4	14	15
2007	P2007035	30	31	32	2	4	14	15
2006	P2006032	28	29	30	2	4	14	15
2005	P2005032	28	29	30	2	4	14	15
2004	P2004032	27	28	29	2	4	12	13
2003	P2003032	25	26	27	2	4	12	13
2002	P2002033	23	24	25	2	4	12	13
2001	P2001034	26	27	28	2	4	14	15
2000	P2000018	40a-b	41a-b	42a-b	2	4	8	9

*corrected from 12-15: P2008034pdf has error in numbering - checked print blank

TABLE A11
Non-Equity Alliance Data Conversion

Schedule F Pt 3 Line Identifiers				
Year	File Num.	Auth Affil	Mandatory Pool	Unauth Affil
2000	P2000041	1,2,3,4	6,15	10,11,12,13
2001	P2001055	1,2,3,4	6,15	10,11,12,13
2002	P2002054	1,2,3,4	6,15	10,11,12,13
2003	P2003053	1,2,3,4	6,15	10,11,12,13
2004	P2004052	1,2,3,4	6,15	10,11,12,13
2005	P2005052	1,2,3,4	6,15	10,11,12,13
2006	P2006052	1,2,3,4	6,15	10,11,12,13
2007	P2007055	1,2,3,4	6,15	10,11,12,13
2008	P2008044	1,2,3,4	6,15	10,11,12,13
2009	P2009047	1,2,3,4	6,15	10,11,12,13
2010	P2010047	1,2,3,4	6,15	10,11,12,13
2011	P2011051	1,2,3,4	6,15	10,11,12,13
2012	P2012051	1,2,3,4,5,6,7,8	10,23,36	14-21, 27-34
2013	P2013051	1,2,3,4,5,6,7,8	10,23,36	14-21, 27-34
2014	P2014076	1,2,3,4,5,6,7,8	10,23,36	14-21, 27-34

TABLE A12 Slack Conversion Sheet
Multiple File Line & Column Identifiers
(omitted)

TABLE A13
Equity Alliance Data Conversion

File Locations			
Yr	BA Pt1	BA Pt2 - Acquired	BA pt3 - Disposed
2000	P2000028	P2000029	na
2001	P2001238	P2001239	na
2002	P2002238	P2002239	na
2003	P2003237	P2003238	na
2004	P2004236	P2004237	na
2005	P2005237	P2005238	na
2006	P2006237	P2006238	na
2007	P2007240	P2007241	na
2008	P2008251	P2008252	P2008253
2009	P2009254	P2009255	P2009256
2010	P2010254	P2010255	P2010256
2011	P2011260	P2011261	P2011262
2012	P2012264	P2012265	P2012266
2013	P2013264	P2013265	P2013266
2014	P2014373	P2014374	P2014375

APPENDIX B

DATA MANAGEMENT PROTOCOL

TABLE B1
Data Management Protocol Part 1

Data Group	Var types	Stage 1 DoFile	summary	Post Append do file	PA Step 2	summary	output file 4 merge:
CPA Variables	DV, IV	CPAv3Append	appends files straight from excel(csv) and saves as dta	CCPA Detail Coding.dta	NewCPAAppend CPAPt2	Removes extra lines of data (non-CPA), reformats & addresses missing values+Cleans; Adds 3&5 year lags &drops 2000-2004	2005-2014CPA4merge
Lines Offered	IV	Pg8EPWAppend	Exhibit (Pg8) from csv, adds variable names, and save dta	LineCtPostAppend	Schedule F PostAppend (run last)	Creates Line_Ct Variable & Tot_Prem vars	LineCt4merge.dta
Premium Written	Mod						Premiums4merge
Payroll	Mod	Exhibit of Expenses Append	inputs and appends UW expense exhibits	PayrollPostAppend		Cleans and reduces to payroll only	Payroll4Merge.dta
State Licensed	IV	StatesAppend	appends from CSV, adds names +corrects 1 error	StatesPostAppend		Reduces to total STCt_Lic	SchedTStates4Merge
Alliance Experience	IV	Schedule BA Pt1	uploads each csv, adds variable names, and appends Exquity Investment data	BA Post Append Version2 (run first), creates BA4merge2		reduces to Non-Equity Alliance Data, then adds in BA4merge2.dta, & SDC4mergeCompany.dta, calculates 5 year sums; Calcs sums for SDC4mergeGroutp.	Alli4Merge.dta
		Schedule BA Pt2&3	uploads each csv, adds variable names, & appends; combines pts 2 & 3				
		Schedule F Pt 3	imports and appends reinsurance ceded				
		Non-NAIC\ SDCCoMatch	imports and saves excel coded data, prepares data for hand coding	SDCpostWAM (run 2nd)			SDC4mergeGroup
Basic Demographic	Control	CompanyBasic Append	uploads each csv, adds names & appends	CompanyBasicPostAppend		calculates Age, reshapes&condenses	CompBasic4merge
Foreign Ownership	Control	For_OwnAppend	uploads each used csv file, adds names, saves as dta, and appends; drops columns and lines not related to FO	For_OwnPost Append		creates detail sheet, then reshapes and condenses, contains cleaning prompts	FO4Merge
Financial Statements	Control	FinStatementsAppend	uploads csvs and appends assets, liabilities, and income statement	FinStatPostAppend			
Slack	Control	SlackAMB	inputs and reformats the AMB QL Ration data	QLRUpdate	QLAppend	uploads csv and generates additional slack var	AMBSlack4merge2

TABLE B2
Data Management Protocol Part 2

Data Group	Var types	Stage 1 DoFile	summary	Post Append do file	PA Step 2	summary	output file 4 merge:
Committee State Years	IV	Political Capabilities Step 1	inputs data on committee membership 1999-2014, & generates dummy and count variables by state/yr "CommStateYrs.dta" , merges FIPS codes into CompBasic and CommStates into CompBasic				Comm4Merge
US Congress Names	IV		Inputs US Congress, cleans & saves				
DO Names	IV	DO_2005	standardize & dedup FYI file, run DO_2005 first	OfficersPostAppend3-AMB&2008			
		DO_2006					
		DO2_2007-2014	stand. & dedup FYI, creates DOIDb	OfficersPostAppend2007			
		DO Name replacements	support file				
		DO_2_Idupdates	support file				
State Politician Names	IV	Non-NAIC/ StatePolNames Output	preps 1)Klarner state Leg db, 2)SM State Leg db, 3) merge of the 2. 4)Klarner governors database.	PolResStep2-changespostWAM…			PR24Merge

TABLE B3
Data Management Protocol Part 3 - Merge & Process

File Names	Stage 1 DoFile	Stage 2 DoFile	Analysis DoFile
SchedTStates4Merge	DissDataMerge	DissDataPostMerge1New	DissDataAnalysis4
LineCt4merge			
Premiums4merge			
FO4Merge			
2005-2014CPA4mergev3			
Comm4Merge			
Alli4MMerge			
Alli4Merge_Group			
PR24Merge			
Payroll4Merge			
AMBSlack4Merge2			

APPENDIX C

HETEROSCEDASTICITY DETAIL

Figures 3 and 4 provide visual confirmation of heteroscedasticity in the model. Figure 3 shows a plot of the observed values on the predicted values. Figure 4 shows a plot of the observed values on the residuals. Both the positive slope and the narrowing of the residuals at higher levels of autonomy indicate heteroscedasticity.

FIGURE C1

FIXED EFFECTS REDICTED AND OBSERVED CPA AUTONOMY

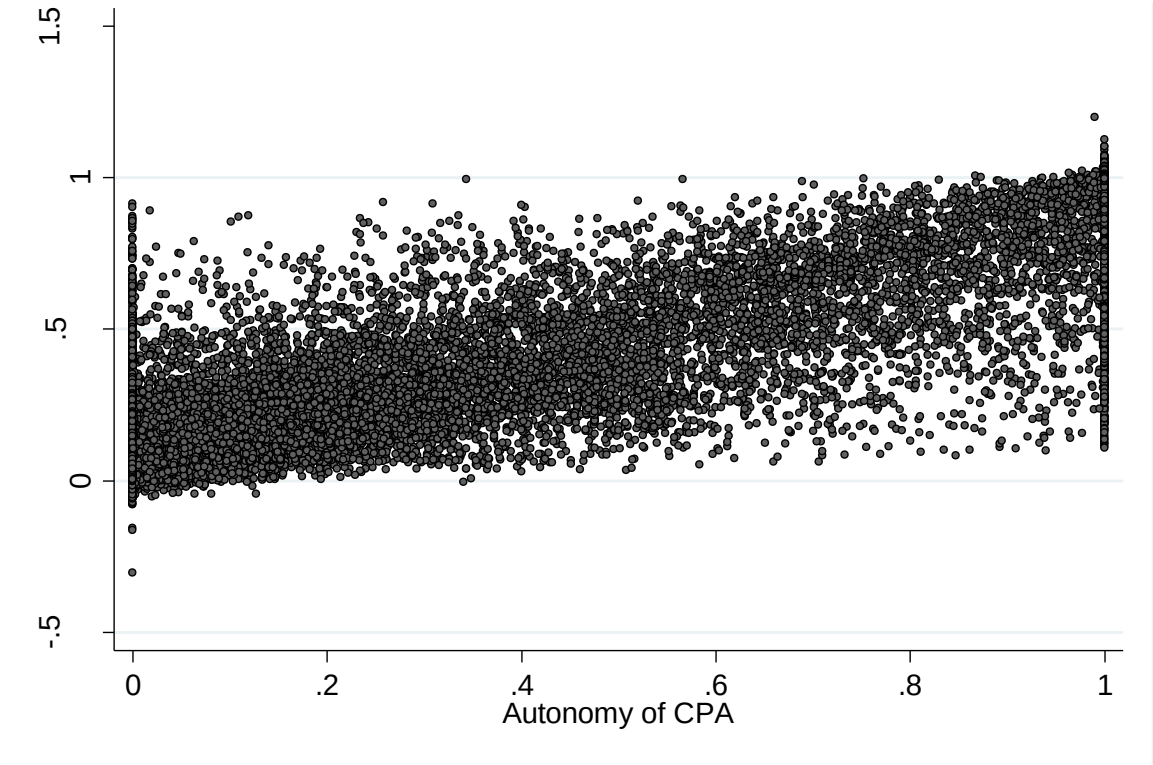
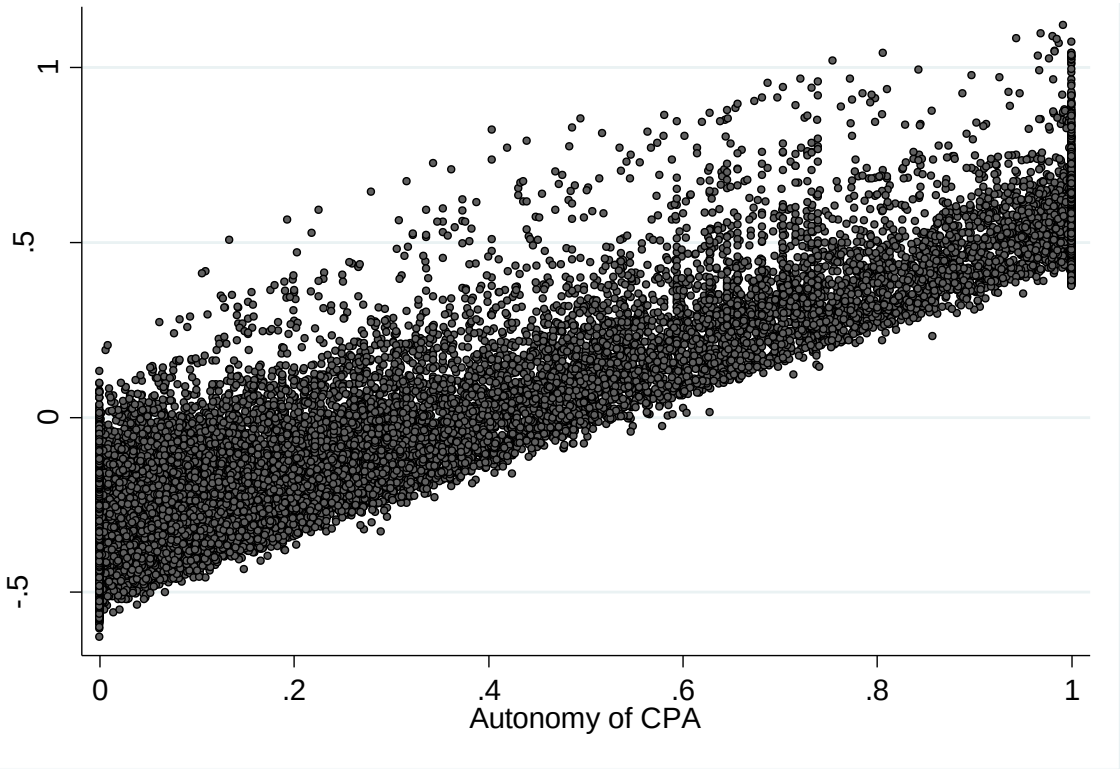


FIGURE C2

FIXED EFFECTS RESIDUAL AND OBSERVED VALUES OF AUTONOMY OF CPA



REFERENCES CITED

Aggarwal, R. K., Meschke, F. & Wang, T. Y. 2012. Corporate political donations: investment or agency? ***Business and Politics***, 14(1).

A.M. Best Company. 2016. Retrieved April 10, 2016 from http://www.ambest.com/about/

Anand, B. N., & Khanna, T. 2000. Do firms learn to create value? The case of alliances. ***Strategic Management Journal***, 21(3): 295-315.

Ansolabehere, S., De Figueiredo, J. M., & Snyder, J. M. 2003. ***Why is there so little money in politics?*** No. w9409. National bureau of economic research.

Ansolabehere, S., Snyder Jr, J. M., & Tripathi, M. 2002. Are PAC contributions and lobbying linked? New evidence from the 1995 Lobby Disclosure Act. ***Business and Politics***, *4*(2): 131-155.

Argote, L. 2012. ***Organizational learning: Creating, retaining and transferring knowledge***. Springer Science & Business Media.

Barnett, M. L. 2006. Finding a Working Balance Between Competitive and Communal Strategies. ***Journal of Management Studies***, 43(8): 1753-1773.

Barnett, M. L. 2013. One voice, but whose voice? Exploring what drives trade association activity. ***Business & Society***, 52(2): 213-244.

Barney, J. 1991. Firm resources and sustained competitive advantage. ***Journal of Management***, 17(1): 99-120.

Baron, D. P. 2006. Competitive lobbying and supermajorities in a majority-rule institution. ***The Scandinavian Journal of Economics***, 108(4): 607-642.

Baron, D. P. 1995. Integrated strategy: Market and nonmarket components. ***California Management Review*** 37(2): 47.

Baysinger, B. D. 1984. Domain maintenance as an objective of business political activity: An expanded typology. ***Academy of Management Review,*** 9(2): 248-258.

Baysinger, B. D., Keim, G. D., & Zeithaml, C. P. 1985. An empirical evaluation of the potential for including shareholders in corporate constituency programs. ***Academy of Management Journal***, 28(1): 180-200.

Biographical Directory of the United States Congress. 2015. Retrieved October 10, 2015 from http://bioguide.congress.gov/biosearch/biosearch.asp

Blasnik, M. 2010. RECLINK: Stata module to probabilistically match records. Retrieved December 05, 2015 from http://EconPapers.repec.org/RePEc:boc:bocode:s456876

Boddewyn, J. J., & Brewer, T. L. 1994. International-business political behavior: New theoretical directions. ***Academy of management review***, 19(1): 119-143.

Bonardi, J. P. 2008. The internal limits to firms' nonmarket activities. ***European Management Review***, 5(3): 165-174.

Bonardi, J. P., Holburn, G. L., & Vanden Bergh, R. G. 2006. Nonmarket strategy performance: Evidence from US electric utilities. ***Academy of Management Journal***, 49(6): 1209-1228.

Bonardi, J. P., Vanden Bergh, R. G. 2015. Political knowledge and the resource-based view of the firm. In T. C. Lawton & T. S. Rajwani (Eds.) ***The Routledge Companion to Non-Market Strategy****:* 12-28.

Bonardi, J. P. 2011. Corporate political resources and the resource-based view of the firm. *Strategic Organization!*, 3: 247-255.

Bourgeois, L. J., & Singh, J. V. 1983. Organizational slack and political behavior among top management teams. In ***Academy of Management Proceedings***, vol. 1983(1): 43-47). Academy of Management.

Brasher, H., & Lowery, D. 2006. The corporate context of lobbying activity. ***Business and Politics***, 8(1).

Bresser, R. K. 1988. Matching collective and competitive strategies. ***Strategic Management Journal***, 9(4): 375-385.

Bresser, R. K., & Harl, J. E. 1986. Collective strategy: Vice or virtue? ***Academy of Management Review***, 11(2): 408-427.

Buchanan, J. M. 1965. An economic theory of clubs. ***Economica***, 1-14.

Burris, V. 2001. The two faces of capital: Corporations and individual capitalists as political actors. ***American Sociological Review***, 361-381.

Capron, L., & Chatain, O. 2008. Competitors' resource-oriented strategies: Acting on competitors' resources through interventions in factor markets and political markets. ***The Academy of Management Review***, 33(1): 97-121.

Chen, H., Parsley, D., & Yang, Y. W. 2015. Corporate lobbying and firm performance. *Journal of Business Finance & Accounting*, 42(3-4): 444-481.

Chin, M. L., Bond, J. R., & Geva, N. 2000. A foot in the door: An experimental study of PAC and constituency effects on access*. *Journal of Politics*, 62(2): 534-549.

Christen: 2012. ***Data matching: concepts and techniques for record linkage, entity resolution, and duplicate detection*.** Springer Science & Business Media.

Citizens United v. Federal Election Com'n, 2010. 130 S. Ct. 876, 558 U.S. 310, 175 L. Ed. 2d 753.

Cohen, W. M., & Levinthal, D. A. 1990. Absorptive capacity: A new perspective on learning and innovation. ***Administrative Science Quarterly***, 128-152.

Collins, E., & Roper, J. 2005. Strategic schizophrenia: The strategic use of trade associations in New Zealand. ***Journal of Communication Management***, 9(3): 256-266.

Cook, R. G., & Barry, D. 1995. Shaping the external environment: A study of small firms' attempts to influence public policy. ***Business & Society***, 34(3): 317-344.

Cornes, R., & Sandler, T. (1994). Are Public Goods Myths?. *Journal of Theoretical Politics*, *6*(3): 369-385.

Cornes, R., & Sandler, T. (1986). ***Theory of Externalities, Public Goods, and Club Goods***. Cambridge Publishing: New York.

Center for Responsive Politics (2016). Insurance Industry Profile. Retrieved March 2, 2016 from http://www.opensecrets.org/lobby/indusclient.php?id=F09&year=2016

CQ Roll Call (2015). Committee rosters for the 113th congress: Senate & House. Retrieved September 27, 2015 from http://media.cq.com/pub/committees/

Cullen, J. B., Johnson, J. L., & Sakano, T. 1995. Japanese and local partner commitment to IJVs: Psychological consequences of outcomes and investments in the IJV relationship. *Journal of* ***International Business Studies***, 26(1): 91–115.

Dahan, N. 2005. Preface: Corporate political strategy. ***International Studies of Management & Organization***, 35(2): 3.

De Figueiredo, J. M., & De Figueiredo Jr, R. J. 2002. The allocation of resources by interest groups: lobbying, litigation and administrative regulation. ***Business and Politics***, 4(2): 161-181.

De Figueiredo, J. M., & Kim, J. J. 2004. When do firms hire lobbyists? The organization of lobbying at the Federal Communications Commission. ***Industrial and Corporate Change***, 13(6): 883-900.

De Figueiredo, J. M., & Tiller, E. H. 2001. The structure and conduct of corporate lobbying: how firms lobby the Federal Communications Commission**.** ***Journal of Economics & Management Strategy***, 10(1): 91-122.

De Figueiredo, R. J., & Edwards, G. 2007. Does private money buy public policy? Campaign contributions and regulatory outcomes in telecommunications. ***Journal of Economics & Management Strategy***, 16(3): 547-576.

Demsetz, H. 1973. Industry structure, market rivalry, and public policy. ***Journal of Law and Economics***, 1-9.

Destler, I. M., & Odell, J. S. assisted by Kimberly Ann Elliott. 1987. ***Anti-protection: Changing forces in the United States trade politics***. Washington, DC: Institute for International Economics.

Dosi, G., Nelson, R., & Winter, S. 2000. Introduction. In G. Dosi, R. Nelson, & S. Winter (Eds.): ***The nature and dynamics of organizational capabilities***. OUP Oxford.

Drope, J. M., & Hansen, W. L. 2009. New evidence for the theory of groups: Trade association lobbying in Washington, DC. ***Political Research Quarterly***, 62(2): 303-316.

Dyer, J. H., & Singh, H. 1998. The relational view: Cooperative strategy and sources of interorganizational competitive advantage. ***Academy of Management Review***, 23(4): 660-679.

Easterby-Smith, M., Lyles, M. A., & Tsang, E. W. 2008. Inter-organizational knowledge transfer: Current themes and future prospects. ***Journal of Management Studies***, 45(4): 677-690.

Epstein, E. M. 1969. ***The corporation in American politics***. Englewood Cliffs, NJ: Prentice-Hall.

Faccio, M. 2006. Politically connected firms. *The American Economic Review*, 96(1): 369-386.

Farrell, K. A., Hersch:, & Netter, J. 2001. Executive compensation and executive contributions to corporate PACs. ***Advances in Financial Economics***, 6: 39-56.

Federal Liability Risk Retention Act of 1986. 15 USC 3901-3906 (1981, as amended 1986)

Funk, R., & Hirschman, D. 2015. Beyond nonmarket strategy: Market actions as corporate political activity**.** ***Academy of Management Review***. Advanced online publication. doi: 10.5465/amr.2013.0178

Getz, Kathleen A. 1997. Research in corporate political action integration and assessment. ***Business & Society***, 36(1): 32-72.

Gordon, S. C., & Hafer, C. 2005. Flexing muscle: Corporate political expenditures as signals to the bureaucracy. ***American Political Science Review***, 99(02): 245-261.

Grant, R. M. 1996. Toward a knowledge-based theory of the firm. ***Strategic Management Journal***, 17(S2): 109-122.

Greene, W. H. 2003. ***Econometric analysis***. New Jersey, ua: Prentice Hall.

Greene, W. H. 2004a. The behavior of the maximum likelihood estimator of limited dependent variable models in the presence of fixed effects. ***The Econometrics Journal***, 7(1): 98-119.

Greene, W. H. 2004b. Fixed effects and bias due to the incidental parameters problem in the Tobit model. ***Econometric Reviews***, 23(2): 125-147.

Hadani, M. 2007. Family matters: Founding family firms and corporate political activity. ***Business & Society***, 46(4): 395-428.

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.

Hamilton, B. & Nickerson, J. 2003. Correcting for endogeneity in strategic management research. ***Strategic Organization!***, 1: 51-78.

Hansen, W. L., & Mitchell, N. J. 2001. Globalization or national capitalism: Large firms, national strategies, and political activities. ***Business and Politics***, 3(1): 5-19.

Hansen, W. L., Mitchell, N. J., & Drope, J. M. 2004. Collective action, pluralism, and the legitimacy tariff: Corporate activity or inactivity in politics. ***Political Research Quarterly***, 57(3): 421-429.

Hansen, W. L., Mitchell, N. J., & Drope, J. M. 2005. The logic of private and collective action. ***American Journal of Political Science***, 49(1): 150-167.

Hausman, J. A. 1978. Specification tests in econometrics. ***Econometrica: Journal of the Econometric Society***, 1251-1271.

Hedberg, B. L., Bystrom: C., & Starbuck, W. H. 1976. Camping on seesaws: Prescriptions for a self-designing organization. ***Administrative Science Quarterly***, 41-65.

Helfat, C. E., & Lieberman, M. B. 2002. The birth of capabilities: market entry and the importance of pre-history. ***Industrial and corporate change***, 11(4): 725-760.

Helfat, C. E., & Peteraf, M. A. 2003. The dynamic resource-based view: capability lifecycles. ***Strategic Management Journal***, 24(10): 997-1010.

Helfat, C. E., & Winter, S. G. 2011. Untangling dynamic and operational capabilities: Strategy for the (N) ever-changing world. ***Strategic Management Journal***, 32(11): 1243-1250.

Heimeriks, K. H., & Duysters, G. 2007. Alliance capability as a mediator between experience and alliance performance: an empirical investigation into the alliance capability development process*. ***Journal of Management Studies***, 44(1): 25-49.

Henisz, W. J., & Delios, A. 2004. Information or influence? The benefits of experience for managing political uncertainty. ***Strategic Organization***, 2(4): 389-421.

Hersch:, Netter, J. M., & Pope, C. 2008. Do campaign contributions and lobbying expenditures by firms create "political" capital?. ***Atlantic Economic Journal***, 36(4): 395-405.

Hillman, A. J., & Hitt, M. A. 1999. Corporate political strategy formulation: A model of approach, participation, and strategy decisions. ***Academy of Management Review***, 24(4): 825-842.

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. 2003. Determinants of political strategies in US multinationals. ***Business & Society***, 42(4): 455-484.

Hoffmann, W. H. 2007. Strategies for managing a portfolio of alliances. ***Strategic Management Journal***, 28(8): 827-856.

Holburn, G. L., & Vanden Bergh, R. G. 2004. Influencing agencies through pivotal political institutions. ***Journal of Law, Economics, and Organization***, 20(2): 458-483.

Holburn, G. L., & Vanden Bergh, R. G. 2008. Making friends in hostile environments: Political strategy in regulated industries. ***Academy of Management Review***, 33(2): 521-540.

Holburn, G. L., & Zelner, B. A. 2010. Political capabilities, policy risk, and international investment strategy: Evidence from the global electric power generation industry. ***Strategic Management Journal***, 31(12): 1290-1315.

Holburn, G. L., & Vanden Bergh, R. G. 2014. Integrated market and nonmarket strategies: Political campaign contributions around merger and acquisition events in the energy sector. ***Strategic Management Journal***, 35(3): 450-460.

Holtermann, Sally. 1976. Alternative tax systems to correct for externalities, and the efficiency of paying compensation. ***Economica***, 43(169): 1-16.

Insurance Information Institute 2016. Retrieved April 10, 2016, from http://www.iii.org/

Insurance Information Institute 2015. Property/Casualty Insurance Cycle. Retrieved April 10, 2016, from http://www.iii.org/fact-statistic/property-casualty-insurance-cycle

Jensen, M. C., & Meckling, W. H. 1976. Theory of the firm: Managerial behavior, agency costs, and ownership structure. ***Journal of financial economics***, *3*(4): 305-360.

Jia, N. 2014. Are collective political actions and private political actions substitutes or complements? Empirical evidence from China's private sector. ***Strategic Management Journal***, 35(2): 292-315.

Jia, N. & Mayer, K. (2016). Complementarity in firms' market and political capabilities: An integrated theoretical perspective. ***Advances in Strategic Management***, 34(1): 435-468.

Kale, P. & Anand, J. 2006. The decline of emerging economy joint ventures: The case of India. ***California Management Review***, 48(3): 62-76.

Kale, P. & Singh, H. 2007. Building firm capabilities through learning: the role of the alliance learning process in alliance capability and firm-level alliance success. ***Strategic Management Journal***, 28(10): 981-1000.

Kahl, S. 2014. Association, jurisdiction battles, and the development of dual-purpose capabilities. ***Academy of Management Perspectives***, 28(4):381-394.

Kennedy: 2008. ***A guide to econometrics***. Malden, MA: Blackwell Pub.

King, A. A., & Lenox, M. J. 2000. Industry self-regulation without sanctions: the chemical industry's responsible care program. ***Academy of Management Journal***, 43(4): 698-716.

Kim, J. H. 2008. Corporate lobbying revisited. ***Business and Politics***, 10(2): 1-25.

Kirby, A. J. 1988. Trade associations as information exchange mechanisms. ***The RAND Journal of Economics***, 138-146.

Klarner, C., 2013. Governors Dataset. IQSS Dataverse Network [Distributor] V1 [Version] Retrieved May 17, 2016 from http://hdl.handle.net/1902.1/20408

Klarner, C., Berry, W. D., Carsey, T., Jewell, M., Niemi, R., Powell, L., and Snyder, J. 2013. State Legislative Election Returns (1967-2010). ***ICPSR34297-v1***. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2013-01-11 Version. Retrieved May 17, 2016 from http://doi.org/10.3886/ICPSR34297.v1

Kollman, K. 1998. ***Outside lobbying: Public opinion and interest group strategies*****.** Princeton University Press.

Lane: J., Koka, B., & Pathak, S. 2006. The reification of absorptive capacity: A critical review and rejuvenation of the construct. ***Academy of Management Review***, 31(4): 833-863.

Lane: J., & Lubatkin, M. 1998. Relative absorptive capacity and interorganizational learning. ***Strategic Management Journal***, 19(5): 461-477.

Lavie, D. 2007. Alliance portfolios and firm performance: A study of value creation and appropriation in the US software industry. ***Strategic Management Journal***, 28(12): 1187-1212.

Lawton, T. C., Rajwani, T., & Phillips, N. 2013. Exploring trade associations: A framework for understanding activity and influence. ***Academy of Management Proceedings***. 2013(1): 16635.

Lawton, T., McGuire, S., & Rajwani, T. 2013. Corporate political activity: A literature review and research agenda. ***International Journal of Management Reviews***, 15(1): 86-105.

Leiblein, M. J. 2011. What do resource-and capability-based theories propose?.***Journal of Management***, 37(4): 909-932.

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.

Lifton, L. R. 1989. ***Rational firm behavior in response to environmental uncertainty: Collective marketing activities in the New York State wine grape industry***. Unpublished doctoral dissertation, Cornell University.

Little, R. J., & Rubin, D. B. 2014. ***Statistical analysis with missing data***. John Wiley & Sons.

Long, J. S. 1997. ***Regression models for categorical and limited dependent variables***. *Advanced quantitative techniques in the social sciences*, 7. Sage Publications.

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.

Macneil, I. R. 1977. Contracts: adjustment of long-term economic relations under classical, neoclassical, and relational contract law. ***Nw. UL Rev.***, 72*:* 854.

Malkin, J., & Wildavsky, A. 1991. Why the traditional distinction between public and private goods should be abandoned. ***Journal of Theoretical Politics*** 3(4): 355-378.

Margolis, J. 1955. A comment on the pure theory of public expenditure. ***The Review of Economics and Statistics***, 347-349.

Masters, M. F., & Baysinger, B. D. 1985. The determinants of funds raised by corporate political action committees: An empirical examination. ***Academy of Management Journal***, 28(3): 654-664.

Mathur, I., & Singh, M. 2011. Corporate political strategies. ***Accounting & Finance***, 51(1): 252-277.

Mathur, I., Singh, M., Thompson, F., & Nejadmalayeri, A. 2013. Corporate governance and lobbying strategies. ***Journal of Business Research***, 66(4): 547-553.

May, T., McHugh, J., & Taylor, T. 1998. Business representation in the UK since 1979: the case of trade associations. ***Political Studies***, 46(2): 260-275.

McWilliams, A., Van Fleet, D. D., & Cory, K. D. 2002. Raising rivals' costs through political strategy: An extension of resource-based theory. ***Journal of Management Studies***, 39(5): 707-724.

McCarran Ferguson Act of 1945.15 U.S.C. §§ 1011-1015

McMillan, J. 1979. A note on the economics of public intermediate goods. ***Public Finance***, 34(2): 293-99.

Mellewigt, T., and Nothnagel, K. 2008. ***Empirical research within resource-based theory: A meta-analysis of the central propositions***. Springer Science & Business Media, 2008.

Mitnick, B. M. 1980. ***The political economy of regulation: Creating, designing, and removing regulatory forms***. New York: Columbia University Press.

Musgrave, R. A. 1964. Estimating the distribution of the tax burden. ***Review of Income and Wealth***, 10(1): 186-219.

National Association of Insurance Commissioners 2016. Retrieved April 10, 2016 from http://www.naic.org/index_about.htm

National Association of Insurance Commissioners 2015a. P&C, Title, Life/A&H, Fraternal, and Health Industry Snapshots for the Period Ended December 31, 2014. NAIC Financial Regulatory Services. Retrieved 04/12/2016 from http://www.naic.org/cipr_topics/industry_snapshots/snapshot_ye_14.htm

National Association of Insurance Commissioners, 2015b. ***Official NAIC Annual Statement Instructions: Property/Casualty*****.** NAIC. Retrieved from: https://www.eagletm.com/Wings/Documentation/NAICInstructions/2015/2015apc.htm

National Association of Insurance Commissioners, 2015c. Investments of Insurers Model Act (Defined Standards Version). Model Regulation Services, April 2001. Retrieved from http://www.naic.org/store/free/MDL-283.pdf

Nelson, G. 2005. Committees in the U.S. Congress, 1947-1992, House & Senate, 80th-102nd Congress.

Nelson, R. R., & Winter, S. G. 1982. ***An evolutionary theory of economic behavior and capabilities***. Cambridge MA: Harvard.

North, D. C. 1990. ***Institutions, institutional change and economic performance***. Cambridge University Press.

Neyman, J., & Scott, E. L. 1948. Consistent estimates based on partially consistent observations. ***Econometrica: Journal of the Econometric Society***, 1-32.

Oakland, W. H. 1972. Congestion, public goods and welfare. ***Journal of Public Economics***, 1(3): 339-357.

Oliver, C., & Holzinger, I. 2008. The effectiveness of strategic political management: A dynamic capabilities framework. ***Academy of Management Review***, 33(2): 496-520.

Olson, M. 1965. ***The Logic of Collective Action***. Cambridge, MA: Harvard University Press.

Ozer, M., & Alakent, E. 2012. The influence of ownership structure on how firms make corporate political strategy choices. ***Business & Society***, 52(3): 451-472.

Ozer, M., & Lee, S. H. 2009. When do firms prefer individual action to collective action in the pursuit of corporate political strategy? A new perspective on industry concentration. ***Business and Politics***, 11(1).

Park, S. H. & Russo, M. V. 1996. When competition eclipses cooperation: An event history analysis of joint venture failure. ***Management Science***, 42(6): 875-890.

Parmigiani, A., & Holloway, S. S. 2011. Actions speak louder than modes: antecedents and implications of parent implementation capabilities on business unit performance. ***Strategic Management Journal***, 32(5): 457-485.

Parmigiani, A., & Rivera-Santos, M. 2011. Clearing a path through the forest: A meta-review of interorganizational relationships. ***Journal of Management***, 37(4): 1108-1136.

Patient Protection and Affordable Care Act of 2010. 42 U.S.C. § 18001.

Penrose, E. 1959. The theory of the growth of the firm. ***The Theory of the Growth of the Firm***. New York: Harpe.

Peteraf, M. A. 1993. The cornerstones of competitive advantage: A resource-based view. ***Strategic Management Journal***, 14(3): 179-191.

Poppo, L., & Zenger, T. 2002. Do formal contracts and relational governance function as substitutes or complements?. ***Strategic Management Journal***, 23(8): 707-725.

Rehbein, K. A., & Schuler, D. A. 1999. Testing the firm as a filter of corporate political action. ***Business & Society***, 38(2): 144-166.

Reveley, J., & Ville, S. 2010. Enhancing industry association theory: a comparative business history contribution. ***Journal of Management Studies***, 47(5): 837-858.

Rubin, D. B. 1976. Inference and missing data. ***Biometrika***, 63(3): 581-592.

Rubin, D. B. 1990. Formal mode of statistical inference for causal effects. ***Journal of Statistical Planning and Inference***, 25(3): 279-292.

Rumelt, R. P. 1987. Strategy, economic theory and entrepreneurship. ***The Competitive Challenge***, 137-158

Sampson, R. C. 2005. Experience effects and collaborative returns in R&D alliances. ***Strategic Management Journal***, 26(11): 1009-1031.

Samuelson, Paul A. 1954. The pure theory of public expenditure. ***The Review of Economics and Statistics***, 36(4): 387-389.

Sawant, R. J. 2012. Asset specificity and corporate political activity in regulated industries. ***Academy of Management Review***, 37(2): 194-210.

Schaefer, A., & Kerrigan, F. 2008. Trade associations and corporate social responsibility: evidence from the UK water and film industries. ***Business Ethics: A European Review***, 17(2): 171-195.

Schimmer, M. 2012. ***Competitive dynamics in the global insurance industry: Strategic groups, ccompetitive moves, and firm performance***. Springer Science & Business Media.

Schreiner, M., Kale:, & Corsten, D. 2009. What really is alliance management capability and how does it impact alliance outcomes and success? ***Strategic Management Journal***, 30(13): 1395-1419.

Schuler, D. A. 1999. Corporate political action: Rethinking the economic and organizational influences. ***Business and Politics***, 1(1): 83-98

Schuler, D. A., & Rehbein, K. 1997. The filtering role of the firm in corporate political involvement. ***Business & Society***, 36(2): 116-139.

Schuler, D. A. 2001. Public affairs, issues management and political strategy: Methodological approaches that count. ***Journal of Public Affairs***, 1(4): 336-355.

Schuler, D. A., Rehbein, K., & Cramer, R. D. 2002. Pursuing strategic advantage through political means: A multivariate approach. ***Academy of Management Journal***, 45(4): 659-672.

Schuler, D. A. Corporate political strategy and foreign competition: The case of the steel industry. ***Academy of Management Journal,*** 39(3): 720-737.

Schwab, A., Starbuck, W. H., Bergh, D., & Ketchen, D. 2009. Null-hypothesis significance tests in behavioral and management research: We can do better. ***Research Methodology in Strategy and Management,*** 5: 29-54.

Shor, B., & McCarty, N. 2015. Individual State Legislator Shor-McCarty Ideology Data, June 2015 update. Harvard Dataverse Network [Distributor] V1 [Version]. Retrieved May 17, 2016 from http://dx.doi.org/10.7910/DVN/26805 UNF:5:B/ieM8k2T-3p72LQHCJp/Wg==

Simcoe, T. 2014. How often is endogeneity addressed in published research? Retrieved May 17, 2016 from http://people.bu.edu/tsimcoe/documents/aom/Simcoe.pdf

Sorenson, J. B. 2012 Comments from the 2012 AOM Endogeneity Workshop. Retrieved May 17, 2016 from http://people.bu.edu/tsimcoe/code/Sorenson.pdf.

Stewart, C. III & Woon, J. 2011. Congressional Committee Assignments, 103rd to 112th Congresses, 1993--2011: Senate and House.

Stratmann, T. 2002. Can Special Interests Buy Congressional Votes? Evidence from Financial Services Legislation.* *Journal of Law and Economics*, 45(2): 345-373.

Alan, S., Honoré, B. E., Hu, L., & Leth-Petersen, S. 2011. ***Estimation of Panel Data Regression Models with Two-Sided Censoring or Truncation***. FRB of Chicago Working Paper No. 2011-08. Available at SSRN: http://ssrn.com/abstract=1961703 or http://dx.doi.org/10.2139/ssrn.1961703

Teece, D. J., Pisano, G., & Shuen, A. 1997. Dynamic capabilities and strategic management. ***Strategic Management Journal***, 18(7): 509-533.

Teece, D. J. 2007. Explicating dynamic capabilities: the nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal*, 28(13): 1319-1350.

Teece, D., & Pisano, G. 1994. The dynamic capabilities of firms: An introduction. *Industrial and Corporate Change*, 3(3): 537-556.

Tucker, A. 2008. Trade associations as industry reputation agents: A model of reputational trust. ***Business and Politics***, 10(1).

Tullock, G. 1971. Public decisions as public goods. ***The Journal of Political Economy***, 913-918.

Vanden Bergh, R., & Holburn, G. L. 2014. Political strategy for corporate mergers and acquisitions. ***Strategic Management Journal***, 35(3): 450-460.

Villalonga, B., & McGahan, A. M. 2005. The choice among acquisitions, alliances, and divestitures. ***Strategic Management Journal***, *26*(13): 1183-1208.

Waddock, S. A., & Graves, S. B. 1997. The corporate social performance-financial performance link. ***Strategic Management Journal***, 18(4): 303-319.

Wang, L., & Zajac, E. J. 2007. Alliance or acquisition? A dyadic perspective on interfirm resource combinations. ***Strategic Management Journal***, 28(13): 1291-1317.

Wasi, N., & Flaaen, A. 2015. Record linkage using Stata: Preprocessing, linking, and reviewing utilities. ***Stata Journal***, 15(3): 672-697.

Weisbrod, B. A. 1964. Collective-consumption services of individual-consumption goods. ***The Quarterly Journal of Economics***, 78(3): 471-477.

Wernerfelt, B. 1984. A resource-based view of the firm. ***Strategic Management Journal***, 5(2): 171-180.

Wilts, A., & Meyer, M. 2005. Small firm membership in national trade associations. ***Journal of Public Affairs***, 5(2): 176-185.

Winter, S. G. 2000. The satisficing principle in capability learning. ***Strategic Management Journal***, 21(10-11): 981-996.

Winter, S. G. 2003. Understanding dynamic capabilities. ***Strategic Management Journal***, 24(10): 991-995.

Wooldridge, J. M. 2002. ***Econometric analysis of cross section and panel data***. MIT Press: Cambridge, MA.

Zahra, S. A., & George, G. 2002. Absorptive capacity: A review, reconceptualization, and extension. ***Academy of Management Review***, 27(2): 185-203.

Zhao, B., & Ziedonis, R. H. 2012. ***State governments as financiers of technology startups: Implications for firm performance***. *Available at SSRN 2060739*.

Zollo, M., Reuer, J. J., & Singh, H. 2002. Interorganizational routines and performance in strategic alliances. ***Organization Science***, 13(6): 701-713.

Zollo, M., & Winter, S. G. 2002. Deliberate learning and the evolution of dynamic capabilities. ***Organization Science***, 13(3): 339-351.