TIPPING THE SCALES OF UNCERTAINTY: THE COMPETITIVE DYNAMICS OF GOVERNANCE AMBIGUITY

by

ERIC YOUNG LEE

(Under the Direction of Scott Graffin)

ABSTRACT

Competitive dynamics research has made great strides in understanding the importance of competitive uncertainty in the competitive exchange between rival firms. Research in this area suggests a firm can improve its competitive position by influencing competitive uncertainty around its competitive actions. Less is known, however, about the implications of influencing competitive uncertainty around the firm itself or its future behaviors. I propose in this dissertation that ambiguity around a competitor influences competitive uncertainty and thus has implications for the focal firm's competitive behaviors. More specifically, I argue that governance changes can influence competitive uncertainty. Some governance practices, and more specifically a competitor's changes to these practices, can influence a focal firm's competitive behavior because the ambiguous nature of these changes can affect the competitive uncertainty surrounding the competitor. I thus suggest that governance changes can have competitive consequences.

INDEX WORDS: Competitive dynamics, Corporate governance, Competitive uncertainty, Ambiguity, Institutional ownership

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CHAPTER 1

INTRODUCTION

"*In expanding the field of knowledge we but increase the horizon of ignorance*."
– Henry Miller

Uncertainty and ambiguity have a complicated relationship. Social scientists' approach to these two constructs differ within and between multiple disciplines. Economists use the terms interchangeably and contrast them with risk (Klibanoff, Marinacci, & Mukerji, 2005; Knight, 1921; Strzalecki, 2013), sociologists associate uncertainty with lack of predictability or awareness and ambiguity with mixed meanings (DiMaggio & Powell, 1983; Goldner, 1965), and social psychologists either conflate the two or base them on the availability of information (Lowery & Wout, 2010; Major, Quinton, & Schmader, 2003; Weick, 1995).

Management scholars also vary in their approach to uncertainty and ambiguity, likely because they ascribe to different core disciplines and adopt their respective approaches (Carson, Madhok, & Wu, 2006; Daft & Lengel, 1986). Some organizational scholars argue that uncertainty and ambiguity are conceptually the same (Carson et al., 2006), while others suggest the two are similar because they both involve limited awareness but are distinct because they have different antecedents (Weick, 1995). According to the latter perspective, uncertainty is the inability to make accurate predictions due to a lack of necessary information, and ambiguity is the lack of clarity that occurs when there is too much information (Burns & Stalker, 1961; Martin, 1992).

Uncertainty thus focuses on unpredictability driven by ignorance, while ambiguity focuses on opacity driven by confusion (Knight, 1921; Levine, 1988).

Uncertainty and ambiguity are, therefore, distinct and organizational researchers conceptualize them and their associated outcomes as separate constructs in different models (Weick, 1995). However, knowledge of the relationship between ambiguity and uncertainty is limited. If ambiguity involves too much information, and uncertainty involves unpredictability, it is possible that ambiguity can influence uncertainty. Boundedly rational individuals can only process a limited amount of information and will attribute whatever information they can to make sense of events (March, 1978; Weick, 1993). This is consistent with Tversky and Kahneman (1974)'s foundational work on uncertainty that suggested the heuristics individuals rely on to make predictions amid uncertainty are often useless or abandoned when there is more information to process. The surplus of information associated with ambiguity can thus influence the unpredictability (uncertainty) of future outcomes.

Research on uncertainty predominantly focuses on its negative aspects (Bergh et al., 2019; Chen, Su, & Tsai, 2007a; Grimm, Lee, & Smith, 2005). Researchers study how to reduce uncertainty's detriments on investments, prices, and economies (Handley & Limao, 2017; Pindyck, 1993), examine uncertainty's negative role in inequality and differences in trust across nations (Auyero & Swistun, 2008; Guseva & Rona-Tas, 2001), and contend that uncertainty impairs judgement (Tiedens & Linton, 2001). Most research involving uncertainty, therefore, focuses on ways to overcome its negative effects.

Despite its negative effects, increasing uncertainty may benefit entities that seek to withhold or conceal information from others (Graffin, Carpenter, & Boivie, 2011;

Grimm et al., 2005). This makes sense because such parties prefer to sustain or increase uncertainty rather than reduce it. For those who benefit from uncertainty, the ability to increase it can facilitate their evasive intentions and thus be a powerful tool. Consistent with this idea, strategy researchers find that managers may intentionally create and use uncertainty to their advantage (Busenbark, Lange, & Certo, 2017; Graffin et al., 2011; Nadkarni, Pan, & Chen, 2019).

Strategy research regarding uncertainty thus partakes one of two perspectives; uncertainty is a negative factor that firms aim to reduce, or it is a positive factor that firms prefer to increase (Cappellaro, Compagni, & Vaara, 2021; Waldman et al., 2001). A common approach towards increasing uncertainty to extract benefits is to induce ambiguity (Graffin, Haleblian, & Kiley, 2016; Graffin et al., 2011)—ambiguity's overabundance of information can impede predictability and result in ignorance of future outcomes. Researchers largely overlook the possibility, however, that using ambiguity in such ways may increase and reduce uncertainty at the same time. Some information from ambiguity may help make sense of some topics or events but impede this process for others. It is, therefore, possible that influencing uncertainty this way can have contemporaneous positive and negative outcomes—both of which are especially relevant in the competitive dynamics context.

Competitive dynamics is well-positioned to explore the positive and negative sides of uncertainty because this research investigates the competitive interactions among rival firms (Chen & Miller, 2012). Specifically, competitive dynamics contends that firms engage in a constant exchange of competitive attacks and responses in a battle for market share (Chen & Miller, 2015; Smith, Grimm, & Gannon, 1992). A core perspective in this

research, the awareness-motivation-capability (AMC) framework, stresses the importance of being aware of a rival firm (or competitor) and its competitive actions in order to obtain and sustain a competitive advantage (Chen et al., 2007a; Shi et al., 2020). This means that one way to disadvantage competitors may be to impede their awareness—something uncertainty (or competitive uncertainty) can help accomplish.[1]

Competitive dynamics research recognizes how uncertainty can be detrimental and thus disadvantage a focal firm (both the observer and competitive action taker in my study) (Miller & Chen, 1996; Smith, Ferrier, & Ndofor, 2001b), but also acknowledges how competitive uncertainty can be beneficial to the focal firm's competitor (the uncertainty influencer) (Tsai, Su, & Chen, 2011). Competitive uncertainty involves the unpredictability of competitive outcomes and occurs when a focal firm is less aware of a rival firm's competitive beliefs, intentions, reasoning, history of action, or implementation abilities (Grimm et al., 2005; Luoma et al., 2018).[2] When such awareness is limited, it is difficult to conduct an efficient competitor analysis (Hitt, Ireland, & Hoskisson, 2007; Smith, Ferrier, & Grimm, 2001a)—a key step towards achieving and sustaining competitive advantage (Tsai et al., 2011).

For the competitor, this means the ability to increase competitive uncertainty can be a valuable tool against the focal firm because the focal firm is less likely to make informed competitive decisions if it is less aware of the competitor and its behaviors—as

[1] I use the terms *competitor* and *rival firm* interchangeably throughout this manuscript. According to Kilduff et al., (2010), a *rival firm* is a specific type of *competitor* based on the intensity and history of competition. The two are, therefore, distinct but also share commonalities. I use the terms interchangeably because my dataset accounts for competitive intensity and history.

[2] Possibly due to its foundational disciplines' interchangeable use of the two constructs, competitive dynamics does not explicitly distinguish uncertainty from ambiguity. The literature does not conceptualize the cause of limited awareness into the construct but treats competitive uncertainty as when a focal firm cannot make accurate predictions due to a lack of knowledge about competitive aspects of its competitor.

the AMC framework posits. The focal firm, conversely, benefits from reducing uncertainty and increasing its awareness of the competitor because doing so allows it to make better competitive decisions that affect market share. Scholars, however, have little knowledge of how drivers of uncertainty can influence a focal firm's awareness.

One reason we know so little about what can influence competitive uncertainty may be because much like other domains, competitive dynamics typically treats competitive uncertainty as a one-dimensional environmental state (Carter, 1990; Miller & Chen, 1996; Wernerfelt & Karnani, 1987; Westphal & Zhu, 2019). Research on competitive uncertainty focuses on ways to reduce it or how it can influence firm behavior (Miller & Chen, 1996; Smith et al., 1991), but less on its drivers and subsequent consequences. Research thus overlooks the fact that competitive uncertainty encompasses several aspects that may occur contemporaneously while differing in polarity. In other words, some competitor activities may increase competitive uncertainty about some aspects but at the same time reduce competitive uncertainty about others. Increasing competitive uncertainty, therefore, may not be purely advantageous for the competitor and may be a double-edged sword that can lead to conflicting competitive implications.

This is important because competitive uncertainty can influence a focal firm's competitor analysis proficiency (Grimm et al., 2005), so a competitor's ability to increase or reduce competitive uncertainty can influence the focal firm's awareness. How competitive uncertainty influences awareness and thus subsequent actions, however, can be complex. For instance, a focal firm may avoid engaging in competitive actions if a competitor increases competitive uncertainty around the competitor's future competitive intentions (Luoma et al., 2018). This is advantageous for the competitor because this

means the competitor's market share stays intact. If the activity that increased this uncertainty, however, reduces uncertainty about the competitor's implementation abilities, the focal firm may engage in other types of competitive behavior that can erode the competitor's market share (Smith et al., 1992). Overall then, the activity can help and harm the competitor's competitive position at the same time. It is then a guessing game of whether this results in a net gain or loss for the competitor's market share.

I suggest that changes in a competitor's governance practices may be one such activity that can increase competitive uncertainty around certain aspects, but also reduce uncertainty about others. Governance tactics are highly visible and many of them have ambiguous strategic implications because they can affect the firm's most senior managers in multiple ways (Quigley & Graffin, 2016; Westphal & Zajac, 1998; Withers & Fitza, 2017). How exactly they influence the firm's strategic decisions and outcomes, however, is not clear to researchers and practitioners (Dalton et al., 1998; Devers et al., 2007; Graffin, Boivie, & Carpenter, 2013a; Krause, Semadeni, & Cannella, 2014).

Hence, if a rival firm makes changes to these highly visible practices, a focal firm is likely to notice and may become less certain of the rival firm's future competitive intentions. At the same time, changes to these governance practices often indicate managerial inefficiencies that require improvement, and these changes typically precede a period of disruption as the firm adjusts to these changes (Arthaud-Day et al., 2006; Ballinger & Marcel, 2010; McDonnell & Werner, 2016). This, therefore, reduces competitive uncertainty about the competitor's current and near-term implementation abilities presenting the focal firm an opportunity to engage in competitive behaviors that can increase its market share relatively unchallenged.

I define *governance ambiguity* as an overabundance of information that results from engaging in, or making changes to, governance practices that have multiple plausible strategic or performance implications and influence uncertainty regarding a firm's behavior.[3] Practitioners appear to be equally uncertain about some of these practices' implications for their firms. In 2018, key stakeholders were conflicted about Deutsche Bank's ability to remain competitive amid executive turnover, and heavy equipment manufacturer Caterpillar's board reappointed its CEO as Chairman a year after removing him from the position, suggesting possible uncertainty about the practice's implications (Hufford, 2018; Strasburg, 2018).

In this study, I explore the relationship between a rival firm's (competitor's) governance ambiguity and a focal firm's competitive behavior. For example, in 2016 auto parts manufacturer Standard Motor Products separated the CEO and board chair positions, replaced the CEO, and added several directors to its board (Reuters, 2016). Subsequently, Dorman Products, Standard Motor Products' chief rival in the auto parts industry, reduced its range of competitive actions. I theorize that governance ambiguity around a competitor may influence uncertainty for the focal firm making it harder to assess the competitor's future competitive intentions but easier to assess its near-term implementation abilities and thus influences the focal firm's own competitive behavior. In other words, the ambiguity of these practices can hinder and foster the focal firm's awareness of its competitor at the same time thus influencing the focal firm's competitive behavior in distinct ways. To be clear, I do not contend that managers engage in these

[3] Governance changes is the context in which I am investigating the conceptual relationship between ambiguity and competitive uncertainty. I argue the ambiguity that ensues from a competitor making these governance changes influences the competitive uncertainty between the competitor and the focal firm, thus influencing the focal firm's competitive behaviors.

practices to intentionally influence uncertainty, but simply that changes to uncertainty may be an unintended externality of governance ambiguity. Given uncertainty influences decision-making (Dane, Rockmann, & Pratt, 2012) and competitive uncertainty impacts awareness (a vital component for competitive exchanges to occur), a competitor's governance ambiguity may affect the focal firm's competitive behavior.

If the influence of governance extends beyond the typical stakeholders that governance research has long investigated and established (Connelly et al., 2010a; Flammer, 2015; Pfarrer et al., 2008), practitioners can better utilize these practices to not just internally improve firm performance, but to strategically combine them with their competitive exchanges. Studies have shown a relationship between a focal firm's governance practices and its own competitive behavior (Connelly et al., 2010b; Hill, Recendes, & Ridge, 2019; Krause, Withers, & Semadeni, 2017; Zhang et al., 2008), but scholars have almost no understanding of if, and how, a competitor's governance practices can influence the focal firm's competitive behavior. This limited understanding of governance practices' role in the competitive interplay among rival firms makes it difficult to establish a connection between them and the ability to achieve competitive advantage. According to Leiblein, Reuer, and Zenger (2018: 565), corporate governance studies in strategy often "are not explicitly related to competitive positioning or competition generally." I posit governance actions may not directly result in any competitive advantage, but they may have implications for the competitive landscape by influencing the uncertainty that surrounds a competitor.

By integrating the corporate governance and competitive dynamics literatures, I theorize that governance ambiguity around a competitor can influence a focal firm's

competitive behavior, and that this influence may restrict the focal firm's range of competitive attacks but also increase its aggressiveness and proclivity to imitate the competitor. I argue that a competitor's governance ambiguity can influence the focal firm's competitive behaviors by influencing its *awareness* of the competitor's competitive intentions and implementation abilities. Specifically, a competitor's governance ambiguity increases competitive uncertainty around the competitor's intentions but also reduces competitive uncertainty about its implementation abilities. Studies have shown that governance practices can influence the firm's motivations to engage in competitive actions, and recent studies suggest firms may pay attention to competitors' corporate governance events (He, Mahoney, & Wang, 2009; Shi et al., 2020). If firms pay attention to competitors as the competitive dynamics literature posits (Smith et al., 1992), then a focal firm may pay attention to a competitor's governance decisions and dwell on how they influence the competitor's behavior.

I test my hypotheses by examining the two most intense competitors in an industry and the relationship between the competitor's governance ambiguity and the focal firm's competitive behavior. To further explore my theoretical mechanism, I also investigate how these relationships change in the presence of governance practices that have less ambiguous strategic implications. I specifically theorize that a higher presence of dedicated institutional owners at the competitor will influence the relationship between the competitor's governance ambiguity and the focal firm's competitive behavior. Research has shown a relationship between institutional investors and firm competitive behavior due to the immense power these shareholders wield (Connelly et al., 2010b; Connelly et al., 2017). I hypothesize that a competitor's level of owners who have a long-

term investment horizon and actively monitor and direct the firm's actions, will reduce the effects of uncertainty that may arise from the competitor's governance ambiguity.

My study makes several contributions. First, I contribute to research on uncertainty. The fascination with uncertainty spans across disciplines because it is an influential force in almost all aspects of the social sciences (Auyero & Swistun, 2008; Klibanoff et al., 2005; Mittal & Griskevicius, 2014). My findings build on research investigating how ambiguity can induce uncertainty (Graffin et al., 2016; Graffin et al., 2011) by suggesting this relationship may be more complex than scholars currently understand. I find that the overabundance of information and multiple meanings associated with ambiguity may increase and reduce uncertainty at the same time. My study focuses on competitive uncertainty, but future research may further explore this relationship regarding other types of uncertainty.

Second, I extend the competitive dynamics literature by exploring the possibility managers may utilize certain governance practices to influence competitive uncertainty to complement competitive attacks in the battle for market share. The literature highlights ways to conceal competitive actions to increase uncertainty (Grimm et al., 2005), but I provide a new perspective that can open new avenues for research by suggesting that less explicit tactics can also be relevant. I contribute to the AMC framework by proposing a new construct that may influence both the firm's awareness of a rival's competitive actions and the effectiveness of those actions, but also the motivation to act. This build's on theory that suggests multiple components of the AMC framework can be influenced by psychological drivers (Livengood & Reger, 2010; Tsai et al., 2011).

Third, I contribute to corporate governance research in strategic management but also to the larger multi-disciplinary corporate governance literature by highlighting the possible connection between governance practices and a firm's competitive advantage over rivals. Strategic management scholars have made major contributions to the larger overarching corporate governance literature primarily by advancing a socio-cognitive perspective of firm governance (Connelly et al., 2019; Graffin et al., 2013b; Rindova, Reger, & Dalpiaz, 2012; Westphal & Zajac, 1998, 2013). Similarly, strategy researchers can leverage their understanding of the competitive landscape to provide insights beyond what finance and accounting researchers contribute to the field. Corporate governance research in strategic management has predominantly mirrored these other disciplines with a firm-centric approach focusing on non-competitor stakeholder outcomes (Hillman & Dalziel, 2003; Sanders & Carpenter, 1998; Zorn et al., 2017). I contribute to the growing literature investigating corporate governance's implications on competitive behavior (Aslan & Kumar, 2016; Connelly et al., 2019; Connelly et al., 2017) by extending this research towards a more traditional competitive dynamics perspective.

Fourth, I add to strategic management's contribution to the broader corporate governance literature by introducing a new construct and suggesting that corporate governance practices may have farther-reaching consequences than given credit for. Specifically, corporate governance may have important implications for the competitive landscape and can be a fruitful topic for future competitive strategy research. Further, my study suggests governance changes may have a collective effect on the external environment beyond individual implications.

Fifth, I help extend the nascent literature on strategic ambiguity (Cappellaro et al., 2021). This research posits that organizations can intentionally and strategically use ambiguity to their benefit (Jarzabkowski, Sillince, & Shaw, 2010), but my findings suggest that even unintentional ambiguity may benefit but also harm the firm. Strategic ambiguity research can further explore how governance ambiguity can influence outcomes and possibly propel its intentional use into mainstream practice.

Finally, I contribute to practice by providing insight on a new perspective on governance. Internal factors and the firm's stakeholders may be the main motivations for corporate governance decisions—and the immediate consequences of corporate governance decisions may be reflected by performance metrics and other firm outcomes—but managers may be able to utilize some corporate governance practices to directly assist in their battle for market share. Firms may unknowingly increase and reduce competitive uncertainty when they make changes to their governance structures, and this may affect the competitive landscape. Firms going through periods of high governance changes can take steps to better prepare for and even counter the effects of these changes. Further, firms can use governance ambiguity deceptively or intentionally to draw out or suppress certain competitive behaviors from their competitors. This can be an effective way to manipulate a rival firm's competitive behavior.

CHAPTER 2

UNCERTAINTY

Uncertainty is defined as "the ignorance of the person who is confronted with a choice about the future in general, and in particular about the outcomes which may follow any of his possible lines of action" (Burns & Stalker, 1961: 112). Uncertainty, therefore, occurs when future outcomes are unpredictable regarding three dimensions: (1) changes in the state of an environment; (2) the effect of the environmental changes; and (3) the available response options (Milliken, 1987).

Research across multiple disciplines in the social sciences study uncertainty in regards to these three dimensions. Economists for example, focus on the economic environment and study how market uncertainty influences prices, investment decisions, and how economies are run (Handley & Limao, 2017; Pindyck, 1993). An overarching assumption in both traditional and behavioral economics research is that individuals and entities cannot optimize situations or maximize profits because of incomplete information (Alchian, 1950; Hansen, 2014). Economists, therefore, spent decades developing and testing various economic models to better forecast outcomes in areas such as production, option pricing, economic growth, and money supplies (Cobb & Douglas, 1928; Lauterbach & Schultz, 1990; Lohmann, 1999; Solow, 1956).

Sociologists also devote considerable attention to the role of uncertainty, focusing on the state of communities and society at large (Crook, 2003). Over the past few decades, sociological research investigated labor uncertainty's detrimental effects (Bailey

& Waldinger, 1991; Sutton & Dobbin, 1996), uncertainty's negative role in social inequality (Auyero & Swistun, 2008), how institutional stability reduces uncertainty and builds trust among constituents (Guseva & Rona-Tas, 2001), and how uncertainty can foster conformity and institutional norms among organizations (DiMaggio & Powell, 1983). Hence, uncertainty is a powerful presence in society and sociological research.

Uncertainty's presence is not limited, however, to macro-level research. Social psychologists also investigate the role of uncertainty focusing on the state of individuals and highlight its implications on how people behave and develop relationships (Sorrentino et al., 1995; Van den Bos, 2001). For instance, uncertainty can increase negative affect and thus impair individual judgment (Tiedens & Linton, 2001), increase anticipatory stress (Monat, Averill, & Lazarus, 1972), and play a key role in how perceptions of importance drives information search (Lanzetta & Driscoll, 1968). Researchers also find that individuals with lower socio-economic backgrounds behave more impulsively amid environmental uncertainty than their higher socio-economic background counterparts (Mittal & Griskevicius, 2014). Social psychologists' work on individual-level uncertainty is, therefore, an important foundational literature for research on managerial decision-making which examines how organizational leaders direct the firm amid limited information (Rajagopalan, Rasheed, & Datta, 1993).

Commonalities in Uncertainty Research

The importance of uncertainty spans across multiple disciplines, and they share the common aspect of unpredictability pertaining to either the state, effect, or response to the environment or the changes that occur to it. Research involving uncertainty, therefore,

may focus on different environments and contexts but are related in this foundational premise and share other commonalities.

First, because researchers typically approach uncertainty as an environmental state, it is limited to an assumption or a moderator in the study's context (Auyero & Swistun, 2008; Miller & Chen, 1996; Mittal & Griskevicius, 2014; Pindyck, 1993; Westphal & Zhu, 2019). In other words, researchers typically treat uncertainty as an uncontrollable factor that can influence decisions, other constructs, or the relationships among constructs, or assume that it is present and relevant in the context. Research has, therefore, shown how uncertainty influences different outcomes or how various relationships exist under it (Hansen, 2014; Lohmann, 1999; Monat et al., 1972). Absent the few studies exploring predictors of trust such as ethnic similarity or institutional stability (Guseva & Rona-Tas, 2001; Levine et al., 2014), however, we know little about what drives uncertainty and the implications of the factors that do.

Second, research predominantly holds a negative perspective on uncertainty. This is not surprising considering the overwhelmingly negative findings associated with it (Auyero & Swistun, 2008; Bailey & Waldinger, 1991; Tiedens & Linton, 2001). Although some studies highlight the potential positive effects of uncertainty (DiMaggio & Powell, 1983; Wilson et al., 2005), most research either associates it with negative outcomes or approaches uncertainty as a negative environmental state (Handley & Limao, 2017; Mittal & Griskevicius, 2014). The finance and accounting literatures, for instance, explore how uncertainty impedes accurate forecasts (Miller, 1977), exacerbates market volatility following both positive and negative news (Zhang, 2006a), negatively

affects stock prices when it shrouds government policies (Pastor & Veronesi, 2012), and negatively impacts firm investment expenditures in election years (Julio & Yook, 2012).[4]

Third, possibly because of the negative assumption about uncertainty that is prevalent in research, studies approach uncertainty as a one-dimensional state that is uniform across all aspects. In other words, uncertainty is typically treated as a broad and uniform assumption of an environment omitting the possibility that uncertainty may be unequal among different aspects. In the competitive landscape, for example, it is possible for uncertainty about a competitor's intentions to be high while uncertainty about its implementation abilities are low.

Finally, perhaps because of its negative outcomes, research focuses on methods to reduce uncertainty rather than foster it. Scholars often even assume individuals are inclined to reduce uncertainty (Crook, 2003; Trope, 1979). Research suggests regulatory oversight can reduce uncertainty in credit markets (Guseva & Rona-Tas, 2001), that different social mechanisms can reduce uncertainty in capitalist versus socialist countries (Stark, 1986), and prior within-network experience mitigates uncertainty in risky transactions (DiMaggio & Louch, 1998). Even the few studies that explore the positive side of uncertainty rarely explore what actions can help increase it, so we know little about the implications of doing so and any potential unintended consequences.

Uncertainty in Strategic Management

Uncertainty is also an important factor in strategy. A stream of strategic management research studies how organizational leaders make decisions amid

[4] The finance and accounting literatures do explore some aspects of how market uncertainty can be beneficial to better-informed investors and ones who have shorter investment horizons (Ke & Petroni, 2004; Koh, 2007; Ramalingowda, 2014), but overwhelmingly focus on uncertainty's negative aspects.

uncertainty, limited information, and finite resources (Rajagopalan et al., 1993) and finds that environmental uncertainty plays a key role in how decision-making processes can influence firm outcomes (Bourgeois & Eisenhardt, 1988; Fredrickson & Iaquinto, 1989). For instance, studies find that environmental uncertainty positively moderates the relationships between global managerial ties and firm performance (Li, Poppo, & Zhou, 2008), executive charisma and profitability (Waldman et al., 2001), and TMT homogeneity and global initiatives (Carpenter & Fredrickson, 2001). Uncertainty can thus impact firm performance and strategic decisions.

Like other disciplines, however, most strategic management research involving uncertainty treats it as an environmental state that influences outcomes and relationships among constructs, or focuses on ways to reduce or overcome its negative effects (e.g. Graffin et al., 2013a; Hubbard et al., 2018; Korsgaard, Schweiger, & Sapienza, 1995). This is not surprising considering "the strategic context of a firm is always uncertain" (Wernerfelt & Karnani, 1987: 189), and strategic planning is more important "when a firm must cope with high degrees of uncertainty and major environmental changes" (Ireland et al., 1987: 469). Understanding how to best reduce uncertainty is, therefore, valuable because uncertainty is a persistent factor that requires strategic planning to overcome. Strategy scholars thus investigate tactics such as environmental scanning that help reduce uncertainty (Elenkov, 1997; Monteiro & Birkinshaw, 2017; Sawyerr, 1993).

Benefits and Costs of Heightened Uncertainty

Heightened uncertainty, however, can have positive aspects, especially as it relates to strategy. Uncertainty may be an impediment to all firms when it involves the state of or changes to an environment if the amount of uncertainty is homogenous across

all firms. It can provide advantages to some firms over others, however, if the amount of uncertainty or its effects varies across firms. According to Wernerfelt and Karnani (1987: 189), "different firms face differing degrees of uncertainty" and the ones facing less uncertainty typically find themselves in a more advantageous position. This means increasing uncertainty may have beneficial effects if it impacts external entities that firms may seek to disadvantage. Stated simply, uncertainty is bad if it hinders the firm but can be good if it disadvantages certain outsiders.

Strategy researchers are well-positioned to investigate uncertainty's positive aspects because strategic management involves both insiders such as owners and managers but also outsiders such as analysts, the media, competitors, and other external stakeholders (Barney, 1991; Becker, 1962; Busenbark et al., 2017; Flammer, 2013; Zavyalova et al., 2012). Insiders often possess information that outsiders (if aware of the information) can use to damage the firm (Healy & Palepu, 2001). Such information can remain internal, but sometimes exposure is inevitable due to leaks and outsiders seeking to uncover such information (Elsbach, Sutton, & Principe, 1998). It is during such times increasing uncertainty can particularly be beneficial.

A stream of research on organizational impression management takes this perspective and shows that managers may intentionally use or create uncertainty for their own benefit (Elsbach, 2014). Organizational impression management researchers find managers may instill noise around unpredictable events to increase uncertainty about the source of negative reactions (Graffin et al., 2011), can strategically utilize uncertainty by limiting information disclosure to appease negative analyst recommendations (Busenbark et al., 2017), and contemporaneously disclose positive and negative news to create

uncertainty about market reactions (Graffin et al., 2016). Researchers further find that managers may use uncertainty and deliberate misinformation to garner positive reactions (Elsbach et al., 1998), and engage in strategies to distort responsibility for organizational crises (Bundy et al., 2017). This literature posits that the ability to increase uncertainty can be used to mitigate or obfuscate negative reactions to firm events and can, therefore, be a strategic tool firms can use for their own benefit.

Organizational impression management researchers explore ways that firms increase uncertainty typically under the assumption that doing so purely benefits the firm. Increasing uncertainty, however, may have unintended consequences because uncertainty is not one-dimensional or isolated to the specific activity or target. In other words, increasing uncertainty about one aspect of the firm may reduce uncertainty about another. For example, Graffin et al. (2016) suggest that firms time the announcement of positive and negative events to increase uncertainty about how bad the negative event truly is. Gamache et al. (2019), however, find that offsetting impressions in such ways can reduce uncertainty about managerial confidence. This suggests that while increasing uncertainty may at times be beneficial, a potential unintended consequence may be that it reduces uncertainty about another aspect of the firm. I explore this possibility and its effects.

Strategic management research explores how managers can use the ability to increase uncertainty for outsiders to benefit the firm, but this ability is especially salient when used against competitors. A core strategy objective is to achieve and sustain a competitive advantage over rival firms (Porter, 1980), and awareness and knowledge of a competitor is a key element in this process (Chen et al., 2007a). From a focal firm's perspective, uncertainty about a competitor inhibits the focal firm's ability to achieve and

sustain a competitive advantage (Yu & Cannella, 2007). The focal firm, therefore, aims to reduce competitive uncertainty while the rival conversely seeks to increase competitive uncertainty to disadvantage the focal firm (McGrath, Chen, & MacMillan, 1998).

Competitive Uncertainty

Competitive uncertainty involves (but is not limited to) competitive actions, which are specific and detectable moves intended to defend or improve the initiating firm's competitive position (Smith et al., 1991). Specifically, competitive uncertainty is defined as unpredictability about a rival firm's competitive action outcomes and occurs when a focal firm is less aware of the rival firm's competitive beliefs, intentions, reasoning, history of action, or implementation abilities (Grimm et al., 2005; Luoma et al., 2018). Competitive uncertainty, therefore, revolves around competitive actions but "covers unpredictable circumstances inside competitive firms but also the nature of the competitors, their strategies, and their response to [competitors'] strategies" (Wernerfelt & Karnani, 1987: 189).

One of the main contentions about competitive uncertainty is that it can limit a focal firm's awareness of a competitor's actions and thus hinder the firm's ability to achieve or sustain a competitive advantage (Grimm et al., 2005). This is because competitive uncertainty impedes awareness by hindering competitive reasoning—or "how managers form beliefs about the likely behaviors of their competitors" (Luoma et al., 2018: 1390). Competitive uncertainty, therefore, raises unpredictability around the outcome of a rival firm's competitive actions because it impedes awareness of the rival firm's overall competitive behavior (Grimm et al., 2005)—or how firms act towards and respond to competition (Chen & Hambrick, 1995).

Like other types of uncertainty, competitive uncertainty's relationship with awareness is approached as either a negative product of an environmental state or, in the case of increasing competitive uncertainty, a way for the focal firm to improve its position. The relationship between competitive uncertainty and awareness is complex, however, because competitive uncertainty involves several aspects of competitive behavior that may be affected differently depending on the situation. For example, situations that increase competitive uncertainty about a competitor's intentions may reduce competitive uncertainty about its implementation abilities. To fully comprehend competitive uncertainty and why it can be of consequence to firms and their competitors, it is important to consider competition, competitive dynamics, and competitor analysis. In the next two chapters, I discuss each of these three topics beginning with the important role of competition in strategy research.

CHAPTER 3

COMPETITION

Competition is a core part of strategic management research (Chen, 1996; Porter, 1980; Wernerfelt & Karnani, 1987). Research streams may differ in their perspectives of firm purpose, the systems in which firms operate, or the best ways for firms to achieve growth (Barney, 1991; DiMaggio & Powell, 1983; Pfarrer, 2010; Porter, 1980; Thompson, 1967), but competition is a consistent and fundamental consideration in every stage of the strategy framework. Competition and competitors are a key component of analysis, formulation, and implementation because resources, capabilities, the business environment, organizational design, and corporate and business strategies all affect the firm's ability to achieve competitive advantage (Rothaermel, 2017). It is, therefore, not surprising that almost every research stream focusing on business strategy addresses or integrates competition (DiMaggio & Powell, 1983; Freeman, 1984; Lawrence & Lorsch, 1967; Porter, 1980; Wernerfelt, 1984).

Early foundational work in business strategy incorporated competition into its central tenets. For example, Penrose (1959)'s theory of firm growth is an influential piece that challenged the existing view on how firms operated. Its central premise is that the recruitment, acquisition, and development of resources dynamically constrains the firm growth process, but this seminal work acknowledges competition's importance. Penrose (1959: 116) refers to attaining a monopolistic market position as a way "in which a firm specializing in given products can meet the threat to its existence from competitors

producing the same products." Competition also plays a key role in Penrose (1959)'s challenge to the widespread notion of product diversification being the most effective protection against adverse changes. She argues that under intense competition or when facing competitors efficient in rapid innovation, a non-specialized firm is just as vulnerable as a specialized one. Competition and competitors are, therefore, important elements of the theory of the growth of the firm and subsequent literatures built on this foundational perspective.

The resource-based view (RBV) is one such perspective built on the theory of the growth of the firm's central tenets (Wernerfelt, 1984). According to RBV, firms that achieve competitive advantage possess superior resources that are valuable, rare, inimitable, and non-substitutable, and can effectively use such resources to improve their position relative to competitors (Barney, 1991). The primary emphasis of RBV is that physical, human capital, and organizational capital resources are important, but competition is a fundamental element in the theory (Nyberg & Ployhart, 2013; Peteraf, 1993). "Competition and the role of superior performance and sustainable competitive advantage" (Barney, 2001: 647) is an important part of RBV. Competition is also important in research streams that emerged from RBV such as the literature on dynamic capabilities—which posits that firms must reconfigure resources and competencies to address changes in competition and the overarching business environment and, unlike RBV, considers how firms behave (Barreto, 2010; Eisenhardt & Martin, 2000). As such, competition is a salient factor in behavioral approaches to firm strategy.

One popular behavioral strategy perspective is the behavioral theory of the firm (BTOF). BTOF research focuses on how boundedly rational managers decide prices,

output, and resource allocation, and competitors play a key role in this decision-making process (Cyert & March, 1963). BTOF suggests that firms assess performance with various aspiration levels (Gavetti, 2012) that are based internally on their own historical performance, or socially relative to competitors' performance (Greve, 2003). Studies show that managers may make decisions based on their firm's performance relative to rivals (Mishina et al., 2010; Ref & Shapira, 2017) and that firms are more likely to engage in resource-consuming acquisitions when they are just below social aspiration levels but divest holdings to free up resources when they are well below them (Kuusela, Keil, & Maula, 2017). Researchers also suggest firms can make acquisition-versus-alliance decisions depending on their innovation skills relative to competitors (Lungeanu, Stern, & Zajac, 2016), and are more likely to engage in divergent strategic behavior when they perform below social aspirations than historical aspirations (Tarakci et al., 2018). Behavioral strategy research thus stresses the saliency of competitors.

Organizational theory research also highlights the role of competitors. The contingency theory perspective posits organizations are an open system in which managers must organize interrelated internal departments and subunits to adapt to changing environmental circumstances (Morgan, 1998; Woodward, 1981). Contingency theory suggests there is no single best way to organize a firm and that instead, the ideal organizational structure is the one that best fits the environment (Lawrence & Lorsch, 1967; Thompson, 1967). Competition and competitor actions are key environmental elements that dictate the appropriate structure as according to Chandler (1962: 13), "new courses of action must be devised and resources allocated…in response to shifting

demands, changing sources of supply, fluctuating economic conditions, new technological developments, and the actions of competitors."

Competition, therefore, plays a central role in contingency theory research. For instance, research suggests that competitiveness can reflect an environment's uncertainty (Pennings, 1975), that the fit between a firm's governance structure and strategy can depend on changes in the competitive environment (Yin & Zajac, 2004), resources that provide a competitive advantage can provide dynamic advantages in a volatile environment (Kraatz & Zajac, 2001), and that market competition is an important environmental factor when determining the ideal structure to maximize international joint venture productivity (Li, Zhou, & Zajac, 2009).

Organizational theory research does not limit the importance of competition and competitors to the contingency theory perspective. Institutional theory focuses on firm survival and posits that firms conform to norms because external social pressures drive them towards gaining legitimacy (DiMaggio & Powell, 1983; Meyer & Rowan, 1977). DiMaggio and Powell (1983) argue that instead of market competition, the need to attain legitimacy drives isomorphism, yet competition and market position still play a key role in the theory. According to (Mizruchi & Fein, 1999: 657), "institutional isomorphism…involves organizational competition for political and institutional legitimacy as well as market position."

Competition is, therefore, an important underlying force in institutional theory research. For example, Deephouse (1999) proposes a theory of strategic balance in which firms must be different enough to remain competitive but similar enough to attain legitimacy. Studies also show that firms are more likely to restate earnings when

competitors do so first (Pfarrer et al., 2008), and smaller firms gain legitimacy and thus benefit when larger competitors imitate their products (Verhaal, Hoskins, & Lundmark, 2017). Regarding competition, however, other scholars find evidence contradicting the tenets of neo-institutional theory and supportive of traditional adaption-based organizational theories. For example, Kraatz and Zajac (1996) find competitive and technical environments are strong predictors of institutional change, fields often become less homogenous over time, and organizations that do not imitate competitors may not experience poor financial performance as the perspective contends.

Most foundational and subsequent research in strategic management involves competition and competitors in some capacity, but the rise of industrial organization (IO) economics brought competition to the forefront of the field. IO economics primarily focuses on the firm's industry and builds on the Bain-Mason paradigm that contends an organization's structure influences both firm conduct and performance (Bain, 1956; Mason, 1939). One of IO economics' biggest contributions is that it challenged the notion that industry membership solely determines a firm's market share and survival (Church & Ware, 2000), and the common assumption of perfect competition (Smith, 1990), by proposing complications such as barriers to entry, limited information, and transaction costs (Bain, 1956; Clark, 1940). According to Demsetz (1973: 3), "in a world in which information is costly and the future is uncertain, a firm that seizes an opportunity…does so because it expects to enjoy some protection from rivals because of their ignorance of this opportunity or because of their ability to initiate quickly." The IO economics perspective is that the firm's industry is a competitive environment and industries differ along competitive intensity and managerial behaviors (Demsetz, 1973; Porter, 1980).

Porter (1980) argues that the rivalry between competitors is a defining characteristic of an industry and various forces including the threat of new entrants, substitute products, and the power of buyers and suppliers contribute to rivalry intensity and industry attractiveness. This focus on competitors brought competitive strategy and the importance of obtaining and sustaining competitive advantage to the forefront of strategy research (Irwin, Lahneman, & Parmigiani, 2018; Porter, 1985). IO economics highlights that cost, differentiation, and market selection strategies are important to obtain and sustain competitive advantage (Kiechel, 2010; Porter, 1980, 1985).

In sum, competition is an important factor across multiple strategy and organizational theory research streams. While early research treated competition as an element of business that is consequential but not the principal driving force behind firms, IO economics highlighted competition and dissected how it drives the firm and its decisions. Following Porter's work and further building on IO economics and other external and internal firm perspectives, strategy research then delved further into understanding competitors, competitive advantage, and the competitive landscape (Church & Ware, 2000; D'Aveni, 1994; Jacobson, 1992; Porter, 1980). In the next chapter, I discuss the literature on competitive dynamics, a core stream of strategy research investigating the battle for market share and all the competitive behavior among rival firms attempting to achieve and sustain competitive advantage (Smith et al., 1992).

CHAPTER 4

COMPETITIVE DYNAMICS

Competitive dynamics is "the study of interfirm rivalry based on *specific competitive actions and reactions*, their strategic and organizational contexts, and their drivers and consequences" (Chen & Miller, 2012: 137). An underlying assumption in my study is that in order for the constant exchange of competitive attacks and responses in attempts to gain market share to occur, firms must pay attention to competitors and their actions—a notion the competitive dynamics perspective is predicated on (Smith et al., 1991). That managers pay attention to rival firms is essential to competitive dynamics because the perspective is based on the Austrian school view that markets are at constant disequilibrium and competition is a dynamic process that makes any competitive advantage a temporary position (Jacobson, 1992; Schumpeter, 1934). Given this view that market positions fluctuate and competitive advantage erodes, managers must monitor rival firm actions and behaviors to efficiently engage in competitive actions that help achieve and sustain a competitive advantage (Grimm et al., 2005; Smith et al., 1992).

Early work in competitive dynamics focused on the dyadic relationship between competitors in which a *focal actor* competitively attacks a rival firm which then by countering with its own subsequent competitive attack, takes the role of the *responder* (Smith et al., 1992). This literature mainly investigated the performance consequences of attacking and responding, focusing on such topics such as attack visibility, magnitude, radicality, complexity, and response speed (Chen & Macmillan, 1992; Hambrick, Cho, &

Chen, 1996; Macmillan, McCaffery, & Vanwijk, 1985). Recent scholarship has largely shifted its focus towards the drivers and consequences of competitive behavior and a firm's collection of actions (Basdeo et al., 2006; Connelly et al., 2019; Luoma et al., 2018), but this research is still built on the literature's core elements. I will discuss some of these core elements in the following sections, beginning with the first step to competitive exchanges—analyzing the competition.

Competitor Analysis

Competitor analysis involves identifying competitors, assessing their qualities, and predicting their behavior (Porter, 1980; Smith et al., 1991; Zajac & Bazerman, 1991). Competitor analysis is an "integral part of competitive dynamics" (Chen & Miller, 2012: 138) because a focal firm cannot engage in a competitive exchange of attacks and responses without first identifying who will be the other party in this exchange. It is also difficult to compete without understanding the competitor's qualities and behavior.

In his seminal paper, Chen (1996) suggests firms identify and distinguish between competitors according to differences among two key factors: (1) market dimensions and (2) resource or strategic dimensions. The basis for this argument is that an industry can comprise multiple markets, each of which can be served by different strategies that require different resources (Harrigan, 1985); this highlights limitations of prior approaches to competitor analysis that focused on the industry or strategic groups and assumed all members of each were competitors (Barney & Hoskisson, 1990; Porter, 1980). Instead, Chen (1996) posits that firms experience different degrees of competitive tension depending on the level of market commonality and resource similarity between

the two rival firms. Chen (1996: 104) thus defines competitors as "firms operating in the same industry, offering similar products, and targeting similar customers".

Competitor analysis is a crucial first step to competing successfully and understanding competitive dynamics (Chen & Miller, 2012), but there are other important aspects. Several of these can be explained by the AMC framework.

The AMC Framework

A core perspective in competitive dynamics research is the Awareness-Motivation-Capability (AMC) framework (Chen et al., 2007a). This framework posits that there are prerequisites for the exchange of competitive attacks between rival firms in the battle for market share to occur. Managers must be *aware* of a competitor and its actions in order to execute a competitive attack or response, must be *motivated* to attack or respond, and be *capable* of attacking or responding (Chen & Miller, 2012; Chen et al., 2007a). All three components of the framework encompass the competitive interplay between competitors and provide a comprehensive view of the battle for market share.

Awareness

Awareness is the first and most fundamental portion of the framework and as cited by (Shi et al., 2020), "refers to how *cognizant* a focal firm is of a threat arising from one or more of its competitors (Smith et al., 2001b: 320)." Firms cannot effectively attack a competitor or prepare an adequate response to their competitive actions if they are unaware of who their competitor is, how they behave, or the competitive attacks they execute (Chen & Miller, 1994; Luoma et al., 2018; Tsai et al., 2011). An assumption in the literature is that firms pay attention to rival firms, but awareness may vary because competitors and their actions are not homogeneous (Smith et al., 1992). For instance,

firms are more aware of competitors' more visible actions (Chen & Miller, 1994), and Macmillan et al. (1985) find that in the banking industry competitors respond slower if they are less aware of the new product's perceived potential. Both tangible and perceptual factors can thus influence awareness of a competitor's actions (Smith et al., 1992).

Perception is also an important factor in the awareness of the competitor itself and its behaviors (Tsai et al., 2011). Researchers have shown that firms are more likely and quicker to respond to competitors' attacks that receive public commitment as opposed to ones that do not regardless of the attack's effectiveness (Chen et al., 2002). This suggests that higher awareness of a competitor's perceived intentions and behaviors plays an important role in how a focal firm reacts to a competitor's actions. Also, the low awareness resulting from greater cultural distance between a focal firm and a competitor can mitigate the volume of combined competitive actions (Yu, Subramaniam, & Cannella, 2009), the focal firm's size relative to a competitor can influence how focal firm managers perceive the competitor's competitive actions (Chen & Hambrick, 1995; Chen et al., 2007a), and a focal firm is more likely to exit a market if a competitor has more alliance partners because the focal firm is more aware of the competitor's opportunities in that market (Silverman & Baum, 2002). These studies suggest perceptions of cultural distance, size, and affinity for alliances play a key role in a focal firm's awareness of a competitor.

Another important factor is the external environment. Studies find heightened awareness when attacks occur between firms that share common identities (Livengood & Reger, 2010), suggesting that external factors that shape firms but are not directly related to the competitive action are important to the competitive exchange among rival firms.

Further, researchers contend more awareness of competitive actions when they are executed by firms with less environmental ambiguity or in hypercompetitive environments due to lower uncertainty (Gimeno & Woo, 1996), when there are changes to the resource environment because of the importance of resources (Insead & Chatain, 2008), and when there is a collective model of market boundaries in an industry because lower uncertainty (Porac et al., 1995). These studies highlight how external factors can impact awareness between rival firms even when they may not directly influence the firms' internal attributes such as their identities.

Taken together, awareness is a key element of the competitive exchange between rival firms because a focal firm cannot effectively attack or respond to a competitor's attacks if they are unaware of the competitor's behaviors and actions. Awareness and the factors that can influence it thus play an important role in achieving and sustaining competitive advantage.

Motivation

The AMC framework posits that awareness is but one necessary condition to incite competitive exchanges among rival firms. Managers must also be motivated to act or respond to a competitive attack (Chen et al., 2007a). Motivation is thus related to the competitive intentions of a firm because it involves not just being aware of a competitor and its actions but engaging in its own competitive actions and responses in order to achieve its competitive goals (Chen et al., 2007a). Motivation is, therefore, a reflection of what the firm intends to accomplish in the competitive landscape and how to do so. Scholars thus investigate drivers of motivation (Chen & Miller, 2012).

Research has shown that factors related to the focal firm can drive its motivation to attack or respond (Chen & Miller, 2012). Research posits, for instance, that high performing firms are less motivated to attack in established markets but more motivated in newer ones because they are less willing to disrupt the status quo in established markets they already dominate than in newer markets in which new market leaders may easily emerge (Chen et al., 2010a). Studies also find that smaller firms are more motivated to engage in less visible actions to avoid attention from larger firms that pose substantial threats (Chen & Hambrick, 1995), and distressed firms are less motivated to attack due to threat rigidity (Ferrier et al., 2002). Finally, studies have shown that a firm's ownership composition influences its motivation to engage in certain types of competitive actions because different owners have varying time horizons and goals for the firm (Connelly et al., 2010b) and that the firm's age, size, past performance, and competitive experience can all influence its motivation to engage in a diverse set of competitive actions because each of these characteristics can restrict managerial search capabilities and knowledge of competitive alternatives (Miller & Chen, 1996). The motivation to act is thus highly dependent on the focal firm's attributes.

Characteristics of the competitor and the competitor's actions can also influence a focal firm's motivation to act or respond (Chen & Miller, 2012). For instance, firms are more motivated to respond and imitate competitive actions of competitors who are more dependent on the focal market due to higher anticipated payoffs from the move (Chen & Macmillan, 1992), not imitate competitors who share common ownership to appease shareholders by avoiding head-to-head competition and encouraging mutual gain between the two rivals (Connelly et al., 2019), act and respond to competitors that are

more similar and have a longer history of rivalry due to increased perceptions of threat and competitive nature (Kilduff, Elfenbein, & Staw, 2010), and form alliances with a competitor's alliance partners if the competitor's alliances are not specialized because existing alliances are less likely to be exclusive (Gimeno, 2004). Firms are also more motivated to respond to competitive attacks that are more impactful in attempts to minimize market share losses (Chen, Smith, & Grimm, 1992) and ones that impact central, as opposed to peripheral, markets because they pose a bigger threat to the focal firm's competitive position (Chen & Miller, 1994). Attributes of the competitor and the competitor's actions can thus influence competitive intentions and the motivation for firms to act or respond.

Finally, external environmental factors can influence a firm's motivation to act or respond to competitors' competitive actions (Chen & Miller, 2012). According to researchers, dominant firms in a strategic group are more motivated to engage in competitive behaviors because they have fewer barriers blocking their engagement in rivalrous behaviors than followers (Smith et al., 1997), and the motivation to pursue certain actions differ depending on market growth and diversity because they can influence competitive inertia (Miller & Chen, 1994). Studies also find that firms in industries with high entry barriers are less motivated to engage in competitive actions due to lower threats of rivalry and competitive nature (Ferrier, 2001), firms in markets with high earnings pressure are less motivated to expand output to avoid negative short-term performance (Zhang & Gimeno, 2010), and rivals who compete in more common markets are less motivated to engage in direct competitive attacks to avoid head-on

competition in multiple markets (Baum & Korn, 1996, 1999; Gimeno & Woo, 1996; Yu et al., 2009).

In sum, firms must be motivated to engage in competitive actions or respond to competitive attacks for competitive exchanges to occur. Competitive intentions are related to motivation because the motivation to engage in competitive behavior reflects what the firm aims to accomplish and how to do so. This makes motivation a key component of the competitive landscape and the AMC framework (Chen et al., 2007a).

Capability

The third and final portion of the AMC framework is 'capability'—firms must be capable of executing a competitive action in order to attack or respond (Chen et al., 2007a). Capability involves not just whether or not the firm can act, but also its implementation abilities regarding competitive actions. In other words, capability involves *if* a firm can attack or respond but also *how well* the firm can implement such actions (Chen & Miller, 2012). Competitive dynamics scholars, therefore, investigate the role of capability in the competitive landscape (Smith et al., 1992).

It makes intuitive sense that firms with more slack resources show more consistency in their competitive actions (Lamberg et al., 2009), but researchers contend that less conspicuous elements may also influence attack capability. For example, the radicality and complexity of a competitive attack are negatively related to the speed of response because an appropriate response will require more capabilities (Macmillan et al., 1985). Researchers also posit that firms are less likely to respond to competitive actions that are harder to reverse or implement because an appropriate response would likely require more specific resources and capabilities that may be uncommon or unique

to the attacking firm (Chen & Macmillan, 1992; Chen et al., 1992), larger firms are slower to respond because they are less able to quickly formulate and implement competitive actions than their smaller counterparts (Chen & Hambrick, 1995), firms in less concentrated industries are less capable of finding and exploiting opportunities and are, therefore, less aggressive (Derfus et al., 2008), and firms with more heterogeneous TMTs are less able to effectively translate a diverse repertoire of actions into positive firm performance or aggressively pursue competitive actions during times of distress (Ferrier et al., 2002). This is because more heterogeneity can mean less unity of thought and agreement-seeking behaviors necessary when pursuing or executing competitive actions during times of poor performance (Ferrier & Lyon, 2004).

A firm's awareness of its competitors and their actions, motivation to act, and capability of engaging in competitive actions and responding to attacks are thus important aspects of the competitive landscape. My study involves all three components that make up the AMC framework as I focus on competitive uncertainty (awareness), intentions (motivation), and implementation abilities (capability). I do, however, partake in an unconventional approach. The typical approach is to assess the three components in only one firm in a dyad, but I posit that focal firm awareness of the competitor's motivation and capabilities can influence the focal firm's competitive behaviors.

Competitive Uncertainty and Awareness

Competitive uncertainty can impede the focal firm's ability to achieve and sustain competitive advantage, so a rival firm may benefit from actively increasing competitive uncertainty to limit the focal firm's awareness and hinder its competitive reasoning (Grimm et al., 2005; Heil & Robertson, 1991). The focal firm, therefore, focuses on ways

to reduce the competitive uncertainty that surrounds a competitor while the competitor seeks to increase it (McGrath et al., 1998; Westphal & Zhu, 2019).

Evidence suggests competitive uncertainty is negatively associated with being attacked (Luoma et al., 2018) but research on what can increase competitive uncertainty and the effects of doing so is sparse. Much like other research streams in strategic management, most competitive dynamics studies approach competitive uncertainty as a market or competitive action state. Research finds for example that when there is high market uncertainty, firms engage in a wider range of competitive actions to spread out risk and attract new customers (Miller & Chen, 1996). Scholars have also shown that firms respond slower and are less likely to imitate competitive actions high in uncertainty because of the extra effort managers must expend on information search activities to reduce or eliminate the uncertainty (Smith et al., 1991), and that competitive uncertainty is positively related to establishing network ties among boards as a way of facilitating search (Westphal & Zhu, 2019). Most studies, as such, do not focus on what activities can lead to competitive uncertainty and the consequences of these activities.

The few studies that explore how to increase competitive uncertainty are typically limited to a competitive action's characteristics or execution (Heil & Robertson, 1991; Nadkarni et al., 2019), rarely focusing on uncertainty about a competitor's behaviors. In other words, research focuses on how a competitor can manipulate competitive uncertainty around a competitive action it engages in and overlooks how competitive uncertainty around the competitor itself can also affect its competitive position. Researchers suggest that firms try to improve their competitive positions by concealing competitive actions or using vague language (when announcing one) to increase

competitive uncertainty and limit rival awareness (Grimm et al., 2005; Heil & Robertson, 1991; Nadkarni et al., 2019), and engaging in certain competitive actions in attempts to obscure their intentions and divert rivals' resources (Markman, Gianiodis, & Buchholtz, 2009; McGrath et al., 1998). Research thus focuses predominantly on the effects of uncertainty about a competitive action and not characteristics or the behavior of the competitor executing the action.

Firm decisions indirectly related to competitive actions, however, may also increase competitive uncertainty and influence a focal firm's awareness of a rival firm. Certain firm attributes and external factors that may seem distal to a firm's competitive actions can influence competitive behavior (Connelly et al., 2019; Connelly et al., 2010b; Wernerfelt & Karnani, 1987), so less proximal decisions may also influence competitive uncertainty. I theorize that a competitor's non-competitive-action decisions that: (1) are highly visible and (2) have ambiguous performance or strategic implications, can influence focal firm awareness and thus its competitive behavior. In other words, ambiguity about a competitor's activities can influence competitive uncertainty and the focal firm's competitive behavior.

I also theorize that activities that can increase competitive uncertainty about future outcomes can reduce uncertainty about more immediate ones. Studies related to increasing competitive uncertainty often assume that when a competitor increases competitive uncertainty, it enjoys a competitive advantage over a focal firm (McGrath et al., 1998; Nadkarni et al., 2019), and that increasing competitive uncertainty only negatively impacts the focal firm's awareness. I argue that there may be unintended consequences to increasing competitive uncertainty because doing so around future

outcomes may reduce uncertainty about other relevant factors that may be more immediate. The relationship between competitive uncertainty and awareness can be a double-edged sword and is more complex than previous research dictates.

Ambiguity and Competitive Uncertainty

Ambiguity occurs when there is a lack of clarity and can lead to situations where "the assumptions necessary for rational decision making are not met" (Weick, 1995: 92). Specifically, ambiguity involves confusion when there are several interpretations of a situation at the same time (Levine, 1988) and occurs because "high complexity, or a paradox makes multiple (rather than a single or dichotomous) explanations plausible" (Martin, 1992: 134). Ambiguity is, therefore, related to competitive uncertainty because unpredictability about a rival firm's competitive behavior can arise when there is a lack of clarity due to multiple plausible possibilities regarding the competitor's future outcomes.

Ambiguity and uncertainty are distinct, but they overlap due to their similarities regarding clarity (Weick, 1995). For instance, according to March (1994: 178), "ambiguous outcomes are outcomes whose characteristics or implications are fuzzy" but Burns and Stalker (1961: 112) describe uncertainty as "the ignorance of the person who is confronted with a choice about the future in general, and in particular about the outcomes which may follow any of his possible lines of action." This means that outcomes can be ambiguous if there are multiple plausible possibilities but can also encompass uncertainty since the focal individual may be ignorant of the future. Stated simply, confusion and ignorance can, and often do, occur contemporaneously or in succession (Weick, 1995). Even research that acknowledges the distinction between ambiguity and uncertainty,

however, overlooks the possibility the two may have different associated outcomes. For example, Joseph and Gaba (2015) highlight the difference between ambiguity and uncertainty, but only investigate ambiguity and argue it can reduce firm responsiveness.

The distinction between ambiguity and uncertainty, however, means the relationship may be multi-faceted. It is possible for ambiguity to increase uncertainty about one subject but reduce uncertainty about another because uncertainty occurs when there is not enough information, but ambiguity occurs when there is too much information (Weick, 1995). Individuals processing all the information can, therefore, become less certain about some areas but become more certain about others depending on the information that is creating the ambiguity. For instance, ambiguity may increase uncertainty about the future if the information overload prevents organizations from making clear projections, but the ambiguity itself may reduce uncertainty about the immediate state of the firm. This is consistent with March and Olsen (1975) which suggests amid uncertainty organizations may not immediately resort to beliefs created from past experiences but instead pay attention to different available situations when making future decisions.

An example of how ambiguity can increase uncertainty around some aspects but reduce others is when an organization implements high amounts of change to its leadership. Changes to leadership structures can have myriad meanings and implications and be difficult to interpret (Arthaud-Day et al., 2006; Hilger, Mankel, & Richter, 2013). Studies suggest that this can increase uncertainty about future decisions such as determining compensation (Graffin et al., 2013a) but can reduce uncertainty about how the firm was run before the changes, and immediately after they are implemented, such as

inefficiencies and turmoil due to the resulting disruption (Ballinger & Marcel, 2010). Studies also posit that changes to a firm's leadership often requires an adjustment period for members to become accustomed to new roles (Hambrick & Quigley, 2014; McDonnell & Werner, 2016). Ambiguity about a competitor can, therefore, hinder and foster focal firm awareness at the same time.

In sum, competitive dynamics research focuses on the competitive exchange between rival firms (Chen & Miller, 2012). Awareness, motivation, and capability are key elements of competitive dynamics because a competitive exchange cannot occur if a focal firm is not aware of its competitor and the competitor's actions, motivated to act or respond, or capable of acting or responding (Chen et al., 2007a). Competitive uncertainty is an important factor firms often attempt to manipulate because it can influence awareness (Nadkarni et al., 2019). Researchers focus on how a competitor can increase competitive uncertainty around a competitive action to impede a focal firm's awareness and improve its own competitive position (Heil & Robertson, 1991), but I contend that non-competitive action decisions that have ambiguous implications can influence competitive uncertainty about the competitor itself and thus influence the focal firm's competitive behavior. Further, researchers overwhelmingly focus on the benefits that accrue for the firm increasing competitive uncertainty, but I suggest that activities that can increase competitive uncertainty do so regarding future competitive outcomes but reduces uncertainty about more immediate aspects of the firm.

In the next chapter, I review the literature on several governance practices. Corporate governance practices are highly visible, and some of their strategic and performance implications are ambiguous to both researchers and practitioners (Amihud &

Stoyanov, 2017; Dalton et al., 2007; Devers et al., 2007; Krause et al., 2014). These ambiguous governance practices precisely fit the type of firm decisions that may influence the competitive uncertainty that surrounds a competitor and thus impact the focal firm's awareness. To be clear, I do not contend that rival firms actively engage in these governance practices to intentionally influence competitive uncertainty; simply that when a competitor implements changes to their governance structure by engaging in them, the focal firm may become less certain about what this means for the competitor's subsequent behavior, but more certain about its more immediate state.

CHAPTER 5

THE BOARD OF DIRECTORS AND GOVERNANCE AMBIGUITY

Corporate governance refers to the "formal structures, informal structures, and processes that exist in oversight roles and responsibilities in the corporate context" (Hambrick, Werder, & Zajac, 2008: 381). This oversight encompasses the firm's strategic decisions and managerial behaviors and is primarily carried out via governance mechanisms—formal monitoring structures and systems intended to promote managerial efficiency and thus positive firm outcomes (Westphal & Zajac, 2013).

The board of directors is the "apex of the decision control systems of organizations" (Fama & Jensen, 1983: 311) and the most central governance mechanism because owners appoint directors to act on their behalf to maximize managerial efficiency (Porter, 1992). Boards have the power to hire and fire executives, determine executive pay, and also to direct and influence strategic decisions (Fama & Jensen, 1983) through monitoring, advising, providing resources, and intervening in important events (Boivie et al., 2016). The board of directors is connected to almost every single governance mechanism encompassing areas such as executive turnover, monitoring executive behaviors, and the market for corporate control.

The two most popular theoretical perspectives in corporate governance research highlight the importance of the board of directors. The agency theory perspective posits that due to the separation of ownership and control, manager and owner motivations and interests diverge (Berle & Means, 1932; Jensen & Meckling, 1976). The main tenet of

this perspective is that because ownership stakes are typically diversified across multiple firms while manager stakes are predominantly centralized to one specific firm, owners prefer more risk taking while managers prefer to be more risk averse (Fama & Jensen, 1983). Managers, therefore, often prioritize their own interests, and agency theory thus posits that managers must be monitored and incentivized to align better with owners' interests. The board of directors is the foremost monitoring body because it is most responsible for who will manage the firm, how manager interests will be aligned with owners, and can impede the market for corporate control because it also has the power to defend against hostile takeovers (Jensen & Murphy, 1990; Jensen & Ruback, 1983).

Resource dependence theory is the second popular perspective and contends that power imbalances between organizations and external parties such as suppliers, competitors, and regulatory agencies can lead to uncertainty over and threats to vital resources (Pfeffer & Salancik, 1978). Owners and managers are, therefore, apt to reduce the power that external players have over their firm by engaging in such tactics such as mergers and acquisitions, alliances, and appointing representatives of the relevant external party a seat on the board (Hillman, Withers, & Collins, 2009). These activities help reduce the uncertainty over and threat to valuable resources by bringing those resources into the firm. Directors are, therefore, key contributors of resources and scholars suggest that besides their monitoring duties, directors can also act as counsel to top managers and influence the firm's strategic decisions (Oliver et al., 2018).

In sum, the board of directors is the most central governance mechanism because it is related to almost every other monitoring mechanism but also plays a key role in strategy formulation and implementation (Boivie et al., 2016). In this study, I focus on

director turnover, CEO duality, board classification, and CEO turnover because these specific governance mechanisms relate to the board in each of the mentioned key governance areas and each have ambiguous strategic implications (Daily & Dalton, 1995; Daines, Li, & Wang, 2018; Krause et al., 2014).

Governance Ambiguity

I define *governance ambiguity* as an overabundance of information that results from engaging in, or making changes to, governance practices that have multiple plausible strategic or performance implications and influence uncertainty regarding a firm's behavior. Governance ambiguity thus takes the form of one or more changes to the firm's governance structure in which more collective engagement in or changes to these individual practices equates to more ambiguity.

Researchers and practitioners are conflicted about the specific implications of these governance practices (Amihud & Stoyanov, 2017; Dalton et al., 2007; Devers et al., 2007; Krause et al., 2014) but generally agree that governance structure changes can indicate turmoil among the firm's leadership and disrupt firm operations (Kesner & Sebora, 1994; Marcel, Cowen, & Ballinger, 2017). Such disruption can be detrimental to the firm because it leads to near-term inefficiency and often requires an adjustment period to overcome (Ballinger & Marcel, 2010; McDonnell & Werner, 2016). Changes to these governance practices are, therefore, ambiguous because there are myriad plausible strategic outcomes that may result from these changes but they also indicate past and near term managerial inefficiencies (Ballinger & Marcel, 2010; Dalton et al., 2007). I theorize and test whether a focal firm's competitive behavior is related to the extent to which a competitor engages in or makes changes to these practices. A competitor's governance

ambiguity may influence competitive uncertainty for the focal firm because governance practices are highly visible, several of them have ambiguous implications, and can also indicate the current state of the firm's managerial efficiency (Amihud & Stoyanov, 2017; Dalton et al., 2007; Devers et al., 2007; Krause et al., 2014).

I particularly focus on the board of directors and its functions because it is the central governance body and both scholars and practitioners debate the influence of some board practices on firm outcomes (Boivie et al., 2016; Cremers, Sepe, & Masconale, 2019; Duru, Iyengar, & Zampelli, 2016). The main conflict is on whether they are beneficial or detrimental to the firm (Amihud & Stoyanov, 2017; Boivie et al., 2016; Krause et al., 2014), but due to little empirical support and weak average effect sizes on overall firm performance (Dalton et al., 1998; Dalton et al., 1999), some scholars posit that these attributes are practically meaningless (Gillespie & Zweig, 2010). According to Porter (1992: 39), the proxy system that is the basis of the board of directors is a "highly imperfect form of influence, and rarely affects management behavior". At the same time, because the board is considered the first line of defense for shareholders against managers who may not appropriately prioritize the interests of the firm (Porter, 1992), too much change to board practices can indicate managerial inefficiency and disruption (Arthaud-Day et al., 2006; Marcel et al., 2017). I explore three particularly ambiguous attributes: (1) board turnover; (2) classified boards; and (3) duality.

Board Turnover

One of the most popular topics in board of directors research is the investigation and implications of the type of directors that comprise the board (Withers, Hillman, & Cannella, 2012). For example, agency theory scholars argue that while the board

monitors top management decisions to ensure efficiency and curtail entrenchment, some directors may serve as better monitors than others (Boivie et al., 2016; Cannella, Jones, & Withers, 2015). The most prevalent idea is that directors who are independent of the firm and its top managers are more effective than ones who have close ties to the top managers or are one of the top managers themselves (Knyazeva, Knyazeva, & Masulis, 2013). The logic behind this idea is that independent (or outside) directors are likely to be more objective and less biased in ensuring managers are acting in the best interest of shareholders (Hillman & Dalziel, 2003; Rosenstein & Wyatt, 1990; Westphal, 1998) because it is more difficult for non-independent (or inside) directors to challenge or express views that may contradict the interests of their peers (Boivie et al., 2016). "Common wisdom posits that boards with close ties to executives and/or comprised of insiders are more prone to rubber-stamp executive decisions and dole out more lavish pay" (Laux & Mittendorf, 2011: 1467).

The academic community, however, is conflicted on board independence's merits (Boivie et al., 2016; Klein, 2002; Rosenstein & Wyatt, 1990). On one hand, board independence can be beneficial and enhance firm value (Armstrong, Core, & Guay, 2014; Dalton et al., 2007; Knyazeva et al., 2013). Research has shown that markets react positively when a new independent director joins the board regardless of the new director's occupation or expertise (Rosenstein & Wyatt, 1990), and markets react negatively to sudden independent director deaths because independent directors provide a valuable service that goes beyond their individual skills or competencies (Nguyen & Nielsen, 2010). Further, scholars contend that outside directors are valuable because they can advise and counsel top managers, thus contributing resources and external knowledge

that may be beyond the firm's expertise (Hillman et al., 2009; Pfeffer & Salancik, 1978). Research has shown a negative relationship between the TMT's industry experience and the board's collective industry experience suggesting firms may offset limitations in industry experience with the experience of directors (Kor & Misangyi, 2008), and that firms that appoint former politicians onto their boards consider how recent their experience is and the human and social capital they possess (Lester et al., 2008).

On the other hand, scholars argue that board independence can be detrimental to the firm. Compared to owners, bankers, or customers, Porter (1992: 53) posits outside directors "exert limited influence on corporate goals." Inside directors possess superior internal information than outsiders and, therefore, a shift towards independence means the firm loses the unique value that insiders contribute to the board (Hillman & Dalziel, 2003; Ocasio, 1994; Zorn, Martin, & Combs, 2012). "Lack of director ties to the corporation and their positions with unrelated firms limits the ability of directors to absorb the vast amounts of information required to understand a firm's internal operations" (Porter, 1992: 54-55). Studies that support this notion have shown that outside directors have no influence on financial reporting accuracy or bias (Klein, 2002) and having inside directors on the board is associated with higher financial reporting quality (Bedard, Hoitash, & Hoitash, 2014). Researchers, therefore, provide strong evidence for the case against board independence.

The confusion around directors, however, is not limited to independence. For instance, some suggest board diversity, or the percentage of women or ethnic minorities on the board of directors, has positive effects on firm performance because directors of non-traditional backgrounds are more likely to enhance diversity of thought and reduce

groupthink (Cox & Blake, 1991). Results are mixed, however, as studies find little evidence for a strong direct link between board diversity and financial performance (Carter, Simkins, & Simpson, 2003), but do find that diversity can improve innovation, reputation, and CSR performance (Bear, Rahman, & Post, 2010; Miller & Triana, 2009).

The mixed findings on board directors have led some scholars to suggest that the board of directors in general is not relevant to firm performance (Rosenstein & Wyatt, 1990). The central argument is that markets provide more powerful incentives to align manager-owner interests so the board is unnecessary (Demsetz, 1983; Faleye, 2004; Hart, 1983). Scholars also contend that even if boards are relevant, board independence may be superfluous because CEOs often influence the outside director selection process, which undermines the notion that outside directors are independent on decisions that impact firm performance (Vancil, 1987; Waldo, 1985; Withers et al., 2012).

One of the major contributions strategic management research has made to the corporate governance literature is its investigation into and findings regarding the social forces that play a key role in effectively governing the firm (Fiss & Zajac, 2004; Westphal, 1998; Westphal & Zajac, 2013). This is particularly the case with the board of directors as research has shown that the director selection process is socially situated such that outside directors may not be as independent as scholars once believed (Westphal & Zajac, 2013; Withers et al., 2012). Studies suggest that even truly independent directors may not serve as effective monitors because of internal and external social pressures (Westphal, 1998; Zajac & Westphal, 1996). For instance, researchers find managers engage in tactics such as ingratiation and persuasion to effectively overcome the limitations that independent directors may pose on their compensation (Westphal, 1998),

and directors selectively behave as monitors and as counsel depending on social interactions and perceptions (Oliver et al., 2018). Researchers also find that managers may pick board directors who are less likely to threaten their power at their focal firm but will seek to appoint such directors onto other boards that they serve if a powerful director is appointed (Zajac & Westphal, 1996), and that external social pressures may drive how boards design executive compensation schemes suggesting board composition may not solely determine firm outcomes (Zajac & Westphal, 1995). This stream of research suggests that because social forces influence the firm, the board may have a limited effect on firm performance and other outcomes.

Despite the debate on how it influences the firm, scholars and practitioners still consider the board of directors the most central part of corporate governance (Boivie et al., 2016; Porter, 1992) so turnover, or change to the composition of the board, has important implications. Like other aspects of the board, researchers find mixed results regarding director turnover particularly pertaining to its motivation (Arthaud-Day et al., 2006). Common logic is that director turnover is typical for firms in distress as it signals an effort towards organizational change that will improve performance (Schwartz & Menon, 1985). Consistent with this notion, turnover on the board is more common when firms underperform or engage in poor governance practices (Marcel et al., 2017), but scholars argue that director replacement may often be a symbolic gesture that is not solely motivated by intentions to improve future performance (Daily & Dalton, 1994). Other researchers, however, suggest that firms that engage in prior misconduct are likely to replace directors and make significant governance improvements in attempts to regain legitimacy (Arthaud-Day et al., 2006). To further complicate matters, researchers also

find amid violations, directors are also likely to voluntarily depart from the board to avoid the stigma of being tied to an unethical firm, suggesting director turnover is sometimes a voluntary decision on behalf of directors and may not represent any firm motive (Marcel & Cowen, 2014).

Director turnover can, therefore, contribute to governance ambiguity because it has myriad implications and ways it can potentially influence the firm (Daily & Dalton, 1994; Marcel et al., 2017). Such ambiguity can increase competitive uncertainty because it is difficult to comprehend how director turnover will influence the firm's future strategic outcomes. The new director(s) can positively influence the firm by serving as better monitors or negatively impact performance by not monitoring at all (Boivie et al., 2016). Relatedly, the new director(s) may be diligent counsels who eagerly offer their resources to help pursue growth-inducing competitive behavior or may not possess such resources or the willingness to contribute (Westphal & Zajac, 2013). This means outsiders will be uncertain about how the turnover on the board will impact the types of strategies the firm will pursue in the future.

At the same time, scholars generally agree that director turnover often indicates managerial inefficiencies that require changes to how the firm is run and turnover on the board is disruptive (Marcel et al., 2017; Schwartz & Menon, 1985). This makes intuitive sense because change is typically not necessary if the firm is managed at an acceptable level of efficiency, and disruptions to the firm can make the firm vulnerable due to necessary adjustment periods for new directors to become accustomed to their roles. Director turnover can, therefore, increase uncertainty about the firm's future actions and competitive behavior, but reduce uncertainty about past inefficiencies that may continue

in the near term as the new directors adjust to the position and apply their input. Stated plainly, director turnover can make it difficult to predict the firm's competitive behavior but indicates that the firm is currently at a vulnerable state.

I posit that a focal firm may become less certain about a rival's future competitive intentions if the rival adds, removes, or replaces directors on its board because there are myriad possibilities that can result from this change, but can also become more certain about the rival's immediate implementation abilities. Future performance implications and competitive intentions may be uncertain, but the rival will likely need time to overcome the negative effects of the ensuing disruption. Director turnover can thus influence awareness for the focal firm by increasing competitive uncertainty about the rival's future competitive intentions and strategic outcomes, while reducing uncertainty about the immediate implementation abilities and state of managerial efficiency.

Classified (Staggered) Boards

Another board attribute with highly ambiguous performance and strategic implications is the classified board structure—also referred to as 'staggered boards' (Amihud & Stoyanov, 2017). Corporate governance scholars have debated the efficacy of this board structure that classifies directors into typically three groups in which only one can be up for election in a year (Bebchuk, Coates, & Subramanian, 2002; Cremers, Litov, & Sepe, 2017; Sundaramurthy, 1996; Sundaramurthy, Mahoney, & Mahoney, 1997). The logic behind this staggered election structure is that the practice makes it difficult for hostile bidders to seize control of the firm because they would have to win two consecutive proxy contests to gain majority control of the board (Bebchuk & Cohen, 2005). Classified boards can thus make hostile takeovers all but impossible because of

the lengthy and costly process it imposes on a takeover attempt (Bebchuk et al., 2002). Scholars assert that a staggered board is one of the most insurmountable antitakeover provisions when paired with more contingency-activated defenses (Bebchuk et al., 2002).

The question regarding the efficacy of classified boards has three perspectives, two of which have been on opposite sides of a long debate spanning almost two decades (Amihud & Stoyanov, 2017; Bebchuk et al., 2002; Cremers et al., 2019; Ge, Tanlu, & Zhang, 2016). The two scholarly perspectives have engaged in a constant exchange of mounting evidence supporting their respective view reminiscent of the competitive exchange between rival firms in the competitive dynamics literature. In recent years, the two sides have escalated their attacks, even making accusations of inappropriate research practices (Lipton & Bulaevsky, 2017; Sorkin, 2015). Amid the heated exchange, a third perspective has emerged to join the debate (Cremers et al., 2019).

The first perspective posits that staggered boards harm firm value because their properties entrench managers and breed managerial complacency (Bebchuk et al., 2002). The specific argument is that by preventing hostile takeover attempts, classified boards impede the market for corporate control (Bebchuk & Cohen, 2005). Given that the market for corporate control is a key governance mechanism that can either help prevent the principal-agent problem or correct it when it occurs (Garvey & Hanka, 1999; Jensen & Ruback, 1983; Sundaramurthy, 1996), researchers argue that the powerful influence of the classified board structure breeds managerial entrenchment and complacency that harms firm performance and destroys value (Faleye, 2007; Pollock, Fischer, & Wade, 2002). Studies find that firms with staggered boards experience lower post-acquisition performance (Masulis, Wang, & Xie, 2007), and positive stock market reactions when

they declassify their boards (Ganor, 2008; Guo, Kruse, & Nohel, 2008). Researchers also find that new public firms with staggered boards experience lower IPO valuations than new firms that do not have a staggered board (Daines & Klausner, 2001), and firms with classified boards engage in more value-destroying decisions such as accounting fraud and cost-cutting (Chen, Lu, & Sougiannis, 2012; Crutchley, Jensen, & Marshall, 2007).

Amid the extensive evidence supporting the notion that classified boards entrench managers and destroy firm value, practitioners moved away from the structure which was once considered standard practice (Whoriskey, 2018). A little more than half of all public firms now employ the classified board structure (Solomon, 2012). Some researchers and practitioners, therefore, posit that classified boards harm firm value.

Following the negative view of classified boards and practitioners' general move towards declassification, scholars developed a counterargument and found evidence challenging the notion that classified boards entrench managers and destroy firm value (Bates, Becher, & Lemmon, 2008; Kacperczyk, 2009). This second perspective argued that the protection that staggered boards provide managers allows them the flexibility to invest in long-term growth projects—something managers who are not protected from the market for corporate control have little incentive to do (Cremers et al., 2017).

Research has since provided evidence supporting this second perspective (Cremers et al., 2019). Studies found that restricting staggered boards is associated with negative stock market reactions suggesting staggered boards enhance firm value (Larcker, Ormazabal, & Taylor, 2011) and declassification leads to lower return on assets and R&D investments (Ge et al., 2016). Research has also shown that firms with staggered boards engage in less financial fraud (Zhao & Chen, 2008) and invest in more

CSR because of lower short-termism (Kacperczyk, 2009). Finally, according to Cremers et al. (2017), firms that stagger their boards engage in more innovation and experience more positive changes to long-term firm value.

Given the enormous support for the notion that staggered boards enhance firm value (Cremers et al., 2017; Larcker et al., 2011), there have been recent calls in the business press to reinstate classified boards as standard practice (Whoriskey, 2018). Amid little signs of agreement in the constant debate between the two perspectives, however, a third perspective has recently gained attention. The most recent perspective is that classified boards are irrelevant (Cremers et al., 2019). Research has shown some support for linkages between staggered boards and either entrenchment (Bates et al., 2008) or with long-term investments (Cohen & Wang, 2013), but a recent study by Amihud and Stoyanov (2017) argues that classified boards do not influence firm value at all because the structure's relevance is minimal compared to the firm's consumers, suppliers, and strategic partners. This third perspective has garnered attention from central scholars of the other two perspectives (Cremers et al., 2019).

The efficacy of classified boards are ambiguous because scholars and practitioners alike debate whether they harm or enhance firm value through their influence on managerial behavior (Cremers et al., 2019). This ambiguity can increase competitive uncertainty for a focal firm if a competitor makes changes to classification because it is difficult to determine how these changes will influence the competitor's future competitive intentions, if at all. Changes to classification may indicate that the firm will engage in more long-term growth oriented competitive actions or be less willing to pursue hard-to-implement competitive actions that require effort.

At the same time, one thing both practitioners and researchers can agree on is that shareholders that seek to declassify boards do so when they believe management can be more efficient and shareholders who vote to classify a declassified board do so when they believe the firm should invest in more long-term value creation (Amihud & Stoyanov, 2017). In other words, shareholders typically seek to change the director election structure hoping to improve managerial efficiency. This implies then that the changes to classification indicate that the firm is likely not operating at an acceptable efficiency level and change is necessary. Changes to a competitor's board classification may, therefore, increase competitive uncertainty about the competitor's competitive intentions but reduce uncertainty about the competitor's near term implementation abilities.

In sum, the performance and strategic implications of classified boards are ambiguous to both researchers and practitioners (Lipton & Bulaevsky, 2017), so changes to board classification may increase governance ambiguity. Given a classified board's ambiguous effect or relevance on managerial behavior and firm outcomes, a change to this practice can increase an outsider's uncertainty about the firm's future competitive intentions, such as engaging in competitive behavior aimed at long-term growth. At the same time, changes to board declassification can also reduce uncertainty about the firm's near term implementation abilities because change would likely not be necessary if management was operating at acceptable levels of efficiency. The effects of this change can also take time to resonate through the firm so near term inefficiencies can persist. I, therefore, contend that a competitor's change to this structure can create governance ambiguity and influence focal firm awareness by increasing competitive uncertainty

about the competitor's intentions while decreasing it about past and near-term implementation abilities.

Duality

According to Krause et al. (2014: 256), duality is "the practice of a single individual serving as both CEO and board chair". Separating the CEO and board chair positions rapidly progressed amid calls from regulators and the public for better corporate governance amid notable corporate scandals (Duru et al., 2016). Activist shareholders played a key role in this shift as they submitted proposals to eliminate duality at firms such as News Corp, JP Morgan, and Goldman Sachs (Krause et al., 2014). A little over half of all public firms have now eliminated duality (Josephs, 2019).

Despite a mass shift in separating the CEO and board chair positions, duality is another governance practice with multiple plausible strategic and performance implications (Dalton et al., 2007). Finkelstein and Daveni (1994) refer to duality as a "double-edged sword" due to its ambiguous ramifications. Firms such as Chevron even publicly denounced separating the two positions while endorsing the value-enhancing qualities that duality engenders (Chevron, 2012; Krause et al., 2014). Some argue that duality harms firm value and performance (Harrison, Torres, & Kukalis, 1988; O'Connor et al., 2006), others argue that the practice enhances value (Ellstrand, Tihanyi, & Johnson, 2002; Pollock et al., 2002), and a third perspective suggests that duality is irrelevant (Dalton et al., 1998; Sundaramurthy, 1996). CEO duality and its relationship with firm performance is "one of the most contentious issues in both academia and business" (Duru et al., 2016: 4269).

The primary argument against duality is that the CEO wields too much power when he or she also holds the chairman position, thus hindering the extent to which an independent board can prevent managerial entrenchment and negative performance (Fama & Jensen, 1983; Jensen & Meckling, 1976). This makes intuitive sense since one of the primary functions of the board is to monitor the CEO (Boivie et al., 2016). "It doesn't make sense to have the person who's being monitored by the board to chair the group monitoring them" (Josephs, 2019: 2).

Research provides evidence to support the negative effects of duality. Studies suggest that CEOs with duality receive higher overall compensation (Zajac & Westphal, 1995), and are associated with poor performance (Harrison et al., 1988), but are less likely to be dismissed despite it (Goyal & Park, 2002). Research also finds that firms with duality are more likely to adopt poison pills (Mallette & Fowler, 1992), experience more negative market reactions when they adopt takeover defenses (Sundaramurthy et al., 1997), pay less attention to board monitoring (Tuggle, Schnatterly, & Johnson, 2010a), and are more likely to engage in earnings management and financial fraud (Davidson et al., 2004; O'Connor et al., 2006). Further, multiple studies find that duality is negatively associated with financial performance (Daily & Dalton, 1994; Rechner & Dalton, 1991; Worrell, Nemec, & Davidson, 1997).

Despite the logical and empirical arguments for the case against duality, some researchers and practitioners contend duality has positive effects. The main argument for duality is that the practice promotes more efficient and flexible leadership in a dynamic environment (Duru et al., 2016). This *unity of command* argument is grounded in organizational theory perspectives that posit when given the discretion to do so, managers

will maximize organizational effectiveness and performance (Donaldson & Davis, 1991; Pfeffer & Salancik, 1978). The logic behind this perspective is that duality empowers the CEO to quickly make decisions necessary to grow the firm in a dynamic environment. In contrast, the board of directors' oversight constrains CEOs who do not have duality so they cannot lead the firm with maximum efficiency.

Possibly because of empirical constraints, there is little research directly testing the *unity of command* hypothesis. There are studies, however, that present evidence to support duality's positive influence. Research has shown that duality can reduce political risk for international investment portfolios (Ellstrand et al., 2002), and may help reduce litigation risk (Kesner & Johnson, 1990). Further, evidence suggests that duality has positive effects on firm performance (Ballinger & Marcel, 2010; Boyd, 1995; Donaldson & Davis, 1991), although its positive influence may be contingent on situational factors (Krause & Semadeni, 2014; Quigley & Hambrick, 2012).

Krause and Semadeni (2013) find that board chair separation harms performance when the firm is doing well, supporting the *unity of command* hypothesis, while separation enhances performance when the firm is underperforming. Their findings suggest that the efficacy of CEO duality may be contingent on the situation and further support this notion by showing that the nature of the separation impacts subsequent performance differently, also depending on prior performance. They find that retaining a CEO but appointing another director as chairperson results in the greatest change to performance because it most represents the imposition of independent oversight compared to scenarios in which the CEO position is changed. Hence, their findings suggest that duality is complex and can have several meanings contingent on the

situation, but also that changes to duality can indicate shareholder and director discontent. Studies support either the beneficial or detrimental effects of duality on the firm and some credit situational factors, but others suggest duality may not affect firm performance at all (Daily & Dalton, 1992). Some studies find minimal or no significant relationship between duality and firm outcomes (Daily & Dalton, 1992; Dalton et al., 1998; Donaldson & Davis, 1991; Krause et al., 2014; Sundaramurthy, 1996).

Due to the mixed results and the debate among both researchers and practitioners regarding its merits, detriments, and relevance, changes in duality can contribute to governance ambiguity as outsiders may have a difficult time assessing what this change will mean for that firm's future actions. In other words, if a competitor decides to either combine or separate the CEO and chairman positions, this can create uncertainty for the focal firm regarding how this change will influence the rival firm's competitive intentions, if at all. This change can mean quicker competitive responses and more competitive actions due to unity of command, or it can mean slower responses and less effort due to entrenchment. A competitor's changes to duality, therefore, increases governance ambiguity and can increase competitive uncertainty for the focal firm.

Like the other board practices I mentioned, however, changes to duality is often interpreted as indication that shareholders or directors are not satisfied with how the firm is being run (Krause & Semadeni, 2013). When decision-makers believe the CEO wields too much power and is shirking responsibilities, taking away duality can be a way to reign in the CEO while awarding duality can be a way decision-makers express that they want more growth and quick decision-making (Krause et al., 2014). Changes to duality can, therefore, reduce uncertainty about prior and current managerial inefficiency and

implementation abilities, and also indicate that there may be a short-term adjustment period for affected parties to adjust to the new role and expectations.

Taken together, the board of directors is a key component of public firms that can influence firm performance and strategic outcomes (Hillman & Dalziel, 2003; Porter, 1992). Decisions in strategic management research and practice may have elusive implications (Haleblian et al., 2009; Lieberman & Montgomery, 1988; McWilliams & Siegel, 2000), but there are several governance practices pertaining to the board of directors whose implications are particularly ambiguous. Board turnover, classification, and duality have especially ambiguous strategic implications because researchers and practitioners make arguments and provide evidence supporting each of their beneficial or detrimental effects and why they may not matter at all (Amihud & Stoyanov, 2017; Boivie et al., 2016; Josephs, 2019; Krause et al., 2014; Whoriskey, 2018).

At the same time, changes to these governance practices also typically indicate discontent with management due to managerial inefficiencies (Amihud & Stoyanov, 2017; Krause & Semadeni, 2013; Marcel et al., 2017). Further, these changes typically require an adjustment period for their effects to materialize and for the individuals involved to get accustomed to new roles and procedures (Graffin et al., 2013a). These changes, therefore, reduce uncertainty about past and near-term managerial inefficiencies. I posit that a competitor's changes to these three board practices can increase governance ambiguity and influence focal firm awareness by increasing competitive uncertainty about the competitor's competitive intentions and reducing competitive uncertainty about its implementation abilities. In the next chapter, I discuss another governance topic that has ambiguous strategic implications—the firm's CEO.

CHAPTER 6

TOP MANAGERS AND GOVERNANCE AMBIGUITY

Strategy researchers posit that the firm and its outcomes are largely a reflection of its top managers and their decisions (Hambrick & Mason, 1984). According to this perspective, because individuals are bounded in rationality and have other cognitive limitations, executives may not select the best choice when making important decisions—challenging an assumption business scholars have long-held about the perfect nature of markets and competition (Brealy & Myers, 2000; Smith, 1990). This stream of research, therefore, investigates the relationship between a firm's top managers and firm outcomes (Carpenter, Geletkanycz, & Sanders, 2004; Finkelstein, Hambrick, & Cannella, 2009) to test the assumption that differences in top manager characteristics have firm implications.

Studies provide evidence supporting this notion that varying executive characteristics may contribute to differences in firm outcomes and decisions (Carpenter et al., 2004; Hill, Upadhyay, & Beekun, 2015; Hubbard, Christensen, & Graffin, 2017). Many practices and characteristics that involve top managers, however, are not very clear. I contend in this chapter that executive succession can increase governance ambiguity because of three main reasons: (1) there are several different motivations and implications associated with succession, making it difficult for outsiders to assess which outcomes will materialize; (2) many executive characteristics are not directly or immediately observable; and (3) even if these characteristics were observable, executives

can possess a myriad combination of these characteristics that are relevant to future firm outcomes, making it difficult for outsiders to assess which ones are most impactful.

An inherent assumption in the notion that firms are a reflection of its top managers (Hambrick & Mason, 1984), is that executives actually matter. Some researchers contend that top managers are the most valuable form of human capital in a firm (Harris & Helfat, 1997; Hiller & Beauchesne, 2014), but others question the extent of their importance (for a summary, see Finkelstein et al., 2009; Germann, Ebbes, & Grewal, 2015). This debate regarding if and how much managers matter to a firm has persisted through decades of research and perspectives. Foundational work in behavioral strategy stressed the importance of managers and their decision-making processes (Cyert & March, 1963; Penrose, 1959) whereas organizational theories emphasized the importance of the organization's environment and structure thus minimizing the effects of managers (DiMaggio & Powell, 1983; Lawrence & Lorsch, 1967).

Like duality, the extent to which executives matter to a firm may be contingent on contextual factors and thus vary across firms (Crossland & Hambrick, 2007). How much top managers matter to a firm is the first factor that can lead to ambiguity about future firm outcomes amid top manager turnover given that outsiders may not be in tune with how much specific managers of a rival firm actually matter to the firm's performance.

The CEO

Given many consider the CEO to be "pivotal to the failure or success of a firm" (Finkelstein & Boyd, 1998: 181), the CEO's effect on firm performance is the most researched topic in this area (Crossland & Hambrick, 2007; Lieberson & O'Connor, 1972; Quigley & Hambrick, 2015). Over the years researchers have employed different

empirical methods in attempts to better determine just how much the CEO matters to the firm (Hambrick & Quigley, 2014; Lieberson & O'Connor, 1972; Quigley & Graffin, 2016). Early work suggested minimal influence (Lieberson & O'Connor, 1972), but more recent developments suggest that the CEO may be more important to firm performance than other factors such as the firm's industry or economic conditions (Crossland & Hambrick, 2007; Quigley & Hambrick, 2015).

Despite these findings, some researchers suggest there are reasons to believe that the extent to which CEOs matter may be overstated and should be questioned (Fitza, 2014; Meindl, Ehrlich, & Dukerich, 1985). Researchers argue that individuals overly dwell on and attribute successes and failures to leadership (Meindl et al., 1985), that their environments constrain CEOs and their influence (Finkelstein & Boyd, 1998), and that the extent to which CEOs matter may be minimal when factoring in the amount that firm performance can be attributed to pure chance (Fitza, 2017). Some believe that "most of a CEO's success has to do with luck or suitability" (Clifford, 2017: 186) and Fitza (2017) provides evidence suggesting that when accounting for random chance, the CEO's influence on firm performance may be much smaller than industry or economic effects.

Practitioners may also have a lack of consensus on the matter. Jack Welch's successor at GE said that "anyone could have run GE and done well…in the 1990s" (Collingwood, 2009), suggesting economic factors play a larger role in firm performance than the CEO. Consistent with this perspective is the notion that the CEO's tasks are difficult and complex, but managers groomed to become a CEO are indistinguishable so other firm effects such as the ability to train employees overshadow the CEO's direct influence. "James March, a management professor at Stanford, believes that if a company

is good at training managers, its CEO candidates are so similar in education, skills, and experiences that they are virtually interchangeable" (Clifford, 2017: 185). Further, another GE executive, while referring to former CEO Jack Welch, once stated: "Jack did a good job, but…the company had been around for over 100 years before he ever took the job, and he had 70,000 other people to help him" (Collingwood, 2009), suggesting firm outcomes reflect collective efforts than a single powerful employee.

Researchers, therefore, highlight that while the CEO may be the ultimate decision-maker, the CEO does not work in isolation (Hiller & Beauchesne, 2014). Studies suggest the importance of other key decision-makers such as the board chairman (Withers & Fitza, 2017), but scholars recognize that other senior executives who make up the TMT contribute to the decision-making process and are critical to strategy implementation (Denis, Langley, & Sergi, 2012). Focusing on the "top management team (TMT) will yield stronger explanations of organizational outcomes than the customary focus on the individual top executive (CEO) alone" (Hambrick, 2007: 334) and according to Hiller and Beauchesne (2014: 571), focusing on the TMT instead of only the CEO provides a "more realistic recognition" that leadership can result from an entire team.

The basis for examining the TMT seems to be the notion that organizational strategies and decisions are a culmination of top managers and not solely the actions of a single individual. Leadership consulting firm Spencer Stuart suggests the modern business environment is much more complex, volatile, uncertain, and ambiguous so CEOs are increasingly "embracing leadership models that spread responsibility and accountability for the business to a broader group of executives" (Daniel, 2013). Accordingly, studies find that other executives such as the chief financial officer and

chief marketing officer have implications for firm outcomes (Mian, 2001; Nath & Mahajan, 2011), but much like how some question the extent to which the CEO matters to the firm, scholars and practitioners question the extent to which a single non-chief executive in the TMT matters (Germann et al., 2015; Karaian, 2014). The extent to which CEOs or other executives matter may, therefore, not be as clear as many believe, so assessing an executive's effect on a firm may be difficult for outsiders.

Executive Succession

The CEO's effect on a firm is particularly hard to assess in new CEOs. According to (Graffin et al., 2013a), even the firm's own board of directors that hired the CEO must often rely on heuristics when making performance evaluations in the first few years of the CEO's tenure. Hence, if insiders who took part in the hiring process and had a direct influence in the CEO selection have difficulty assessing his or her performance, then it may be even harder for outsiders to assess the CEO and the succession's implications. Further, given the CEO is often the most visible individual at a firm (Liu, Zhang, & Jiraporn, 2016), if outsider assessments of the CEO is challenging, then less visible employees such as members of the CEO's TMT should be even harder to evaluate.

Further exacerbating the obscurity regarding new CEOs is that research seems to agree that an executive succession event is impactful to the firm (Berns & Klarner, 2017; Wilson & Wang, 2010), but how it impacts the firm is not as clear. There are multiple plausible outcomes associated with succession and according to Graffin et al. (2011: 749), "even if a board believes it has chosen a good successor, there is no guarantee that the market will respond positively to the announcement." Markets that many consider perfect seem to be inconsistent regarding executive succession (Berns & Klarner, 2017;

Smith, 1990). For instance, researchers suggest executive successions are disruptive so negatively impact performance and stock market reactions (Grusky, 1963). Others find that markets react positively to turnover when investors perceive the successor to be capable in the position but negatively when not (Beatty & Zajac, 1987). Researchers also posit that prior performance is irrelevant to market reactions because boards often pick successors irrespective of pre-succession performance and more so based on how they identify with the successor (Borokhovich, Parrino, & Trapani, 1996)—further complicating the complex relationship between executive succession and performance.

One of the most researched successor characteristics—the distinction between inside and outside successions—is also ambiguous because there is little overall consensus on whether firm outcomes benefit from having an internal successor or hiring someone from another firm (Berns & Klarner, 2017). Some studies contend that outside successors are better for post-turnover performance during turnaround situations because it signals change (Chen & Hambrick, 2012), but others find that amid poor performance markets may interpret outside succession as an admission of past mistakes and react negatively (Chung et al., 1987). Much like other elements of executive succession this suggests the costs and benefits of inside and outside successions depend on the situation.

The common explanation regarding the relationship between executive turnover and firm performance seems to be that outcomes depend on specific conditions. Studies suggest that among others, prior performance, director characteristics, expectancy of the succession, market characteristics and conditions, prior firm misconduct, board quality, relations and socio-demographic similarities within the TMT, and successor characteristics can all influence post-succession performance (Ballinger & Marcel, 2010;

Borokhovich et al., 1996; Chen & Hambrick, 2012; Chung & Luo, 2013; Connelly et al., 2016; Georgakakis & Ruigrok, 2017; Graffin et al., 2013a; Zhang, 2006b). Stated plainly, nearly everything affects what executive succession will mean for firm performance. This means outsiders attempting to understand the subsequent implications of a firm's change in an executive position must be able to assess an overwhelming amount of information. Given that managers have limited cognitive abilities and are bounded in their rationality (Hambrick & Mason, 1984), it can be daunting to comprehend the future strategic implications of a competitor's executive succession event. Even the directors who hired a new CEO have difficulty evaluating the CEO's performance (Graffin et al., 2013a).

Further, many of the aforementioned factors that can affect subsequent firm outcomes are not directly observable to outsiders. Only insiders who have direct access to the inner-workings of the firm may have information about relevant factors such as board quality, relations among the TMT, director characteristics, and many successor characteristics. Research suggests specific executive characteristics such as narcissism, hubris, social class background, and political orientation (Graffin et al., 2020; Kish-Gephart & Campbell, 2015; Petrenko et al., 2016; Tang et al., 2015) can all influence firm outcomes, but many of these characteristics are difficult for outsiders to observe. Further, executives may possess a myriad combination of these characteristics, so external assessors must weigh which ones are more or less important. This is particularly the case amid a succession considering only the directors who interviewed the candidates may know the successor's characteristics and even the board has difficulty making evaluations early in a new executive's tenure (Graffin et al., 2013a). It may, therefore, be extremely difficult for outsiders to assess how a new executive will impact subsequent

firm outcomes and decisions so a competitor's executive succession event can increase competitive uncertainty for the focal firm regarding the competitor's future competitive intentions. It is difficult to determine what type of competitive actions the new executive prefers or the types of repertoires he or she will pursue.

At the same time, scholars agree that executive succession events can be disruptive and often indicates a need for positive change (Berns & Klarner, 2017). This means that the executive succession event may largely be a response to managerial inefficiencies at the rival firm. Further, because new executives require an adjustment period to become comfortable in their new roles (Hambrick & Quigley, 2014), managerial inefficiencies may persist for the near term. Executive successions can, therefore, reduce uncertainty about past and short-term future implementation abilities.

Taken together, if: (1) the extent to which executives matter to a specific firm is uncertain (Fitza, 2017; Quigley & Hambrick, 2015); (2) executive succession's strategic and performance implications are contingent on almost every factor relevant to the firm and its environment (Berns & Klarner, 2017); (3) outsiders and even insiders cannot directly observe many of these factors; and (4) firm managers are bounded in their rationality and have limitations to their cognitive abilities (Hambrick & Mason, 1984), then managers may have difficulty comprehending how a competitor's executive succession event will influence the competitor's multiple plausible subsequent outcomes. As such, executive succession may increase governance ambiguity. This governance ambiguity around a competitor may influence a focal firm's awareness by increasing competitive uncertainty about the competitor's future competitive intentions while reducing competitive uncertainty about its implementation abilities.

CHAPTER 7

A RIVAL FIRM'S GOVERNANCE AMBIGUITY AND THE FOCAL FIRM'S COMPETITIVE BEHAVIOR

On the one hand, a competitor's governance ambiguity can increase competitive uncertainty for the focal firm because it is uncertain how changes to these governance practices will impact the competitor's future actions and competitive intentions. On the other hand, it can reduce uncertainty about the competitor's implementation abilities because changes to its governance structure indicates disruption and managerial inefficiencies that can persist in the near-term. In other words, a competitor's governance ambiguity influences the focal firm's awareness of the competitor, so impacts the focal firm's competitor analysis abilities. Awareness is an integral portion of the AMC framework and competitive exchanges among rival firms cannot occur without it (Chen & Miller, 2012). In this chapter, I theorize how the increase and decrease in competitive uncertainty due to a competitor's governance ambiguity can influence the focal firm's competitive behavior, specifically relating to the focal firm's competitive actions.

Competitive Actions

A competitive action is defined as a "specific and detectable competitive move…initiated by a firm to defend or improve its relative competitive position" (Smith et al., 1991: 61). The competitive dynamics literature posits a competitive action serves as a message to competitors that the executing firm seeks to gain market share, but also provides information that can help competitors determine the best response that will

allow them to partake in the economic profits (Smith et al., 1992). A focal firm and its competitor must both evaluate and understand each other's competitive actions to compete successfully (Smith et al., 1991).

All competitive actions are attempts to improve the executing firm's competitive position, gain market share, or both, but they are not homogeneous (Connelly et al., 2010b). Competitive actions are distinguished as either strategic or tactical actions (Chen et al., 1992). Strategic actions require a large commitment of resources that tend to be more specific in nature, are difficult to implement and reverse, and involve a major shift in the business (Miller & Chen, 1994). Tactical actions differ as they involve fewer resources that are more general in nature, are easier to implement and reverse, and are often used to fine-tune strategy (Smith et al., 1991). Studies have shown that strategic and tactical actions are associated with contrasting outcomes. For instance, competitors respond slower to strategic actions than tactical actions because strategic actions are harder to implement and require more time to execute an appropriate response (Smith et al., 1991), and inertia in strategic actions (but not in tactical actions) can benefit performance in the near term because parsimony and repetition can improve efficiency for hard to implement actions (Miller & Chen, 1994). The distinction between individual competitive actions is, therefore, important and extensively researched.

Individual competitive actions are important, but competitive dynamics research also focuses on a firm's collection of actions to assess competitive behavior (Chen & Miller, 2012). The two main collection of actions is competitive repertoire complexity, which involves the *range of competitive actions* a firm engages (Connelly et al., 2017), and competitive aggressiveness—or a firm's *volume of actions* (Chen & Macmillan,

1992). I suggest a competitor's governance ambiguity can influence both a focal firm's repertoire complexity and aggressiveness.

Competitive Repertoire Complexity

Competitive repertoire complexity refers to "a firm's *diversity* of competitive actions (i.e., a firm's range of actions…)" (Connelly et al., 2017: 1153). Competitive repertoire complexity thus focuses on the different types of competitive actions a firm engages in. Repertoire complexity is important because researchers contend that it is related to various firm outcomes such as performance, reputation, and market share erosion (Basdeo et al., 2006; Ferrier & Lyon, 2004; Ferrier, Smith, & Grimm, 1999).

A firm's competitive repertoire complexity is important, but its implications are mixed. On the one hand, repertoire complexity can allow a firm to take advantage of new opportunities, keep competitors off guard, and respond better to changing environments (Connelly et al., 2017). On the other hand, repertoire complexity poses challenges for the firm's managers because it requires more unique resources to execute a wider range of actions and also more effort because different actions require different managerial skill sets (Golden & Ma, 2003). Firms with a less complex repertoire of actions repeatedly engage in a smaller set of actions and develop more efficient routines that can help lead to competitive advantage (D'aveni & Macmillan, 1990). Proficiency in a new competitive action can take time to develop and maintain so contemporaneously achieving expertise in a wide set of actions is harder than doing so with a more concentrated portfolio (Easterby-Smith, Crossan, & Nicolini, 2000). Competitive repertoire complexity is thus associated with more defensive elements and is longer term in nature.

Possibly because of the trade-offs associated with repertoire complexity, researchers find mixed results between complexity and firm performance (Connelly et al., 2017). Studies show that repertoire complexity has a positive relationship with firm performance because it plays a key role in using technological resources (Ndofor, Sirmon, & He, 2011), is positively related to firm reputation because the ability to execute a diverse set of actions signals high competency (Basdeo et al., 2006), and is positively related to firm performance but is contingent on TMT heterogeneity (Ferrier & Lyon, 2004). Researchers also provide evidence, however, that suggests that repertoire complexity is negatively related to investor evaluations because it impedes pattern recognition that can aide performance projections (Rindova, Ferrier, & Wiltbank, 2010).

Consistent with these mixed findings, Connelly et al. (2017) found that the overall relationship between repertoire complexity and firm performance is curvilinear such that complexity is harmful to short-term performance but benefits performance in the long term. Ferrier and Lee (2002) also found a similar U-shaped relationship between repertoire complexity and stock market reactions such that investors react more positively to complexity and simplicity but less positively to moderate levels of complexity.

Governance Ambiguity and Competitive Repertoire Complexity

Miller and Chen (1996) find that amid high uncertainty, firms do not decrease the complexity of their competitive repertoires. I argue, however, when uncertainty arises due to governance ambiguity, a focal firm will engage in a less diverse set of competitive actions for several reasons. First, if the competitor's governance ambiguity increases competitive uncertainty about the competitor's future competitive intentions, then the focal firm may be less certain about what type of competitive actions would be most

appropriate since some firms are more likely to respond to some competitive actions and less likely to respond to others (Chen & Macmillan, 1992; Smith et al., 1991). This is especially the case for non-routine competitive actions because effectively executing an unfamiliar action will require a substantial investment of resources (Kim, Haleblian, & Finkelstein, 2011). Further, since repertoire complexity is negatively related to short-term performance, engaging in a diverse set of competitive actions can be costly with low return (Connelly et al., 2017).

Second, the focal firm may elect to wait until they are more certain about the competitor's competitive intentions to avoid investing in competitive actions that may not afford the best competitive position and instead focus on their most dominant actions. This makes sense given that focusing on a more concentrated set of routine actions is more beneficial for competitive advantage during times of uncertainty (Miller & Chen, 1996). Further, governance ambiguity reduces uncertainty of the competitor's implementation abilities. The turmoil indicates that the competitor was not performing at maximum efficiency and that this low efficiency will persist in the near term as the firm adjusts to these changes (Marcel et al., 2017). This distinguishes the nature of uncertainty amid governance ambiguity and why it can affect the focal firm's behavior differently. Increasing the diversity of competitive actions would not make sense because focusing on a few dominant actions during this brief window of opportunity will lead to much higher market share gains than spreading out resources to execute a wide range of actions, some of which may require learning new skills.

When a competitor has low governance ambiguity, however, the focal firm is more aware of the competitor's reasoning and behavior because there is lower

competitive uncertainty about the competitor's intentions. The focal firm is inclined to assume that the competitor will behave in a consistent manner since there is little or no change to the governance practices that may influence the competitor's strategic trajectory. Since the focal firm is more aware (or not less aware) of the competitor's intentions, the focal firm will either maintain or even increase its diversity of competitive actions since it is better aware of how the competitor will behave or respond. The focal firm will also be more willing to sustain short-term losses to foster the type of long-term growth more complex repertoires enable when there is less governance ambiguity because they are more aware of the rival firm's competitive intentions and how they may respond. Further, there is little reason to assume that the competitor is in a vulnerable state in which the focal firm can exploit by focusing its competitive actions. I thus hypothesize that a focal firm will elect to engage in a less complex repertoire of competitive actions when a competitor makes changes to or engages in more ambiguous governance practices.

> *Hypothesis 1: A competitor's governance ambiguity is negatively associated with a focal firm's competitive repertoire complexity.*

Competitive Aggressiveness

Whereas competitive repertoire complexity pertains to the diversity of competitive actions a firm engages in, competitive aggressiveness involves the "number of competitive actions" or volume of attacks (Ferrier et al., 2002: 303). In Figure 1 on page 76, I provide details and examples of four different combinations of high and low competitive repertoire complexity and aggressiveness. The two constructs are related, but it is important to make this distinction because a firm can engage in a high (low) level of

diversity while contemporaneously engaging a low (high) volume of competitive actions. For example, a firm can frequently engage in one or two types of competitive actions, so exhibit high competitive aggressiveness, but low competitive repertoire complexity.

		Competitive Aggressiveness	
		High	Low
Competitive Repertoire Complexity	High	• Firm engages in many competitive actions (e.g. ten total competitive actions) • Firm's competitive actions are of many different types of competitive actions (e.g. two acquisitions, two new products, three price cuts, three new facilities	• Firm engages in few competitive actions (e.g. four total competitive actions) • Firm's competitive actions are of many different types of competitive actions (e.g. one acquisition, one new product, one price cut, one new facility
	Low	• Firm engages in many competitive actions (e.g. ten total competitive actions) • Firm competitive actions are of a few different types of competitive actions (e.g. ten new facilities)	• Firm engages in few competitive actions (e.g. four total competitive actions) • Firm's competitive actions are of a few different types of competitive actions (e.g. four new facilities)

Figure 1 – Four Quadrants of Competitive Repertoire Complexity and Aggressiveness

The competitive dynamics literature contends that competitive aggressiveness is important because a firm's competitive action volume is consequential to its performance and competitive advantage (Smith et al., 1992). Research has shown a positive relationship between competitive aggressiveness and firm performance because it is the most direct way to gain market share (Chen, Lin, & Michel, 2010b; Derfus et al., 2008; Lin & Shih, 2008) and dethrone a market leader (Ferrier et al., 1999). Because of competitive aggressiveness' relationship with market share gain and competitive advantage, researchers have investigated what can predict attack volume (Chen & Miller,

2012). For instance, research finds that resources and industry conditions are imperative to attack volume so firms that have more slack or compete in low entry-barrier industries are more likely to aggressively engage in competitive actions (Ferrier, 2001). Research also suggests that firms that compete in hypercompetitive environments are likely to compete aggressively to better keep up with frequent changes (Chen et al., 2010b).

Competitive dynamics research has also investigated the behavioral motivations for competitive aggressiveness. For example, studies find that TMT social integration is positively related to competitive aggressiveness because more integrated teams can execute decisions more efficiently (Chen et al., 2010b; Lin & Shih, 2008). Most notably, Ferrier et al. (2002) found that firms in financial distress compete less aggressively when the firm perceives little threat because managers are prone to behave rigidly when they sense threats. Their findings suggest that firms may behave more aggressively when they perceive less threat in the environment and from competitors. This perception of threat is important to the relationship between a competitor's governance ambiguity and a focal firm's competitive behavior.

Governance Ambiguity and Competitive Aggressiveness

Competitive uncertainty can impede awareness, but the nature of rival firm governance ambiguity is not completely enigmatic. This is because governance ambiguity may increase competitive uncertainty about a competitor's future competitive intentions, but it also indicates that there is turmoil among the rival firm's leadership (Berns & Klarner, 2017; Daines et al., 2018; Marcel et al., 2017). In other words, multiple governance changes at a rival firm may indicate management issues about how the firm will be run in the near term considering all the disruption. This can mean that the

competitor may be at a vulnerable state with low implementation abilities and pose less threat to the focal firm, thus presenting the focal firm an opportunity to gain market share. The low level of threat also means the focal firm will be more willing to compete aggressively since they will be less rigid (Ferrier et al., 2002). Governance changes can also impose drastic changes that require an adjustment period for managers to achieve acceptable efficiency and thus create a window of opportunity for the focal firm to execute actions relatively unchallenged (Hambrick & Quigley, 2014). The focal firm will likely try to capitalize on this opportunity and increase its volume of competitive actions to increase its market share.

I, therefore, argue that a competitor's governance ambiguity may be one factor that may influence a focal firm's aggressive engagement in competitive actions. When governance ambiguity is high, the focal firm may increase its volume of competitive actions to capitalize on the competitor's vulnerable state. Studies suggest that, particularly during times of high uncertainty, firms can best increase market share by focusing on its strongest competitive actions (Miller & Chen, 1996). Further, governance ambiguity may increase competitive uncertainty regarding the competitor's future competitive moves, but it decreases uncertainty about the competitor's ability to efficiently direct the firm amid the increased turmoil in its leadership structure and disruption across the firm. This, therefore, increases focal firm awareness of the rival firm's ability to effectively counter any competitive attacks.

When the competitor's governance ambiguity is low, however, there is less awareness of the competitor's response effectiveness because there is no indication of disruption in the management structure. This means there is no comparable window of

opportunity to exploit any potential competitor vulnerability. It may be impossible for a focal firm to completely be aware of a competitor's inner-workings, but the focal firm is more likely to assume the competitor will be able to effectively respond to any increase in the focal firm's aggressive competitive behavior. The focal firm will, therefore, display less competitive aggressiveness when the competitor's governance ambiguity is low.

In sum, when a competitor's governance ambiguity is low, there is high competitive uncertainty about the competitor's implementation abilities, so the focal firm is less likely to be able to identify an opportunity to increase its volume of competitive actions to increase market share. When a competitor's governance ambiguity is high, however, there is less competitive uncertainty for the focal firm about the rival firm's ability to respond to competitive actions because the high number of governance changes can indicate turmoil among leadership and an adjustment period for these changes to take effect and become routine. The focal firm may, therefore, increase its competitive actions to capitalize on this opportunity and the competitor's vulnerable state. I thus hypothesize that a focal firm will engage in a higher volume of competitive actions when a competitor makes more changes to or engages in ambiguous governance practices.

> *Hypothesis 2: A competitor's governance ambiguity is positively associated with a focal firm's competitive aggressiveness.*

Competitive Repertoire Dissimilarity

Competitive repertoire complexity and aggressiveness represents the collection of competitive actions a focal firm engages in to increase its market share relative to competitors. Both of these constructs indicate distinct elements of the focal firm's competitive behavior, but do not capture how similar or different its behavior is relative

to its competitor. Given that imitation is an important aspect of strategy and competition (Semadeni & Anderson, 2010), it is important to explore how similarly or dissimilarly firms compete against their rivals. Competitive dynamics research, therefore, investigates competitive repertoire dissimilarity.

Competitive repertoire dissimilarity occurs when a focal firm and a competitor focus on achieving competitive advantage while engaging in competitive activities different from each other (Connelly et al., 2019). In other words, competitive repertoire dissimilarity refers to the extent to which a focal firm and a competitor "differ in the actions they carry out" (Ferrier et al., 1999: 376). For example, the focal and rival firm may each engage in four competitive actions. The focal firm's four actions, however, may comprise a combination of alliances and pricing actions, whereas the rival firm's four actions comprise a combination of new product launches and new facilities. The two repertoires are thus similar in the total number of competitive actions but dissimilar according to competitive action type. Competitive repertoire dissimilarity accounts for both of these distinctions (the volume of competitive actions and the different types of competitive actions) when comparing the focal and rival firms' competitive repertoires.

Repertoire dissimilarity is important because engaging in competitive actions that differ from the actions of competitors can help both sides avoid direct competition and low profits (Connelly et al., 2019). Evidence suggests competitive repertoire dissimilarity is negatively related to rivalry intensity (Gimeno & Woo, 1996; Kilduff et al., 2010) and performance disparity (Connelly et al., 2019), and positively related to stock market returns (Ferrier & Lee, 2002). Firms often try to increase repertoire dissimilarity by limiting imitation between themselves and their competitors (Casadesus-Masanell & Zhu,

2013; Macmillan et al., 1985), as low dissimilarity can lead to aggressive competition (Smith et al., 1991) and to a Red Queen outcome (Connelly et al., 2019).

Despite the reasons firms would seek competitive repertoire dissimilarity, there are several reasons firms often pursue similarity. Firms prefer to avoid direct competition, but research finds little support for the relationship between competitive repertoire dissimilarity and some indicators of poor performance such as market share erosion or leader dethronement (Ferrier et al., 1999). Studies even suggest imitation can be beneficial for both the imitator and the firm being imitated. For example, Verhaal et al. (2017) find that smaller firms benefit when a larger competitor imitates the smaller firm's products because of increased legitimacy, while the larger firm enjoys a wider market breadth. Scholars also contend that having a similar repertoire as a competitor can benefit both parties because this may represent strong institutional norms driven by the aim to reduce uncertainty but also because firms that maintain this parity may be less likely to engage in some value-destroying, zero-sum practices such as incessant price cuts (Smith et al., 2001b). Firms, therefore, sometimes seek to hold more similar competitive repertoires with competitors, even though doing so can lead to competitive tension, intense rivalry, and aggressive competition (Kilduff et al., 2010; Smith et al., 1997).

One instance when firms decrease competitive repertoire dissimilarity is when uncertainty is high. "In highly uncertain environments…imitating others becomes an attractive decision rule" (Lieberman & Asaba, 2006: 373). This may be because uncertainty can force organizations to conform and imitate others that share a common environment, thus establishing stronger norms and more stability (DiMaggio & Powell, 1983). Firms also often decide whether to imitate a competitor's actions by assessing

characteristics of the competitor (Semadeni & Anderson, 2010), so the deft decision may be to imitate when such an assessment is not possible; scholars suggest that a focal firm can better interpret competitors who are more similar or engage in actions more similar to the focal firm (Heil & Robertson, 1991).

I contend that a focal firm will display more competitive dissimilarity with a competitor when that competitor has low governance ambiguity, and less competitive repertoire dissimilarity with a competitor when that competitor has high governance ambiguity. When a competitor's governance ambiguity is high, competitive uncertainty about its future strategic outcomes increases for the focal firm, thus making it difficult to assess the competitor's intentions. Imitation allows the focal firm to maintain parity in the market but is less aggressive than increasing the volume of actions and involves less risk than investing in a wide range of new actions that the competitor is not engaging in. Imitation may lead to aggressive competition, but engaging in similar actions as the competitor may also send positive signals of a desire for establishing institutional conformity (DiMaggio & Powell, 1983). Further, when a competitor's governance ambiguity is high, it reduces competitive uncertainty regarding its managerial efficiencies and implementation abilities because it indicates that managerial change was necessary. The focal firm may, therefore, be more willing to be similar to the competitor under the impression that it can execute similar actions more efficiently than the rival firm.

When a competitor's governance ambiguity is low, however, there is less competitive uncertainty about the competitor's future intentions, so less institutional pressure for the focal firm to imitate competitors. This also means that since the focal firm is more aware of the competitor's intentions, the focal firm will be more willing to

differentiate its actions from the competitor hoping to acquire bigger competitive gains as opposed to merely matching the competitor's gains. Further, because there is no indication that there may be managerial inefficiencies at the rival firm, the focal firm is less likely to want to compete head on as executing similar actions more efficiently may be challenging. I thus hypothesize that a focal firm's competitive repertoire will become less (more) dissimilar (similar) to a competitor's repertoire when the competitor engages in more ambiguous governance practices.

> *Hypothesis 3: A competitor's governance ambiguity is negatively (positively) associated with a focal firm's competitive repertoire dissimilarity (similarity).*

CHAPTER 8

THE ROLE OF DEDICATED INSTITUTIONAL INVESTORS IN THE RELATIONSHIP BETWEEN RIVAL FIRM GOVERNANCE AMBIGUITY AND FOCAL FIRM COMPETITIVE BEHAVIOR

In this chapter, I investigate a less ambiguous governance practice of the competitor. Some governance aspects have multiple plausible strategic and performance implications, but others have little disagreement over their associated outcomes and are thus clearer. The influence of powerful shareholders is one such aspect that scholars and practitioners find less ambiguous (Boyd & Solarino, 2016). I will, therefore, discuss institutional investors—a class of influential shareholders who own substantial shares in public firms (David, Kochhar, & Levitas, 1998)—and their moderating role in the relationship between a competitor's governance ambiguity and a focal firm's competitive behavior. To be clear, I focus on the competitor's institutional ownership and how it moderates my hypothesized direct relationships because it reflects a clear governance aspect of the competitor amid its governance ambiguity.

Institutional Investors

Institutional investors are a class of large shareholders who own at least $5 million in financial assets[5] (Cohn, 2017) and include mutual funds, hedge funds, public and private pension funds, banks, insurance companies, foundations, and endowments

[5] Major institutional investors own at least $100 million in financial assets and are the focus of this study as only major institutional investors are required to "file quarterly reports listing all holdings that are greater than 10,000 shares or $200,000 in market value" (Connelly et al., 2010b: 725).

(Connelly et al., 2010b). Institutional owners account for over half of all U.S. equities (Boyd & Solarino, 2016) and by 2017, owned almost 80 percent of equity market cap among large firms (McGrath, 2017). Given their rising stature over the last several decades, corporate governance research has investigated the extent to which institutional owners monitor and influence managerial decisions (David, Hitt, & Gimeno, 2001; Hoskisson et al., 2002).

Institutional investors differ from regular shareholders because their large holdings incentivize them to monitor the firm and allow them resources to surmount governance obstacles that typically inhibit regular shareholders (Gillan & Starks, 2007). Clients delegate their voting rights to institutional investors centralizing bargaining power into a single entity (Bogle, 2005). Institutional owners, therefore, wield substantial power and influence over the firms in their portfolios and the firms' managers. According to Connelly et al. (2010a: 1562): "executives today are in regular contact with their most influential shareholders, take actions in response to shareholder desires, and are cognizant that job security lies in the hands of their investors."

Many governance practices have ambiguous implications, but research on institutional investors and their influence on the firm is relatively clear and consistent. "Overall, institutional ownership is positively associated with both accounting and market outcomes" (Boyd & Solarino, 2016: 1290). Research has shown, for instance, that both foreign and domestic institutional ownership is associated with superior firm performance in both emerging and developed markets (Tuggle et al., 2010b). Some argue these positive performance associations may be due to legitimacy halo effects because institutional investors may be privy to targeting underperforming firms with higher

improvement margins (Klein & Zur, 2009), but others suggest that superior performance may be attributed to better monitoring (Chen, Harford, & Li, 2007b; David et al., 1998; Johnson et al., 2010). Institutional investors are, however, heterogeneous in their motives, interests, and incentives to monitor managerial actions, so not all institutional investors have or exert their influence on firm activities (Garcia-Meca, Lopez-Iturriaga, & Tejerina-Gaite, 2017; Johnson et al., 2010).

Dedicated and Transient Investors

Researchers categorize institutional investors according to their investment preferences (Connelly et al., 2010a). One common classification is the distinction between dedicated and transient investors (Bushee, 1998). Dedicated investors hold a more concentrated portfolio with larger ownership stakes in each firm and have longer investment horizons, whereas transient investors hold a more diversified portfolio with smaller stakes and have shorter investment horizons (Connelly et al., 2017; Koh, 2007). Dedicated investors are more incentivized and better able to monitor firm activities than transient investors due to these distinctions. Dedicated investors have less diversified portfolios so are exposed to higher risk and are more sensitive to the firm's performance—which instills higher motivation to actively monitor how the firm is being run (Chen et al., 2007b). Dedicated investors also have long-term horizons, so are more likely to exert their influence on firm decisions to ensure long-term firm growth and sustainability, whereas transient investors can unpredictably sell their stakes at any time, so have little incentive to exert monitoring efforts (Connelly et al., 2010b). Finally, dedicated investors are better able to serve as monitors than transient investors because it is easier to monitor a few rather than many firms (Chen et al., 2007b).

Consistent with the distinctions between dedicated and transient investors, researchers associate the two institutional investor classes with different firm outcomes. Research suggests that dedicated ownership is positively associated with internal innovation whereas transient ownership is positively associated with external innovation (Hoskisson et al., 2002), dedicated investors prefer outside directors with lone-founder firm experience whereas transients prefer outside directors with family-firm experience (Cannella et al., 2015), dedicated investors are more savvy to symbolic lead director appointments than transient investors (Shi & Connelly, 2018), and dedicated ownership is associated with less stock market volatility than transient ownership (Bushee & Noe, 2000). Firm outcomes thus vary according to transient and dedicated ownership.

Dedicated Investors and Governance Ambiguity

Another distinction between dedicated and transient investors is the amount of uncertainty that is associated with the two classes of institutional owners. Dedicated investors are associated with more stability and certainty than transient investors because they have long-term investment horizons, which means they are less likely to sell their stakes in a firm (Porter, 1992). This may explain why dedicated ownership is associated with less market volatility than transient ownership (Bushee & Noe, 2000) considering stock market volatility is a common indicator of uncertainty (Smith, 1990). Researchers also find that dedicated and transient investors are associated with different types of competitive actions (Connelly et al., 2010b) but only dedicated investors influence the firm's competitive repertoire complexity (Connelly et al., 2017), leaving transient ownership's influence on managerial behavior questionable.

Dedicated ownership's relationship with firm performance is also more certain than their transient counterparts. Dedicated investors are associated with better firm performance (Connelly et al., 2010a) but the relationship between transient investors and firm performance is less clear (Bushee, 1998, 2001). Some say transient investors benefit short-term performance (Bushee, 2001), but according to Porter (1992: 92), transient ownership is one of the biggest detriments to U.S. firms because these short-term investors are "unwilling to invest in understanding the fundamental prospects of companies, and unable and unwilling to work with companies to build long-term earning power." Porter (1992: 92) further posits that "as long as owners are committed, management has much to gain in terms of owner support for building the business." This is perhaps why scholars find that managers will go to great lengths to retain dedicated investors (Shi, Connelly, & Hoskisson, 2017).

The implications of and the extent to which executives and the board's turnover, classification, and duality matter is highly debated and uncertain (Cremers et al., 2019; Dalton et al., 1998; Fitza, 2017; Krause et al., 2014), but most strategy researchers and practitioners agree that dedicated investors benefit the firm and positively influence managerial decisions (Boyd & Solarino, 2016; Connelly et al., 2010a; Porter, 1992). This is perhaps not surprising given that "indirect governance…may make top managers feel more secure, but it leads to an inappropriate rate of investment, bad management choices, and ultimately competitive problems" (Porter, 1992: 92).

I thus argue that the competitor's level of dedicated ownership will moderate the effects of a competitor's governance ambiguity on a focal firm's competitive behaviors. My central argument behind why a competitor's governance ambiguity will influence a

focal firm's competitive behavior is that a competitor's governance ambiguity can increase or decrease competitive uncertainty for the focal firm and influence its awareness. The presence or lack of a clearer and more certain governance practice such as dedicated ownership should then influence the relationship between governance ambiguity and competitive behavior.

I argued earlier that a competitor's governance ambiguity may be negatively related to the focal firm's competitive repertoire complexity because governance ambiguity increases uncertainty about the competitor's future competitive intentions. Studies suggest, however, that higher levels of dedicated ownership is positively associated with strategic actions and more complex repertoires because they prefer longer-term growth (Connelly et al., 2010b; Connelly et al., 2017). This means when there is a high level of dedicated ownership of the rival firm, there is less uncertainty around its competitive intentions. The focal firm can, therefore, more confidently invest resources in a wider variety of competitive actions. In contrast, when the rival firm has a low level of dedicated ownership, the competitive uncertainty around the competitor's future competitive intentions induced by governance ambiguity persists. I, therefore, hypothesize that the competitor's level of dedicated ownership positively moderates the negative relationship between the competitor's governance ambiguity and the focal firm's competitive repertoire complexity.

> *Hypothesis 4: A competitor's dedicated ownership positively moderates the negative relationship between a competitor's governance ambiguity and a focal firm's competitive repertoire complexity, such that the relationship is less negative when the competitor has higher levels of dedicated ownership.*

Governance ambiguity can reduce competitive uncertainty about a firm's implementation abilities because changes to a firm's governance structure can indicate poor management and disruption that can continue in the near term (Grusky, 1963; Marcel et al., 2017). I, therefore, argued that a focal firm may interpret a competitor's governance ambiguity as an opportunity to increase its competitive actions and capitalize on the competitor's vulnerable state. The focal firm, however, may be less willing to behave aggressively when the competitor has a high level of dedicated ownership because dedicated investors are effective monitors who can also exert their influence on strategic decisions to increase managerial efficiency (Connelly et al., 2010a). Dedicated investors buy shares with long-term growth in mind so are likely to maintain their ownership stakes and exert positive influence for an extended time period (Shi et al., 2017). As such, any disruptions may be short-lived because dedicated investors will actively direct the firm to improve efficiency and to swiftly address any competitive attacks. Aggressively engaging such a firm may be counterproductive and may unnecessarily start a competitive war that can be difficult to win (Yu & Cannella, 2013).

When the competitor has a low level of dedicated ownership, however, the focal firm may interpret less likelihood that any disruptions will be short-lived and be more willing to aggressively engage in competitive actions that can help take away market share from the rival firm. I thus hypothesize that the competitor's level of dedicated ownership will negatively moderate the positive relationship between governance ambiguity and the focal firm's competitive aggressiveness.

> *Hypothesis 5: A competitor's dedicated ownership negatively moderates the positive relationship between a competitor's governance ambiguity and a focal firm's competitive aggressiveness, such that the relationship is less positive when the competitor has higher levels of dedicated ownership.*

Finally, I posit that the competitor's level of dedicated ownership will also moderate the negative relationship between governance ambiguity and competitive repertoire dissimilarity. When the competitor has high levels of dedicated ownership, there is less uncertainty about the competitor's future strategic outcomes, and any disruptions in management are more likely to be short-lived. In other words, there is less competitive uncertainty about the competitor's implementation abilities. The focal firm will, therefore, engage in a more dissimilar set of competitive actions from the competitor due to less institutional pressure but also to avoid head-on competition (Connelly et al., 2019). When the competitor has low levels of dedicated ownership, however, there is more uncertainty and less likelihood of short-lived disruption, so the focal firm will be more willing to imitate the competitor's repertoire of competitive actions because they will have higher confidence in being able to engage those actions with superior efficiency. I thus hypothesize:

> *Hypothesis 6: A competitor's dedicated ownership positively moderates the negative relationship between a competitor's governance ambiguity and a focal firm's competitive repertoire dissimilarity, such that the relationship is less negative when there is an increase in the competitor's level of dedicated ownership.*

CHAPTER 9

EMPIRICAL METHODOLOGY

Sample, Data Structure, and Data Sources

My sample consists of rival dyads in which both firms were listed on the S&P 1500 anytime between 2002 and 2017. These firms are reciprocally each other's most intense rival in their industry. In other words, dyads are only included in my sample when two firms are acknowledged as chief rivals. I limit my sample this way because it is difficult to determine which competitors a focal firm will pay attention to, but research suggests that firms are more likely to focus attention towards their most intense rivals (Kilduff, 2019; Nadkarni et al., 2019). Looking at all firms in an industry unrealistically assumes that firms can and do pay equal attention to all competitors (Chen, 1996), and only examining duopolies (Nadkarni et al., 2019) limits the generalizability of my inferences as industries with duopolies are systematically different from most industries (Porter, 1980). Therefore, only including reciprocally-most-intense rivals (chief rivals), reduces potential noise that can contaminate estimates.

I determine chief rivals in my sample using Hoberg and Phillips (2016) dataset of text-based network industry classifications. In their classification system, Hoberg and Phillips (2016) developed an intensity score that indicates how directly two firms in the same industry (according to SIC code) compete. They compute this score by conducting a content analysis of annual 10-K reports to calculate the similarity of the two firms' product offerings in a given year and link these data using SEC and Compustat

identifiers. This measurement is calculated each year so not all dyads will have the same score year after year. This reduces potential noise in my sample since their calculation accounts for the dynamic process of competition (D'Aveni, 1994).

In addition, dyads are only included if the two firms shared this relationship for at least four consecutive years. According to Kilduff (2019), firm rivalry involves intensity and history. Dyads of firms that only share a competitive relationship for a short period are less likely to consider each other as their most intense rival, so may not pay attention to each other as the competitive dynamics perspective contends (Kilduff et al., 2010). It is difficult to determine how many years a competitor must be considered a focal firm's most intense rival in order for the focal firm to pay attention to it and its activities, but in my sample the mean number of consecutive years chief rivals have this relationship is a little less than three years. Dyads that have this relationship for longer than the average are more likely to pay attention to each other, as longer history of competition contributes to relational rivalry and intensity (Kilduff, 2019). Further, because the Hoberg and Phillips (2016) calculation accounts for the dynamic nature of competition between rivals, my four-year cutoff period results in a conservative sample of intense competitors that are likely to pay attention to each other's activities.

I use several databases used in strategy research for my other data. The Hoberg and Phillips (2016), text-based network industries classification is based on Compustat, so I used Compustat firm identifiers to construct my sample. To be consistent with Connelly and colleagues' (2019) measurement of competitive behavior, I collected firm competitive action data from media sources through Factiva.[6] Firms almost never report

[6] Summary statistics of a subsample of my data were similar to prior studies that used different data sources.

all of their competitive actions in yearly reports and so analyzing media reports of firm activities is a commonly used method for compiling competitive action data (Connelly et al., 2019; Hill et al., 2019). Finally, I obtained data for my control variables from other commonly used databases. Specifically, I used board and governance data from Institutional Shareholder Services (ISS), analyst data from Thomson Reuters I/B/E/S, institutional ownership from Thomson Reuters Institutional (13F) Holdings, and executive data from Execucomp. Due to missing data and the limitation of only observing chief rivals, my final sample consists of 79 firms across 354 firm-year observations.

Dependent Variables

***Competitive Repertoire Complexity*.** Scholars describe competitive repertoire complexity as the diversity of moves a firm holds in its portfolio of competitive actions (Basdeo et al., 2006; Ferrier & Lyon, 2004). Competitive repertoire complexity thus encompasses the extent to which a firm engages in many different types of competitive actions. Consistent with prior research, I measure the focal firm's competitive repertoire complexity by calculating the Shannon index for the eight different types of competitive actions the focal firm may engage in (Connelly et al., 2017)—new product actions, capacity-related actions, pricing actions, marketing actions, acquisitions, strategic alliances, market expansion, and legal actions (Derfus et al., 2008; Ferrier, 2001; Upson et al., 2012). Some studies incorporate other measures in addition to the Shannon index to account for experimentation with new competitive actions and change across time (Connelly et al., 2017), but I use the Shannon index because my theory focuses solely on the diversity of actions and not the firm's willingness to experiment or change.

The Shannon index is a weighted diversity index measure similar to the more common Herfindahl-Hirschman index (HHI) (Basdeo et al., 2006; Yu et al., 2009) but is, according to Connelly et al. (2017), "a natural fit for the competitive dynamics literature." This is because the Shannon index includes the notion of quantifying the ability to predict future moves (Straathof, 2007). The Shannon index is calculated as:

$$S = -\sum_{i=1}^{8} p_i \, ln \, p_i$$

where p_i is the proportion of competitive actions in the *i*th competitive action category out of 8 categories.

***Competitive Aggressiveness*.** Competitive dynamics scholars stress the importance of aggressively engaging in competitive actions to gain market share (Chen et al., 2010b). Given competitive aggressiveness is defined as the volume of competitive actions a focal firm engages in, also consistent with prior work, I measure competitive aggressiveness as the count of competitive actions the focal firm engages in for a given year (Chen & Macmillan, 1992; Ferrier et al., 2002; Yu et al., 2009). Due to outliers that may bias estimates, I winsorized my competitive aggressiveness variable at the one and 99th percentiles. Results are similar, however, when using the non-winsorized variable.[7]

***Competitive Repertoire Dissimilarity*.** This variable represents the extent to which two firms (focal firm and competitor) have different competitive repertoires (Smith et al., 2001b). In other words, competitive repertoire dissimilarity captures the degree to which the focal firm's portfolio of competitive actions differs from the competitor's collective

[7] In supplemental analyses, I control for the focal firm's competitive aggressiveness in models predicting the focal firm's competitive repertoire complexity. Conversely, I control for the focal firm's competitive repertoire complexity in models predicting the focal firm's competitive aggressiveness. Results are not substantially different between the models including or excluding these controls.

set of competitive actions. Consistent with prior research, I measure competitive repertoire dissimilarity with the Euclidean Distance between the focal firm's set of competitive actions during a given year and the competitor's set of competitive actions in the same time period (Connelly et al., 2019). The Euclidean Distance is calculated by squaring the difference between the competitor's number of competitive actions and the focal firm's number of competitive actions for each of the eight competitive action categories and then taking the square root of the sum of all values. A lower value indicates less (more) dissimilarity (similarity) between the two firms' repertoires and a higher value indicates more (less) dissimilarity (similarity) between the two firms' repertoires. I winsorized my dissimilarity variable at the one and 99th percentiles to account for outliers, although results are similar when using the non-winsorized variable.

Independent Variable

Governance Ambiguity. My independent variable represents the overabundance of information and multiple meanings that emerge when firms make changes to governance practices. My measurement must, therefore, capture more and less ambiguity that can result from these changes. I thus measure governance ambiguity as a count of the total number of changes a competitor makes in a given year to the ambiguous governance practices that I focus on in my study. The formative nature of my indicators justifies aggregating them together as there are strong theoretical reasons why they can individually and collectively predict governance ambiguity but not be highly correlated to one another (Jarvis, MacKenzie, & Podsakoff, 2003).

I use an equally weighted count of changes to board turnover, board classification, duality, and CEO turnover such that any change to each in a given year is counted as one

change.[8] The extent to which each of these four governance practices induces ambiguity may vary but there is no empirical precedent to suggest which practices are more or less salient. It is, therefore, nearly impossible to determine a value-weighted system that will capture the differences between the four governance practices and how much ambiguity will result from changes to them. My measure, therefore, ranges from '0' (where there were no changes to any of these governance practices in a given year) to '4' (in which there were changes to each of these governance practices in a given year). A score of '0' indicates there is no governance ambiguity since no changes to a single one of these governance practices means there is no indication of managerial inefficiencies or multiple plausible strategic outcomes that may ensue directly resulting from governance changes. A score of '4', however, indicates the most governance ambiguity since changes to all four of these governance practices means there is the maximum amount of information and different meanings relating to managerial inefficiencies or multiple plausible strategic outcomes that may occur in the future. This variable is lagged one year to ensure temporal precedence (Kennedy, 2008).

Moderator Variable

Rival's Dedicated Ownership. I measure the amount of a firm's ownership that consists of dedicated institutional investors according to Bushee's (1998) institutional investor classification system. This system classifies institutional owners according to their investment horizon and the diversity of their holdings. Dedicated investors have longer-term investment horizons and less diversified holdings, transient investors have

[8] I only focus on CEO succession and not on other top managers because the CEO is the most visible and salient executive in the TMT. This is a conservative approach because it better ensures that the focal firm will pay attention and be aware of the competitor's succession event; the focal firm is less likely to pay attention to or become aware of other top managers' succession event.

shorter-term horizons and more diversified holdings, and quasi-index investors have long-term horizons with highly diversified holdings (Ke, Petroni, & Yu, 2008; Schnatterly & Johnson, 2014; Shi & Connelly, 2018). Consistent with prior studies, I measure the level of dedicated ownership as the percentage of total shares held by dedicated institutional investors (Connelly et al., 2010a; Shi & Connelly, 2018) and lag the variable one year to ensure temporality (Kennedy, 2008).

Control Variables

I control for several firm, competitor, executive, and external factors that might serve as alternative explanations for the relationship between governance ambiguity and competitive and strategic outcomes (Connelly et al., 2010b; Hillman & Keim, 2001). At the firm level, there are multiple factors that studies suggest can be related to governance practices and competitive behavior for which it is important to control. Studies suggest that a firm's competitive behaviors are related to the firm's financial performance because firms that perform better typically have or can acquire more resources needed to engage in more competitive moves (Ferrier, 2001; Ferrier et al., 2002). I, therefore, control for *firm performance* using the focal firm's return on assets (ROA) (net income over total assets) (Marcel, Barr, & Duhaime, 2011). Research has also shown that larger firms engage in different competitive behaviors than smaller firms (Chen & Hambrick, 1995; Haleblian et al., 2012), so I control for *firm size* measured by the total number of employees that work for the focal firm (Connelly et al., 2019). Both firm controls were winsorized at the one and 99th percentiles to ensure outliers are not biasing results (Baum, 2006). Results remain unchanged, however, when using the non-winsorized variables.

To account for other governance attributes that may influence the focal firm's strategic decisions, I control for *board size* (total number of board directors), *board independence* (total number of outside directors), *minority directors* (total number of ethnic minority directors), *interlocking directorships* (total number of inter-firm connections through directors), and *female directors* (total number of female directors) (Guldiken et al., 2019; Harrison et al., 2018; Jiang et al., In press; Zhu & Shen, 2016; Zorn et al., 2020). I also control for the focal firm's level of *dedicated ownership* (percentage of total shares held by dedicated institutional investors), *transient ownership* (percentage of total shares held by transient institutional investors), and *quasi-index ownership* (percentage of total shares held by quasi-index institutional investors) because research suggests institutional investors may influence competitive behavior (Bushee, 1998; Connelly et al., 2010b). Given the CEO ultimately makes or heavily influences the firm's strategic decisions (Busenbark et al., 2016; Quigley & Hambrick, 2015), I control for several factors that may influence the CEO's decisions (Busenbark et al., 2016; Crossland et al., 2014). Specifically, I control for *CEO pay* (total direct compensation) because a CEO's compensation structure can influence strategic decisions and performance outcomes (Devers et al., 2007) and *CEO tenure* (total number of years the CEO served in the position for the firm) (Hill et al., 2019; Ridge, Hill, & Aime, 2017) because CEOs who are in their position longer are more likely to become complacent in their strategies (Miller, 1991). To account for outliers, I winsorized both CEO pay and tenure at the one and 99th percentiles even though results remain similar when using the non-winsorized variables (Baum, 2006). I also control for *CEO risk propensity* (natural

logarithm of the firm's R&D expenditure) because the CEO's risk-taking behavior can influence their strategic decisions (Gentry & Shen, 2013; Patel & Chrisman, 2014).

External stakeholders can influence firm outcomes (Pfarrer et al., 2008). I, therefore, control for the rival firm's competitive behavior (except in models in which competitive repertoire dissimilarity is the dependent variable of interest) by mirroring the focal firm's dependent variable of interest as studies have shown that rival firms often imitate each other's competitive actions (Semadeni & Anderson, 2010; Smith et al., 2001b). In other words, I control for the *rival's repertoire complexity* or *rival's competitive aggressiveness* to match the dependent variable of interest of the model. I do not follow this procedure for models in which the dependent variable of interest is competitive repertoire dissimilarity because the dependent variable already encompasses the element of imitation making it impossible to capture individually as a control variable (Connelly et al., 2019). In addition, I control for the *rival's firm performance* (ROA) and *rival's firm size* (total number of employees) as both are highly visible and can influence competitive behavior (Chen & Hambrick, 1995; Ferrier et al., 2002). All rival firm controls were also winsorized at the one and 99th percentiles to account for outliers (Baum, 2006).[9] I control for *total analysts* (the total number of securities analysts that covered the firm in a given year), *recommendation dispersion* (the standard deviation of analyst recommendations in a given year), *median recommendation* (the median analyst recommendation in a given year), *total upgrades* (the total number of upgrade recommendations in a given year), and *total downgrades* (the total number of downgrade

[9] In unreported supplemental analyses, I also control for the rival's governance ambiguity. Results are not substantially different between including and excluding this control.

recommendations in a given year) as analyst recommendations can influence firm decisions (Busenbark et al., 2017; Harrison et al., 2018).

Finally, I include *year fixed effects* to control for unobserved heterogeneity across different time periods. All control variables are lagged one year to ensure temporal precedence (Baum, 2006; Kennedy, 2008).

Empirical Estimation

The panel data structure of my sample allows me to investigate both within and between firm variance dynamically over time (Kennedy, 2008). Both within and between firm variance are relevant to the nature of my hypotheses, but a fixed effects estimator allows for stronger causal inference (Allison, 1994; Kennedy, 2008). This is because the fixed effects estimator accounts for all time-invariant variables omitted from the model, thus reducing endogeneity concerns attributed to unit heterogeneity (Baltagi, 1995). To determine the appropriate estimator, I conducted a Hausman test, which is consistent with econometricians' recommendations (Certo & Semadeni, 2006; Kennedy, 2008). The results from the Hausman test indicate that estimates differ between fixed and random effects in a statistically significant manner ($\chi 2$=363.110; p=0.000), which suggests the estimated panel error term may be correlated with the independent variables (Certo & Semadeni, 2006). I thus use a fixed effects estimator to test my hypotheses as it is the appropriate estimator to test my models (Allison & Waterman, 2002; Wooldridge, 2015). I also employ Huber-White standard error estimates (robust standard errors) to address potential bias from serial correlation and heteroscedasticity (Certo & Semadeni, 2006).

One of my dependent variables of interest has a different structure from the other two dependent variables, so I employed two different fixed effects empirical estimators to

test my hypotheses. Specifically, competitive aggressiveness is a count variable, while competitive repertoire complexity and competitive repertoire dissimilarity are continuous variables. Count variables violate the linearity and identically and independently distributed error terms (i.i.d) assumptions of OLS regression (Kennedy, 2008). It is, therefore, important to utilize an empirical estimator that accounts for this difference to reduce the likelihood of biased estimates (Baum, 2006; Wiersema & Bowen, 2009).

For Hypotheses 1 and 4, which focus on competitive repertoire complexity, I used a fixed effects estimator (Kennedy, 2008). My dependent variable in both of these models is a continuous variable, so this estimator is appropriate and the most efficient estimator to test these hypotheses (Baum, 2006; Kennedy, 2008). My dependent variable of interest for Hypotheses 3 and 6 is also a continuous variable. I, therefore, used a fixed effects estimator to test these hypotheses (Wooldridge, 2015).

For Hypotheses 2 and 5, I am predicting competitive aggressiveness, which is a count variable. To account for the non-linear nature of my variable of interest, I used a fixed effects poisson model as a negative binomial model (an alternative model commonly used when the dependent variable of interest is a count variable) is not appropriate when employing a fixed effects estimator even when employed with an over-dispersed sample (Baum, 2006; StataCorp, 2019). This is because a negative binomial estimator does not control for unchanging covariates when employed with panel data (Allison & Waterman, 2002). This incidental parameter bias does not occur when using a fixed effects poisson estimator, which accounts for non-linearity using a maximum likelihood estimation procedure (Kennedy, 2008).

Results

Table 1 on page 119 displays the descriptive statistics and correlations for all the variables in my study. The correlation between the focal firm's competitive repertoire complexity and aggressiveness is consistent with prior studies (Basdeo et al., 2006; Chi, Ravichandran, & Andrevski, 2010; Connelly et al., 2017), and as expected these variables are positively correlated with the rival firm's competitive repertoire complexity and aggressiveness. This is consistent with the possibility that the two firms may be paying attention to each other's competitive moves (Smith et al., 1992). The rival's level of dedicated ownership is also negatively correlated with governance ambiguity, which is consistent with the notion that dedicated ownership is one of the less ambiguous governance aspects (Boyd & Solarino, 2016; Connelly et al., 2010a). These correlations suggest some level of face validity for my measures. In addition, the correlations between all variables are low enough to not raise concerns that multicollinearity may be biasing estimates (Kalnins, 2018). To ensure multicollinearity is not an issue, however, I conducted variance inflation factors (VIF). The mean VIF in my sample is 4.94, which is considerably lower than recommended thresholds (Kennedy, 2008). Finally, all my instrumental variables are correlated substantially higher with *governance ambiguity* than with their respective dependent variables of interest. I discuss mathematical justification for my instruments in depth later in my supplemental analyses section, but these correlations indicate some level of face validity in my choice of instruments.

In Table 2 on page 119, I display parameter estimates from the fixed effects regression models I used to test Hypotheses 1 and 4 in which I predict a negative relationship between the rival firm's governance ambiguity and the focal firm's

competitive repertoire complexity, and that the rival firm's level of dedicated ownership will positively moderate this relationship. Column I depicts parameter estimates when only control variables are included in the model, Column II includes the parameter estimate for governance ambiguity (my independent variable of interest), and Column III adds estimates for the fully specified model which includes the rival's level of dedicated ownership (my moderating variable) and interaction term parameters. The coefficient and p-value for the governance ambiguity parameter in Column II (β=-0.084; p=0.051) and in Column III (β=-0.148; p=0.008) both suggest a high likelihood of a negative relationship between the rival's governance ambiguity and focal firm's competitive repertoire complexity that differs from zero. In addition, the coefficient and p-value for the interaction term parameter in Column III (β=0.850; p=0.058) suggest a moderate likelihood of a positive moderating effect of the rival's dedicated ownership on the relationship between governance ambiguity and competitive repertoire complexity that differs from zero. In practical terms, this means that in my sample the focal firm's competitive repertoire of actions becomes about 11% less diverse for every one additional change the rival firm makes to its governance practices. In Table 3 on page 120, I display the marginal effects, which also suggest there is likely a positive moderating effect and that the direct relationship between governance ambiguity and competitive repertoire complexity differs from zero at low and medium levels of the rival's dedicated ownership but does not differ from zero at high levels of dedicated ownership. This interaction effect is depicted graphically in Figure 2 on page 133. Hypothesis 1 is thus supported and Hypothesis 4 receives marginal support.

In Table 4 on page 120, I depict parameter estimates corresponding to Hypotheses 2 and 5, in which I predict a positive relationship between the rival firm's governance ambiguity and the focal firm's competitive aggressiveness, and that the rival firm's level of dedicated ownership will negatively moderate this main effect. Column I displays estimates when only control variables are in the model, Column II includes the parameter estimate for governance ambiguity, and Column III is the fully specified model that also includes estimates for the rival's dedicated ownership and interaction term parameters. The parameter estimate and p-value for governance ambiguity in Column II suggest a very low likelihood of a positive relationship between the rival's governance ambiguity and the focal firm's competitive aggressiveness that differs from zero (β=0.067; p=0.198), but the estimate and p-value in Column III suggest a moderate likelihood that this relationship differs from zero (β=0.107; p=0.088). Given the coefficient in Column II represents the average effect in a non-fully specified model and the coefficient in Column III represents the main effect in a fully specified model in which the moderator variable equals zero, the best way to interpret the main effect is through the marginal effects approach (Busenbark et al., 2021). The marginal effects and p-values displayed in Table 5 on page 121 suggest a likelihood of a positive main effect that differs from zero between the rival firm's governance ambiguity and the focal firm's competitive aggressiveness at low (β=0.107; p=0.088) and medium (β=0.103; p=0.092) levels of the rival firm's level of dedicated ownership. There is almost no likelihood, however, of a main effect that differs from zero at high levels of rival dedicated ownership (β=-0.040; p=0.638). In practical terms, the coefficient in Column III for governance ambiguity means that in my sample the focal firm engages in almost two more competitive actions

for every one additional governance change in the rival firm. The parameter estimate and p-value in Column III for the interaction term suggest almost no likelihood of a negative moderating effect on this relationship that differs from zero (β=-0.725; p=0.157). The marginal effects depicted in Table 5, however, suggest there is a negative moderating effect at low and medium levels of the rival firm's dedicated ownership, as the effect gets weaker when the rival firm's dedicated ownership goes from low (β=0.107; p=0.088) to medium (β=0.103; p=0.092) levels. According to the marginal effects approach, this means there is some likelihood of a moderating effect (Busenbark et al., 2021). This lends some support for my theory that a focal firm will behave more aggressively when a rival's governance ambiguity is high, but is less likely to engage in such behavior when the rival has a high level of dedicated owners. Figure 3 on page 133 graphically depicts the interaction effect. These results suggest marginal support for Hypotheses 2 and 5.

Table 6 on page 121 contains parameter estimates relating to Hypotheses 3 and 6, in which I predict a negative relationship between the rival firm's governance ambiguity and the focal firm's competitive repertoire dissimilarity, and that the rival firm's dedicated ownership will positively moderate this relationship. Column I contains estimates for when only control variables are included in the model, Column II includes the estimate for the governance ambiguity parameter, and Column III adds the estimates for the rival's dedicated ownership and interaction term parameters. In Column II, the parameter estimate and p-value for governance ambiguity suggest almost no likelihood that a negative relationship between the rival's governance ambiguity and the focal firm's competitive repertoire dissimilarity differs from zero (β=0.047; p=0.906). This is consistent with the estimate in Column III, depicting coefficients and p-values for the

fully specified model, which also suggest almost no likelihood the relationship differs from zero (β=-0.190; p=0.671). In addition, the coefficient and p-value for the interaction term in Column III also indicate there is almost no likelihood of a moderating effect of the rival's dedicated ownership (β=2.847; p=0.324). Hypotheses 3 and 6 are, thus, not supported. This is consistent with the marginal effects depicted in Table 7 on page 122.

Supplementary Analyses

Identification. The fixed effects estimators I employed in my analyses account for the influence of all time-invariant variables that are not included in my models (Allison, 1994). Much of the concerns that an omitted variable may be biasing my estimates are, therefore, addressed in my analyses. Due to the non-random nature of my independent variable of interest, however, it is still possible that an omitted variable is biasing my estimates (Hamilton & Nickerson, 2003). I thus conducted an Impact Threshold of a Confounding Variable test (ITCV), to see how much of a concern endogeneity is in my models (Frank, 2000). The ITCV suggested an omitted variable would have to be correlated at 0.164 with the outcome and predictor variables, or have an impact of 0.027, to invalidate any causal inference (Frank, 2000). The impact valuation represents the combined correlations of an omitted variable to the independent and dependent variables of interest, and an omitted variable would have to exceed this impact score to invalidate results. Of all the other covariates in my models, only the impact of the rival firm's competitive repertoire complexity and aggressiveness exceed this threshold at about 0.031 and 0.034, respectively. This suggests there is a low likelihood that most omitted variables will have an impact that can invalidate my estimates.

Endogeneity is likely not of major concern, but there is still potential omitted variable bias in my models. I, therefore, employed two additional empirical models to address potential omitted-variable bias, and other sources of endogeneity concerns such as potential measurement error (Angrist & Pischke, 2008). I employed a two-stage least squares (2SLS) model (Kennedy, 2008) to test my three main effects, and a fixed effects two-stage residual inclusion model (2SRI) (Terza, Basu, & Rathouz, 2008) to test all six of my hypotheses. The 2SLS and 2SRI models are instrumental variable techniques that use an exogenous instrument(s) to parse out variance that can bias estimates when the independent variable of interest is correlated with the structural error term (Wooldridge, 2015). The 2SLS model uses the instrument(s) in the first stage to parse out the exogenous portion of the endogenous independent variable of interest, and then in the second stage uses the parsed out portion as the main predictor in the model (Kennedy, 2008). The 2SRI model is similar but instead captures the residuals in the first stage to correct for them in the second stage (Terza et al., 2008).

In the 2SLS and 2SRI models, it is important to employ theoretically strong instruments that are also empirically robust. Specifically, strong instruments are relevant and exogenous (Semadeni, Withers, & Certo, 2014). This means the instruments must be theoretically and empirically related to the endogenous variable but not correlated to the model's structural error term (Larcker & Rusticus, 2010). I use two such instruments in each of my main effect models as econometricians recommend using more instruments than endogenous variables (Semadeni et al., 2014).

In Hypothesis 1, my first instrument is the *rival of the rival's share price* at the end of the fiscal year. More specifically, my instrument is the closing share price of the

rival firm's most intense competitor that is not a mutual competitor of the focal firm. This is relevant because studies suggest that firms pay attention and react to how their competitors perform and are evaluated (Kim, Finkelstein, & Haleblian, 2015; Mishina et al., 2010). The rival firm's governance changes may thus be a response to another competitor's market performance and shareholder valuation (He et al., 2009; Shi et al., 2020). There is little theoretical basis, however, as to why the market performance and evaluation of this competitor of the rival firm should be directly related to the focal firm's competitive repertoire complexity, given this firm is not a competitor of the focal firm. My second instrument is the same *rival of the rival's tax avoidance*, which I measure as the rival of the rival's cash effective tax rate (ETR) (Dyreng, Hanlon, & Maydew, 2008; Hanlon & Heitzman, 2010). The cash ETR is calculated as the firm's cash income taxes paid scaled by the firm's pretax book income (Huseynov & Klamm, 2012). Corporate tax avoidance represents managerial risk propensity, which is central to many governance practices (Christensen et al., 2015; Graffin et al., 2020). It is, however, a much more appropriate and robust proxy to use as an instrumental variable in my context because while other proxies of risk propensity such as R&D expenditure require more use of firm capital to represent increasing risk-taking behavior (Bromiley, Rau, & Zhang, 2017), more tax avoidance involves reducing cash expenditures (Blaylock, 2016). This means more tax avoidance means more financial resources to invest in competitive actions, whereas more R&D investment means less financial resources. It is, therefore, likely that the rival firm will make more governance changes to ensure they are competitive if an intense competitor's managers engage in risky activities such as tax avoidance to grow their firm. At the same time, there is no theoretical reason why this firm's tax avoidance

should influence the focal firm's competitive behavior given the two firms are not competitors. Both instruments are also supported mathematically as relevant (F-stat=12.664, p=0.000) and not correlated to the structural error (Sargan $\chi 2$=1.065; p=0.302). The two instruments are, therefore, what Semadeni et al. (2014: 1071) refer to as "strong and exogenous instruments."

To test Hypothesis 2, I also employ two conceptually and empirically strong instruments. I again use the *rival of the rival's share price* as the first instrument because a competitor's market performance and valuation are probably the most relevant and visible characteristics when a firm makes internal decisions based on a competitor (Joseph & Gaba, 2015). There is no theoretical reason, however, as to why this firm's market value and performance should influence the focal firm's competitive aggressiveness, since the two firms are not competitors. As my second instrument, I use an industry ranking of the rival firm's governance ambiguity. This is what Kennedy (2008: 142) refers to as a "natural" instrument since there is no theoretical reason why the ranked independent variable of interest should correlate to the structural error but would naturally be correlated with its source variable. In fact, Kennedy (2008: 160) refers to this as the "Durbin method [in which] the independent variable is ranked by size and an [instrumental variable] is defined as the rank order." Both instruments are also empirically supported as strong instruments regarding relevance (F-stat=318.911, p=0.000) and exogeneity (Sargan $\chi 2$=0.309; p=0.578).

Finally, for Hypothesis 3, I also use the same *rival of the rival's share price* as my first instrument. For my second instrument, I use the same *rival of the rival's governance ambiguity*. While this instrument may be inappropriate for my other models, it is

appropriate and important here because my dependent variable of interest is about imitation. Given competitors often imitate each other (Semadeni & Anderson, 2010; Smith et al., 1997), a strong theoretical argument can be made that the rival firm will imitate another competitor's governance changes. As such, the rival firm's governance ambiguity may be similar to the governance ambiguity of its most intense competitor that is not a mutual competitor of the focal firm. This firm's governance ambiguity, however, should not influence the focal firm's competitive behavior given the two firms are not competitors. Empirical tests support this theory as both instruments are strongly relevant (F-stat=20.572, p=0.000) and exogenous (Sargan $\chi 2$=0.017; p=0.896).

2SLS results. Table 8 on page 122 displays parameter estimates for the first and second stages of my 2SLS model testing Hypothesis 1. Column I depicts the first stage estimates and Column II displays the second stage estimates. In Column I, estimates and p-values for my two instrumental variables, *rival of the rival's share price* (β=-0.002; p=0.000) and *rival of the rival's tax avoidance* (β=0.291; p=0.001) suggest there is a high likelihood their relationship with governance ambiguity differs from zero. In Column II, the estimate and p-value for the governance ambiguity parameter suggest there is a high likelihood of a negative relationship between the rival's governance ambiguity and the focal firm's competitive repertoire complexity that differs from zero (β=-0.314; p=0.048). It is important to note that my 2SLS model estimate has a higher effect size and p-value than my fixed effects model estimates. This makes sense given the 2SLS model attenuates endogeneity so provides a less biased estimate, but is less efficient so has larger standard errors (Kennedy, 2008). In sum, this estimate supports Hypothesis 1.

Table 9 on page 123 contains first and second stage parameter estimates for my 2SLS model testing Hypothesis 2. Column I displays first-stage estimates and Column II depicts second stage results. Both instrumental variable estimates and p-values in Column I suggest a high likelihood their relationship with governance ambiguity differs from zero (β=-0.001; p=0.000) and (β=-0.354; p=0.000). The estimate and p-value for the governance ambiguity parameter in Column II suggests a moderate likelihood that the rival's governance ambiguity has a positive relationship with the focal firm's competitive aggressiveness that differs from zero (β=2.143; p=0.098). Consistent with using two-stage models, my coefficient estimate and p-value are again higher than estimates from my fixed effects poisson model. Hypothesis 2 is thus marginally supported.

Finally, Table 10 on page 124 contains 2SLS model parameter estimates for Hypothesis 3. First stage estimates are displayed in Column I and second stage estimates are depicted in Column II. In Column I, my two instruments have a high likelihood of a relationship with governance ambiguity that differs from zero (β=-0.001; p=0.008) and (β=0.200; p=0.000). Interestingly, the coefficient estimate and p-value for governance ambiguity in Column II (β=2.660; p=0.081) suggest a moderate likelihood of a positive relationship between the rival's governance ambiguity and the focal firm's competitive repertoire dissimilarity that differs from zero. This is in the opposite direction of what I hypothesized and considerably different from my fixed effects model estimates. This may be because the imitation aspect of Hypothesis 3 is highly endogenous. Conceptually, I am arguing that the focal firm pays attention to the rival firm's governance changes and also its competitive repertoire. Thus both independent and dependent variables of interest involve awareness which means there is an extremely high likelihood my independent

variable is correlated with the structural error. It is, therefore, perhaps not surprising that the fixed effects model and 2SLS model results are considerably different. As for the direction of the coefficient, it is possible that the focal firm would want to imitate the rival firm's repertoire, since the focal firm will likely believe it can easily win a head-to-head matchup, as I argued earlier. However, it is also likely that given the rival's inefficient state, the focal firm will discount the rival firm's competitive decisions and not want to follow suit. Put simply, the rival firm is currently not making the best decisions, so the focal firm will probably not want to imitate them. This result suggests that when it comes to imitation, firms more heavily weigh the lower uncertainty about their competitor's current managerial efficiency and implementation abilities than the higher uncertainty about its future competitive intentions.

2SRI results. Table 11 on page 125 displays parameter estimates for the first and second stages of my 2SRI model testing Hypotheses 1 and 4. Column I depicts estimates for the first stage. To be consistent with my 2SLS model, I employ the same two theoretically strong instruments, the rival of the rival's share price and tax avoidance. Column II contains the second stage estimates after correcting the residuals. Consistent with my fixed effects model and 2SLS model estimates, the coefficient estimate and p-value for governance ambiguity suggest a strong likelihood of a negative relationship with the focal firm's competitive repertoire complexity that differs from zero (β=-0.156; p=0.008). Further, the coefficient estimate and p-value for the interaction term indicate a moderate likelihood that the rival firm's level of dedicated ownership weakens the relationship between the rival firm's governance ambiguity and the focal firm's

competitive repertoire complexity (β=0.877; p=0.064). These results provide further support for Hypotheses 1 and 4.

Table 12 on page 126 contains 2SRI model parameter estimates for Hypotheses 2 and 5. I again employ the same instruments from my 2SLS model, and first and second stage results are displayed in Columns I and II, respectively. Also consistent with my fixed effects model and 2SLS model results, the coefficient estimate and p-value for governance ambiguity in Column II suggest a strong likelihood that the positive relationship between the rival firm's governance ambiguity and the focal firm's competitive aggressiveness differs from zero (β=0.153; p=0.032). The coefficient estimate and p-value for the interaction term in Column II suggest a high likelihood that the rival firm's level of dedicated ownership weakens the positive relationship between its governance ambiguity and the focal firm's competitive aggressiveness (β=-1.196; p=0.040). These results provide further support for Hypotheses 2 and 5.

Finally, 2SRI model parameter estimates for Hypotheses 3 and 6 are depicted in Table 13 on page 127. I employ the same instruments that I used in my 2SLS model, and first and second stage results are respectively displayed in Columns I and II. The coefficient estimates and p-values in Column II for governance ambiguity (β=-0.150; p=0.745) and the interaction term (β=2.131; p=0.450), suggest almost no likelihood of relationships that differ from zero. This is consistent with my fixed effects model but counter to my 2SLS model estimates for Hypothesis 3. These results may indicate that the non-zero relationship suggested by my 2SLS model results for Hypothesis 3 may be an artifact of the empirical model and not represent the true relationship between the two

variables. While further investigation may be necessary to understand the true nature of the relationship, these results further suggest no support for Hypotheses 3 and 6.

A summary of my results is displayed in Table 14 on page 128. I conducted three separate empirical analyses to test Hypotheses 1-3 and two analyses to test Hypotheses 4-6. Estimates and p-values from all three models suggest support for Hypothesis 1. This consistency indicates robustness in my findings, supporting my argument that a rival firm's governance ambiguity may negatively influence the range of competitive actions a focal firm will pursue. Results from all three models also suggest support or marginal support for Hypothesis 2. This suggests my findings are robust regarding my theory that a rival firm's governance ambiguity may positively influence how aggressively a focal firm will compete. Finally, results from all three of my models consistently suggest there is no meaningful relationship between a rival firm's governance ambiguity and the amount of competitive imitation a focal firm will engage in.

My results are also consistent across both empirical analyses I conducted to test Hypotheses 4-6. Estimates and p-values from both models suggest marginal support for Hypothesis 4 in which I argue that the negative relationship between the rival's governance ambiguity and the focal firm's competitive repertoire complexity will be weaker when the rival firm has higher levels of dedicated ownership. This lends support for the robustness of my findings for Hypothesis 4. Similarly, results from both models suggest support or marginal support for Hypothesis 5 in which I argue that the positive relationship between the rival firm's governance ambiguity and the focal firm's competitive aggressiveness will be weaker at higher levels of dedicated ownership at the rival firm. This also suggests my findings are robust. Finally, results from both models

suggest no likelihood of any meaningful moderating effect of the rival firm's dedicated ownership on the relationship between the rival firm's governance ambiguity and the focal firm's competitive repertoire dissimilarity.

Robustness checks. While I conducted multiple analyses to test my main hypotheses and the consistency across those analyses provide evidence suggesting my results are robust, I conducted further tests to explore the robustness of my overarching theory. An underlying assumption in this study is that the influence of changes to one type of ambiguous governance practice alone differs from the collective influence of changes to multiple governance mechanisms. More specifically, the idea here is that the effects of governance ambiguity increase when there are more governance changes as opposed to a change in just one mechanism. For instance, according to the theoretical arguments in this dissertation, board turnover may increase governance ambiguity for outsiders but is less salient than if board turnover is accompanied by changes to duality or the CEO position. Therefore, to ensure the robustness of my theory and empirical tests, I individually investigated each governance practice that was a component in measuring governance ambiguity. Conceptually, these rival firm's governance changes should have either a weaker or no likelihood of a relationship that differs from zero with the focal firm's competitive behaviors when examined individually.

Table 15 on page 129 displays parameter estimates for the rival firm's changes to classification predicting the focal firm's competitive repertoire complexity, aggressiveness, and dissimilarity. The estimates and p-values for the classification parameter in Columns I-VI all suggest there is almost no likelihood that the relationship between changes to classification and my three dependent variables of interest differ from

zero. In addition, the parameter estimates and p-values for the interaction term also suggest the rival firm's level of dedicated ownership does not have a moderating effect. Consistent with my arguments, this suggests governance ambiguity may be less, or not at all, influential to the focal firm's competitive behavior when the ambiguity derives from only one governance change as opposed to changes to multiple governance mechanisms.

Parameter estimates for changes in duality predicting competitive behaviors and the moderating role of the rival firm's dedicated ownership are displayed in Table 16 on page 130. All the estimates and p-values for the duality parameter in Columns I-VI suggest there is almost no likelihood of a relationship between duality and competitive repertoire complexity, aggressiveness, or dissimilarity. This is also consistent with my theory that governance ambiguity becomes more pronounced when changes occur collectively across multiple governance practices. The estimate and p-value for the interaction term parameter in Column II suggest a strong likelihood that the rival's level of dedicated ownership positively moderates the relationship between changes in duality and competitive repertoire complexity. This suggests that while changes in the rival firm's duality alone may not influence the focal firm's diversity of competitive actions, it may have some influence when observed with the level of the rival's dedicated ownership. This also lends support to my theory on the collective effect of governance practices, however, given dedicated ownership is also a governance mechanism.

Table 17 on page 131 contains parameter estimates for the relationship between the rival firm's board turnover and the focal firm's competitive behaviors, and the interaction effect of the rival firm's dedicated ownership on this relationship. Consistent with the other governance changes when examined individually, estimates and p-values

for the board turnover parameter in Columns I-VI suggest almost no likelihood of a relationship between the rival firm's board turnover and the focal firm's competitive behaviors. Much like changes to duality, however, the estimate and p-value in Column II for the interaction term parameter suggest a high likelihood of a moderating effect of the rival firm's dedicated ownership.

Finally, Table 18 on page 132 depicts estimates for the relationship between the rival firm's CEO turnover and the focal firm's competitive repertoire complexity, aggressiveness, and dissimilarity. Again, all estimates and p-values for the CEO turnover parameter in Column I-VI and the interaction term parameter in Columns II, IV, and VI suggest almost no likelihood of relationships that differ from zero.

In sum, these analyses provide further support for my theory that governance ambiguity is more salient when it is driven by multiple governance changes as opposed to just one type of governance practice. My main results suggest that the rival's governance changes collectively are related to the focal firm's competitive behaviors, but within the same sample of firms, none of the governance changes individually are likely related to the focal firm's competitive behaviors.

Table 1
Descriptive Statistics and Correlations

Variables	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1 Competitive repertoire complexity	0.77	0.51																															
2 Competitive aggressiveness	13.59	14.52	0.56																														
3 Competitive repertoire dissimilarity	8.83	6.72	0.33	0.74																													
4 Governance ambiguity	1.01	0.56	0.02	0.15	0.13																												
5 Rival's dedicated ownership	0.06	0.08	-0.02	-0.11	-0.08	-0.11																											
6 Governance ambiguity x Rival's dedicated ownership	0.06	0.10	0.01	-0.05	-0.02	0.32	0.78																										
7 Firm performance	0.06	0.10	0.13	0.18	0.23	0.10	-0.02	-0.02																									
8 Firm size	19.08	25.99	0.28	0.30	0.13	0.01	0.02	0.03	0.05																								
9 Rival's firm performance	0.06	0.08	0.02	0.08	0.25	0.06	0.12	0.10	0.39	-0.01																							
10 Rival's firm size	16.08	21.99	0.22	0.02	-0.07	0.04	0.07	0.07	0.07	0.52	0.15																						
11 CEO pay	7000.00	5928.00	0.38	0.39	0.26	0.00	-0.01	-0.02	-0.06	0.44	-0.02	0.28																					
12 CEO tenure	6.13	5.64	-0.05	-0.03	-0.09	-0.03	0.01	-0.03	0.04	-0.04	-0.08	-0.06	-0.03																				
13 CEO risk propensity	2.03	2.65	0.35	0.32	0.19	0.00	-0.06	-0.04	-0.14	0.25	-0.09	0.14	0.36	-0.06																			
14 Dedicated ownership	0.07	0.07	0.01	-0.02	-0.07	0.04	0.28	0.24	0.11	0.14	0.04	0.08	-0.03	0.13	-0.11																		
15 Transient ownership	0.18	0.09	-0.04	-0.10	-0.06	0.03	-0.05	-0.05	-0.06	-0.22	-0.04	-0.05	-0.10	-0.11	-0.16	-0.08																	
16 Quasi-index ownership	0.52	0.16	-0.04	0.03	0.20	0.02	-0.23	-0.19	0.24	-0.03	0.11	0.01	-0.08	-0.08	-0.05	-0.35	0.09																
17 Board size	9.74	2.76	0.34	0.38	0.22	-0.02	-0.11	-0.08	-0.01	0.45	-0.03	0.26	0.37	-0.11	0.14	-0.11	-0.21	-0.13															
18 Board independence	7.77	2.74	0.31	0.44	0.34	-0.01	-0.12	-0.09	0.04	0.36	0.09	0.24	0.35	-0.18	0.17	-0.12	-0.19	-0.01	0.89														
19 Minority directors	0.90	1.05	0.27	0.36	0.25	0.04	0.08	0.09	0.06	0.52	-0.01	0.28	0.30	-0.03	-0.05	0.18	-0.16	-0.16	0.38	0.40													
20 Interlocking directorships	0.03	0.20	-0.02	-0.05	-0.09	-0.08	-0.01	-0.04	0.02	0.18	-0.04	-0.02	-0.03	-0.05	0.12	0.08	-0.10	-0.05	0.13	-0.03	-0.01												
21 Female directors	1.23	1.17	0.14	0.30	0.34	-0.03	-0.07	-0.07	-0.07	0.17	0.03	0.02	0.21	-0.12	-0.04	-0.08	-0.02	0.03	0.36	0.46	0.28	-0.15											
22 Total analysts	6.22	4.09	0.34	0.25	0.13	0.01	-0.09	-0.08	-0.15	0.32	-0.15	0.15	0.38	-0.09	0.30	-0.02	0.04	-0.10	0.18	0.08	0.14	-0.02	0.06										
23 Recommendation dispersion	0.83	0.30	0.12	0.07	0.05	-0.05	-0.02	-0.10	0.04	0.12	-0.01	0.08	0.14	-0.12	0.12	0.02	0.09	0.02	0.05	0.05	0.04	-0.02	0.07	0.27									
24 Median recommendation	3.46	0.57	0.02	-0.01	-0.03	-0.06	0.02	0.01	-0.05	-0.02	0.01	-0.07	0.06	0.09	0.08	-0.01	-0.02	-0.18	-0.07	-0.09	0.05	-0.03	-0.09	-0.01	-0.14								
25 Total upgrades	1.95	2.00	0.27	0.18	0.05	0.04	-0.08	-0.04	-0.22	0.22	-0.14	0.16	0.33	-0.14	0.27	-0.07	0.04	-0.14	0.24	0.16	0.11	-0.05	0.07	0.67	0.29	-0.03							
26 Total downgrades	1.96	2.27	0.24	0.16	0.02	0.08	-0.08	-0.04	-0.18	0.17	-0.20	0.08	0.28	-0.08	0.22	0.00	0.07	-0.15	0.13	0.03	0.08	-0.05	0.02	0.72	0.27	-0.08	0.72						
27 Rival's competitive repertoire complexity	0.74	0.55	0.33	0.27	0.29	0.09	-0.03	0.02	0.16	0.13	0.24	0.31	0.22	-0.07	0.22	-0.03	0.00	-0.02	0.23	0.29	0.14	-0.10	0.15	0.09	0.04	0.05	0.11	0.01					
28 Rival's competitive aggressiveness	12.56	14.38	0.33	0.37	0.58	0.09	-0.07	0.01	0.13	0.10	0.27	0.14	0.23	-0.11	0.29	-0.17	-0.08	0.10	0.31	0.41	0.11	-0.09	0.30	0.11	0.05	-0.01	0.11	0.02	0.59				
29 Rival of rival share price	62.74	74.14	0.14	0.00	-0.05	-0.14	0.18	0.05	0.08	0.33	0.23	0.52	0.07	-0.07	-0.08	0.01	0.01	0.03	0.11	0.12	0.29	-0.02	0.09	0.01	0.01	-0.03	0.09	-0.04	0.11	0.03			
30 Rival of rival tax avoidance	0.32	0.36	-0.04	0.05	0.05	0.17	0.08	0.15	0.07	-0.01	0.09	-0.02	-0.02	-0.06	0.03	0.05	-0.10	0.00	0.08	0.11	0.01	0.00	0.02	-0.14	-0.01	-0.01	-0.06	-0.10	-0.01	0.02	-0.01		
31 Ranked governance ambiguity	1.62	1.25	-0.04	0.09	0.09	0.76	0.01	0.29	0.09	0.00	0.11	0.00	-0.04	-0.02	0.01	0.07	-0.07	-0.01	-0.07	-0.03	0.03	-0.07	0.04	-0.09	-0.08	-0.01	-0.10	-0.07	0.12	0.04	-0.04	0.23	
32 Rival of rival governance ambiguity	1.01	0.81	0.06	0.05	0.09	0.31	-0.07	0.09	0.01	-0.06	0.01	-0.10	0.05	-0.10	-0.07	0.00	0.05	-0.02	-0.10	-0.15	0.03	-0.11	-0.03	0.19	0.03	0.02	0.15	0.23	0.00	0.07	-0.21	-0.03	0.15

n = 354

Table 2
Fixed Effects Regression Model Results for Hypotheses 1 and 4

	Competitive repertoire complexity					
	I		II		III	
Variables	*Estimate*	*p-value*	*Estimate*	*p-value*	*Estimate*	*p-value*
Governance ambiguity			**-0.084**	**[0.051]**	**-0.148**	**[0.008]**
Rival's dedicated ownership					-0.379	[0.597]
Governance ambiguity x Rival's dedicated ownership					**0.850**	**[0.058]**
Controls						
Constant	0.210	[0.591]	0.395	[0.327]	0.310	[0.427]
Firm performance	0.079	[0.816]	0.060	[0.854]	0.050	[0.883]
Firm size	0.001	[0.941]	-0.000	[0.956]	0.000	[0.979]
Rival's firm performance	-0.529	[0.200]	-0.497	[0.237]	-0.432	[0.324]
Rival's firm size	0.013	[0.002]	0.013	[0.003]	0.013	[0.002]
CEO pay	-0.000	[0.990]	-0.000	[0.960]	0.000	[0.920]
CEO tenure	-0.002	[0.895]	-0.002	[0.832]	-0.003	[0.793]
CEO risk propensity	-0.060	[0.176]	-0.045	[0.319]	-0.037	[0.401]
Dedicated ownership	0.330	[0.576]	0.262	[0.654]	0.399	[0.453]
Transient ownership	0.359	[0.588]	0.357	[0.594]	0.356	[0.600]
Quasi-index ownership	-0.210	[0.485]	-0.253	[0.388]	-0.206	[0.496]
Board size	-0.008	[0.807]	-0.009	[0.778]	-0.013	[0.690]
Board independence	-0.003	[0.938]	-0.003	[0.945]	0.002	[0.958]
Minority directors	0.027	[0.447]	0.034	[0.336]	0.034	[0.372]
Interlocking directorships	0.080	[0.642]	0.053	[0.758]	0.014	[0.934]
Female directors	0.020	[0.734]	0.015	[0.793]	0.024	[0.679]
Total analysts	0.012	[0.320]	0.010	[0.411]	0.006	[0.593]
Recommendation dispersion	-0.080	[0.420]	-0.105	[0.274]	-0.083	[0.388]
Median recommendation	0.008	[0.875]	-0.002	[0.963]	-0.000	[0.997]
Total upgrades	-0.026	[0.182]	-0.026	[0.185]	-0.026	[0.204]
Total downgrades	0.000	[0.997]	0.002	[0.914]	0.005	[0.820]
Rival's competitive repertoire complexity	0.036	[0.532]	0.042	[0.446]	0.053	[0.350]
Rival's competitive aggressiveness						
Year fixed effects	Included	Included	Included	Included	Included	Included
Model characteristics						
R-squared	0.127		0.138		0.152	
Groups	79		79		79	
n	354		354		354	

All models feature robust standard errors

Table 3
Marginal Effects from Fixed Effects Model for Hypothesis 4

	Competitive Repertoire Complexity	
Rival's Dedicated Ownership	dy/dx	p-value
Low	-0.148	0.007
Medium	-0.077	0.046
High	0.039	0.575

Notes: dy/dx represents the change in competitive repertoire complexity owing to the rival firm's governance ambiguity across the rival firms' different levels of dedicated ownership

Table 4
Fixed Effects Regression Model Results for Hypotheses 2 and 5

	Competitive Aggressiveness					
	I		II		III	
Variables	*Estimate*	*p-value*	*Estimate*	*p-value*	*Estimate*	*p-value*
Governance ambiguity			**0.067**	**[0.198]**	**0.107**	**[0.088]**
Rival's dedicated ownership					0.069	[0.943]
Governance ambiguity x Rival's dedicated ownership					**-0.725**	**[0.157]**
Controls						
Constant						
Firm performance	-0.275	[0.511]	-0.282	[0.501]	-0.279	[0.486]
Firm size	0.000	[0.974]	0.001	[0.907]	0.000	[0.972]
Rival's firm performance	1.122	[0.030]	1.119	[0.029]	1.099	[0.030]
Rival's firm size	0.011	[0.031]	0.011	[0.037]	0.010	[0.056]
CEO pay	-0.000	[0.732]	-0.000	[0.775]	-0.000	[0.761]
CEO tenure	0.007	[0.537]	0.008	[0.482]	0.011	[0.371]
CEO risk propensity	-0.025	[0.626]	-0.042	[0.428]	-0.047	[0.368]
Dedicated ownership	1.396	[0.078]	1.489	[0.069]	1.469	[0.092]
Transient ownership	1.484	[0.028]	1.483	[0.026]	1.482	[0.029]
Quasi-index ownership	0.019	[0.960]	-0.022	[0.954]	-0.022	[0.951]
Board size	-0.005	[0.891]	-0.001	[0.983]	-0.004	[0.912]
Board independence	0.017	[0.634]	0.017	[0.624]	0.021	[0.543]
Minority directors	0.064	[0.113]	0.061	[0.135]	0.055	[0.160]
Interlocking directorships	-0.074	[0.718]	-0.053	[0.800]	-0.023	[0.911]
Female directors	-0.078	[0.085]	-0.074	[0.104]	-0.080	[0.081]
Total analysts	0.017	[0.167]	0.019	[0.154]	0.021	[0.131]
Recommendation dispersion	-0.109	[0.371]	-0.102	[0.407]	-0.113	[0.357]
Median recommendation	-0.007	[0.899]	-0.006	[0.922]	-0.003	[0.955]
Total upgrades	-0.029	[0.118]	-0.031	[0.098]	-0.033	[0.092]
Total downgrades	0.007	[0.697]	0.007	[0.694]	0.006	[0.752]
Rival's competitive repertoire complexity						
Rival's competitive aggressiveness	0.011	[0.005]	0.012	[0.004]	0.012	[0.004]
Year fixed effects	Included	Included	Included	Included	Included	Included
Model characteristics						
R-squared						
Groups	79		79		79	
n	354		354		354	

All models feature robust standard errors

Table 5
Marginal Effects from Fixed Effects Model for Hypothesis 5

	Competitive Aggressiveness	
Rival's Dedicated Ownership	dy/dx	p-value
Low	0.107	0.088
Medium	0.103	0.092
High	-0.040	0.638

Notes: dy/dx represents the change in competitive aggressiveness owing to the rival firm's governance ambiguity across the rival firms' different levels of dedicated ownership

Table 6
Fixed Effects Regression Model Results for Hypotheses 3 and 6

	Competitive repertoire dissimilarity					
	I		II		III	
Variables	*Estimate*	*p-value*	*Estimate*	*p-value*	*Estimate*	*p-value*
Governance ambiguity			**0.047**	**[0.906]**	**-0.190**	**[0.671]**
Rival's dedicated ownership					-4.644	[0.266]
Governance ambiguity x Rival's dedicated ownership					**2.847**	**[0.324]**
Controls						
Constant	-6.820	[0.075]	-6.925	[0.090]	-6.407	[0.134]
Firm performance	-5.475	[0.095]	-5.466	[0.095]	-5.592	[0.084]
Firm size	-0.023	[0.729]	-0.022	[0.737]	-0.029	[0.682]
Rival's firm performance	-0.239	[0.957]	-0.259	[0.953]	-0.200	[0.963]
Rival's firm size	0.068	[0.179]	0.068	[0.181]	0.063	[0.207]
CEO pay	0.000	[0.034]	0.000	[0.034]	0.000	[0.028]
CEO tenure	-0.006	[0.952]	-0.005	[0.956]	-0.004	[0.968]
CEO risk propensity	0.266	[0.700]	0.257	[0.708]	0.303	[0.663]
Dedicated ownership	10.336	[0.052]	10.374	[0.052]	10.225	[0.071]
Transient ownership	7.043	[0.042]	7.044	[0.042]	6.922	[0.046]
Quasi-index ownership	8.302	[0.003]	8.326	[0.004]	8.510	[0.004]
Board size	-0.083	[0.772]	-0.082	[0.775]	-0.090	[0.768]
Board independence	0.240	[0.480]	0.240	[0.482]	0.235	[0.506]
Minority directors	0.830	[0.054]	0.826	[0.050]	0.803	[0.062]
Interlocking directorships	-0.806	[0.710]	-0.791	[0.721]	-0.795	[0.713]
Female directors	-0.014	[0.979]	-0.011	[0.983]	0.001	[0.998]
Total analysts	0.068	[0.627]	0.069	[0.630]	0.067	[0.637]
Recommendation dispersion	0.375	[0.583]	0.389	[0.560]	0.469	[0.490]
Median recommendation	0.150	[0.721]	0.156	[0.714]	0.162	[0.705]
Total upgrades	0.058	[0.761]	0.058	[0.761]	0.042	[0.830]
Total downgrades	-0.027	[0.846]	-0.028	[0.842]	-0.026	[0.850]
Rival's competitive repertoire complexity						
Rival's competitive aggressiveness						
Year fixed effects	Included	Included	Included	Included	Included	Included
Model characteristics						
R-squared	0.351		0.351		0.352	
Groups	79		79		79	
n	354		354		354	

All models feature robust standard errors

Table 7
Marginal Effects from Fixed Effects Model for Hypothesis 6

	Competitive Repertoire Dissimilarity	
Rival's Dedicated Ownership	dy/dx	p-value
Low	-0.190	0.670
Medium	0.046	0.909
High	0.435	0.466

Notes: dy/dx represents the change in competitive repertoire dissimilarity owing to the rival firm's governance ambiguity across the rival firms' different levels of dedicated ownership

Table 8
Two-stage Least Squares Model Results for Hypothesis 1

	Competitive repertoire complexity			
	(I) First stage		(II) Second stage	
Variables	*Estimate*	*p-value*	*Estimate*	*p-value*
Governance ambiguity			**-0.314**	**[0.048]**
Controls				
Constant	1.430	[0.003]	-0.049	[0.914]
Firm performance	0.358	[0.294]	1.065	[0.000]
Firm size	0.001	[0.533]	-0.003	[0.049]
Rival's firm performance	0.120	[0.778]	-0.023	[0.944]
Rival's firm size	0.003	[0.063]	0.001	[0.511]
CEO pay	-0.000	[0.255]	0.000	[0.170]
CEO tenure	-0.001	[0.802]	-0.000	[0.946]
CEO risk propensity	0.004	[0.779]	0.064	[0.000]
Dedicated ownership	0.506	[0.372]	0.934	[0.044]
Transient ownership	-0.171	[0.650]	0.123	[0.687]
Quasi-index ownership	-0.304	[0.251]	-0.152	[0.481]
Board size	-0.008	[0.794]	0.079	[0.001]
Board independence	-0.033	[0.270]	-0.062	[0.010]
Minority directors	0.071	[0.056]	0.117	[0.000]
Interlocking directorships	-0.168	[0.320]	-0.229	[0.099]
Female directors	0.020	[0.572]	0.024	[0.405]
Total analysts	-0.013	[0.255]	0.015	[0.114]
Recommendation dispersion	-0.240	[0.020]	-0.085	[0.343]
Median recommendation	-0.039	[0.479]	-0.002	[0.957]
Total upgrades	0.008	[0.755]	-0.005	[0.801]
Total downgrades	0.039	[0.080]	0.027	[0.159]
Rival's competitive repertoire complexity	0.096	[0.117]	0.160	[0.002]
Rival's competitive aggressiveness				
Year fixed effects	Included		Included	
Instruments				
Rival of the rival's share price	-0.002	[0.000]		
Rival of the rival's tax avoidance	0.291	[0.001]		
Ranked governance ambiguity				
Rival of the rival's governance ambiguity				
Model characteristics				
R-squared	0.214		0.319	
n	354		354	

Table 9
Two-stage Least Squares Model Results for Hypothesis 2

	Competitive aggressiveness			
	(I) First stage		(II) Second stage	
Variables	*Estimate*	*p-value*	*Estimate*	*p-value*
Governance ambiguity			**2.143**	**[0.098]**
Controls				
Constant	0.945	[0.001]	-14.609	[0.118]
Firm performance	0.158	[0.438]	28.093	[0.000]
Firm size	0.000	[0.869]	0.015	[0.658]
Rival's firm performance	-0.366	[0.161]	8.168	[0.322]
Rival's firm size	0.003	[0.010]	-0.165	[0.000]
CEO pay	-0.000	[0.598]	0.000	[0.002]
CEO tenure	0.004	[0.265]	0.144	[0.183]
CEO risk propensity	-0.012	[0.164]	1.549	[0.000]
Dedicated ownership	0.132	[0.698]	16.277	[0.138]
Transient ownership	0.154	[0.492]	6.610	[0.365]
Quasi-index ownership	-0.182	[0.248]	0.772	[0.881]
Board size	-0.018	[0.313]	0.563	[0.326]
Board independence	0.005	[0.798]	0.421	[0.472]
Minority directors	0.031	[0.158]	3.641	[0.000]
Interlocking directorships	-0.032	[0.752]	-4.422	[0.181]
Female directors	0.006	[0.793]	0.833	[0.237]
Total analysts	-0.007	[0.298]	0.360	[0.113]
Recommendation dispersion	-0.103	[0.096]	-2.320	[0.252]
Median recommendation	-0.022	[0.504]	-0.308	[0.772]
Total upgrades	0.016	[0.269]	-0.081	[0.862]
Total downgrades	0.024	[0.073]	0.266	[0.544]
Rival's competitive repertoire complexity				
Rival's competitive aggressiveness	0.003	[0.057]	0.111	[0.022]
Year fixed effects	Included		Included	
Instruments				
Rival of the rival's share price	-0.001	[0.000]		
Rival of the rival's tax avoidance				
Ranked governance ambiguity	0.354	[0.000]		
Rival of the rival's governance ambiguity				
Model characteristics				
R-squared	0.719		0.491	
n	354		354	

Table 10
Two-stage Least Squares Model Results for Hypothesis 3

	Competitive repertoire dissimilarity			
	(I) First stage		(II) Second stage	
Variables	*Estimate*	*p-value*	*Estimate*	*p-value*
Governance ambiguity			**2.660**	**[0.081]**
Controls				
Constant	1.314	[0.005]	-6.291	[0.215]
Firm performance	0.418	[0.207]	9.801	[0.003]
Firm size	0.001	[0.583]	-0.018	[0.283]
Rival's firm performance	0.077	[0.852]	16.274	[0.000]
Rival's firm size	0.004	[0.026]	-0.081	[0.000]
CEO pay	-0.000	[0.135]	0.000	[0.008]
CEO tenure	0.001	[0.822]	0.009	[0.860]
CEO risk propensity	0.016	[0.217]	0.529	[0.000]
Dedicated ownership	0.513	[0.355]	0.585	[0.915]
Transient ownership	-0.219	[0.549]	0.145	[0.968]
Quasi-index ownership	-0.284	[0.273]	7.986	[0.002]
Board size	-0.016	[0.568]	-0.259	[0.357]
Board independence	-0.002	[0.944]	0.557	[0.054]
Minority directors	0.048	[0.191]	1.336	[0.000]
Interlocking directorships	-0.107	[0.519]	-1.007	[0.543]
Female directors	0.021	[0.552]	1.245	[0.000]
Total analysts	-0.018	[0.108]	0.304	[0.007]
Recommendation dispersion	-0.208	[0.040]	-0.254	[0.808]
Median recommendation	-0.035	[0.514]	-0.062	[0.906]
Total upgrades	0.009	[0.692]	-0.198	[0.389]
Total downgrades	0.021	[0.334]	-0.179	[0.419]
Rival's competitive repertoire complexity				
Rival's competitive aggressiveness				
Year fixed effects	Included		Included	
Instruments				
Rival of the rival's share price	-0.001	[0.008]		
Rival of the rival's tax avoidance				
Ranked governance ambiguity				
Rival of the rival's governance ambiguity	0.200	[0.000]		
Model characteristics				
R-squared	0.241		0.425	
n	354		354	

Table 11
Two-stage Residual Inclusion Model Results for Hypotheses 1 and 4

	Competitive repertoire complexity			
	(I) First stage		(II) Second stage	
Variables	*Estimate*	*p-value*	*Estimate*	*p-value*
Governance ambiguity	**-0.135**	**[0.028]**	**-0.156**	**[0.008]**
Rival's dedicated ownership	-0.298	[0.687]	-0.417	[0.587]
Governance ambiguity x Rival's dedicated ownership	**0.899**	**[0.041]**	**0.877**	**[0.064]**
Controls				
Constant	0.296	[0.454]	0.142	[0.776]
Error correction			0.895	[0.446]
Firm performance	0.027	[0.938]	0.073	[0.820]
Firm size	-0.001	[0.946]	-0.002	[0.850]
Rival's firm performance	-0.325	[0.487]	-0.435	[0.311]
Rival's firm size	0.013	[0.004]	0.012	[0.005]
CEO pay	0.000	[0.956]	-0.000	[0.961]
CEO tenure	-0.002	[0.847]	-0.004	[0.744]
CEO risk propensity	-0.036	[0.433]	-0.025	[0.583]
Dedicated ownership	0.455	[0.418]	0.339	[0.551]
Transient ownership	0.352	[0.602]	0.369	[0.594]
Quasi-index ownership	-0.129	[0.663]	-0.224	[0.465]
Board size	-0.018	[0.575]	-0.015	[0.643]
Board independence	0.006	[0.864]	-0.001	[0.980]
Minority directors	0.034	[0.395]	0.039	[0.313]
Interlocking directorships	0.015	[0.935]	-0.024	[0.881]
Female directors	0.033	[0.568]	0.025	[0.679]
Total analysts	0.007	[0.549]	0.007	[0.547]
Recommendation dispersion	-0.075	[0.427]	-0.077	[0.428]
Median recommendation	0.005	[0.922]	0.001	[0.988]
Total upgrades	-0.028	[0.169]	-0.023	[0.258]
Total downgrades	0.003	[0.882]	0.001	[0.956]
Rival's competitive repertoire complexity	0.043	[0.461]	0.046	[0.439]
Year fixed effects	Included	Included	Included	Included
Instruments				
Rival of the rival's share price	0.000	[0.607]		
Rival of the rival's tax avoidance	-0.091	[0.253]		
Model characteristics				
R-squared	0.157		0.156	
Groups	79		79	
n	354		354	

Table 12
Two-stage Residual Inclusion Model Results for Hypotheses 2 and 5

	Competitive aggressiveness			
	(I) First stage		(II) Second stage	
Variables	*Estimate*	*p-value*	*Estimate*	*p-value*
Governance ambiguity	**0.123**	**[0.356]**	**0.153**	**[0.032]**
Rival's dedicated ownership	0.056	[0.954]	0.450	[0.603]
Governance ambiguity x Rival's dedicated ownership	**-0.751**	**[0.143]**	**-1.196**	**[0.040]**
Controls				
Constant				
Error correction			-2.934	[0.101]
Firm performance	-0.275	[0.501]	-0.439	[0.296]
Firm size	0.001	[0.952]	0.012	[0.221]
Rival's firm performance	1.098	[0.034]	1.465	[0.007]
Rival's firm size	0.010	[0.050]	0.017	[0.011]
CEO pay	-0.000	[0.760]	0.000	[0.569]
CEO tenure	0.011	[0.369]	0.003	[0.803]
CEO risk propensity	-0.047	[0.373]	-0.080	[0.115]
Dedicated ownership	1.441	[0.117]	2.574	[0.011]
Transient ownership	1.475	[0.030]	1.787	[0.006]
Quasi-index ownership	-0.031	[0.934]	0.257	[0.467]
Board size	-0.003	[0.931]	0.029	[0.475]
Board independence	0.019	[0.560]	0.004	[0.913]
Minority directors	0.055	[0.163]	0.003	[0.945]
Interlocking directorships	-0.015	[0.945]	-0.129	[0.521]
Female directors	-0.080	[0.089]	-0.064	[0.182]
Total analysts	0.021	[0.130]	0.016	[0.274]
Recommendation dispersion	-0.112	[0.372]	-0.189	[0.149]
Median recommendation	-0.002	[0.972]	0.089	[0.268]
Total upgrades	-0.033	[0.106]	-0.034	[0.108]
Total downgrades	0.005	[0.769]	0.019	[0.313]
Rival's competitive aggressiveness	0.012	[0.005]	0.012	[0.005]
Year fixed effects	Included	Included	Included	Included
Instruments				
Rival of the rival's share price	-0.000	[0.843]		
Ranked governance ambiguity	-0.007	[0.886]		
Model characteristics				
Groups	79		79	
n	354		354	

Table 13
Two-stage Residual Inclusion Model Results for Hypotheses 3 and 6

	Competitive repertoire dissimilarity			
	(I) First stage		(II) Second stage	
Variables	*Estimate*	*p-value*	*Estimate*	*p-value*
Governance ambiguity	**-0.111**	**[0.813]**	**-0.150**	**[0.745]**
Rival's dedicated ownership	-7.427	[0.097]	-2.645	[0.470]
Governance ambiguity x Rival's dedicated ownership	**0.562**	**[0.841]**	**2.131**	**[0.450]**
Controls				
Constant	-4.894	[0.273]	-1.686	[0.751]
Error correction			-1.969	[0.065]
Firm performance	-6.257	[0.055]	-5.116	[0.130]
Firm size	-0.002	[0.981]	0.001	[0.993]
Rival's firm performance	0.033	[0.994]	0.807	[0.850]
Rival's firm size	0.094	[0.064]	0.090	[0.030]
CEO pay	0.000	[0.039]	0.000	[0.012]
CEO tenure	-0.006	[0.949]	-0.010	[0.914]
CEO risk propensity	0.198	[0.767]	0.336	[0.607]
Dedicated ownership	8.198	[0.139]	11.500	[0.034]
Transient ownership	6.679	[0.056]	6.105	[0.087]
Quasi-index ownership	7.525	[0.014]	8.472	[0.005]
Board size	0.057	[0.843]	-0.071	[0.806]
Board independence	0.056	[0.868]	0.224	[0.512]
Minority directors	0.857	[0.035]	0.766	[0.058]
Interlocking directorships	-0.450	[0.834]	0.287	[0.876]
Female directors	-0.067	[0.896]	0.170	[0.751]
Total analysts	0.054	[0.704]	0.051	[0.718]
Recommendation dispersion	0.330	[0.616]	0.500	[0.461]
Median recommendation	0.092	[0.837]	0.272	[0.536]
Total upgrades	0.084	[0.688]	0.051	[0.790]
Total downgrades	-0.016	[0.902]	0.000	[1.000]
Year fixed effects	Included	Included	Included	Included
Instruments				
Rival of the rival's share price	-0.021	[0.003]		
Rival of the rival's governance ambiguity	-0.129	[0.775]		
Model characteristics				
R-squared	0.369		0.365	
Groups	79		79	
n	354		354	

Table 14
Summary of Empirical Test Results

Hypotheses	**Fixed effects models**	**2SLS models**	**2SRI models**
H1: Governance ambiguity → Competitive repertoire complexity	Supported	Supported	Supported
H2: Governance ambiguity → Competitive aggressiveness	Marginally supported	Marginally supported	Supported
H3: Governance ambiguity → Competitive repertoire dissimilarity	Not supported	Not supported	Not supported
H4: Dedicated ownership moderates Governance ambiguity → Competitive repertoire complexity	Marginally supported	N/A	Marginally supported
H5: Dedicated ownership moderates Governance ambiguity → Competitive aggressiveness	Marginally supported	N/A	Supported
H6: Dedicated ownership moderates Governance ambiguity → Competitive repertoire dissimilarity	Not supported	N/A	Not supported

Table 15
Results for Changes to Classification and Competitive Behaviors

	Competitive repertoire complexity				Competitive aggressiveness				Competitive repertoire dissimilarity			
	I		II		III		IV		V		VI	
Variables	*Estimate*	*p-value*	*Estimate*	*p-value*	*Estimate*	*p-value*	*Estimate*	*p-value*	*Estimate*	*p-value*	*Estimate*	*p-value*
Classification	**0.101**	**[0.327]**	**0.140**	**[0.374]**	**-0.115**	**[0.558]**	**-0.239**	**[0.257]**	**0.246**	**[0.892]**	**0.728**	**[0.828]**
Rival's dedicated ownership			0.474	[0.252]			-0.622	[0.402]			-1.918	[0.610]
Classification x Rival's dedicated ownership			**-0.899**	**[0.699]**			**3.495**	**[0.373]**			**-10.355**	**[0.793]**
Controls												
Constant	0.199	[0.612]	0.092	[0.808]					-6.851	[0.074]	-6.461	[0.102]
Firm performance	0.079	[0.817]	0.094	[0.786]	-0.269	[0.521]	-0.250	[0.535]	-5.480	[0.097]	-5.504	[0.094]
Firm size	0.000	[0.967]	0.002	[0.833]	0.001	[0.934]	-0.001	[0.950]	-0.023	[0.719]	-0.030	[0.680]
Rival's firm performance	-0.474	[0.257]	-0.452	[0.287]	1.079	[0.033]	1.061	[0.040]	-0.112	[0.980]	-0.216	[0.961]
Rival's firm size	0.012	[0.002]	0.013	[0.001]	0.011	[0.032]	0.010	[0.049]	0.068	[0.180]	0.064	[0.209]
CEO pay	0.000	[0.995]	0.000	[0.992]	-0.000	[0.705]	-0.000	[0.709]	0.000	[0.031]	0.000	[0.032]
CEO tenure	-0.002	[0.895]	-0.002	[0.869]	0.008	[0.493]	0.010	[0.403]	-0.006	[0.952]	-0.003	[0.980]
CEO risk propensity	-0.063	[0.160]	-0.063	[0.150]	-0.023	[0.648]	-0.016	[0.747]	0.258	[0.712]	0.278	[0.695]
Dedicated ownership	0.330	[0.578]	0.407	[0.479]	1.441	[0.064]	1.333	[0.091]	10.335	[0.052]	9.943	[0.074]
Transient ownership	0.376	[0.569]	0.398	[0.548]	1.496	[0.028]	1.442	[0.033]	7.088	[0.041]	7.090	[0.042]
Quasi-index ownership	-0.213	[0.480]	-0.214	[0.479]	0.006	[0.988]	0.001	[0.998]	8.295	[0.003]	8.363	[0.003]
Board size	-0.007	[0.814]	-0.009	[0.787]	-0.005	[0.890]	-0.009	[0.795]	-0.082	[0.777]	-0.079	[0.788]
Board independence	-0.003	[0.937]	-0.000	[0.994]	0.016	[0.653]	0.022	[0.543]	0.240	[0.482]	0.226	[0.519]
Minority directors	0.027	[0.444]	0.034	[0.392]	0.064	[0.127]	0.059	[0.158]	0.830	[0.051]	0.847	[0.037]
Interlocking directorships	0.080	[0.639]	0.063	[0.724]	-0.075	[0.718]	-0.052	[0.798]	-0.807	[0.710]	-0.719	[0.734]
Female directors	0.025	[0.683]	0.028	[0.647]	-0.087	[0.061]	-0.090	[0.047]	-0.002	[0.997]	0.003	[0.995]
Total analysts	0.013	[0.290]	0.011	[0.351]	0.018	[0.160]	0.020	[0.143]	0.070	[0.620]	0.076	[0.586]
Recommendation dispersion	-0.075	[0.451]	-0.077	[0.449]	-0.109	[0.370]	-0.105	[0.387]	0.387	[0.578]	0.405	[0.563]
Median recommendation	0.010	[0.842]	0.009	[0.854]	-0.008	[0.889]	-0.003	[0.958]	0.155	[0.714]	0.153	[0.720]
Total upgrades	-0.027	[0.173]	-0.024	[0.238]	-0.030	[0.109]	-0.032	[0.097]	0.058	[0.765]	0.052	[0.786]
Total downgrades	-0.001	[0.971]	0.000	[0.994]	0.008	[0.641]	0.007	[0.706]	-0.029	[0.832]	-0.034	[0.797]
Rival's competitive repertoire complexity	0.033	[0.573]	0.038	[0.521]								
Rival's competitive aggressiveness					0.012	[0.005]	0.012	[0.005]				
Year fixed effects	Included		Included		Included		Included		Included		Included	
Model characteristics												
R-squared	0.128		0.133						0.351		0.352	
Groups	79		79		79		79		79		79	
n	354		354		354		354		354		354	

All models feature robust standard errors

Table 16
Results for Changes to Duality and Competitive Behaviors

	Competitive repertoire complexity				Competitive aggressiveness				Competitive repertoire dissimilarity			
	I		II		III		IV		V		VI	
Variables	*Estimate*	*p-value*	*Estimate*	*p-value*	*Estimate*	*p-value*	*Estimate*	*p-value*	*Estimate*	*p-value*	*Estimate*	*p-value*
Duality	**0.038**	**[0.559]**	**-0.098**	**[0.235]**	**-0.103**	**[0.145]**	**-0.083**	**[0.307]**	**0.430**	**[0.544]**	**0.586**	**[0.485]**
Rival's dedicated ownership			-0.486	[0.445]			-0.336	[0.664]			-1.380	[0.777]
Duality x Rival's dedicated ownership			**2.027**	**[0.006]**			**-0.313**	**[0.653]**			**-1.930**	**[0.762]**
Controls												
Constant	0.195	[0.612]	0.112	[0.763]					-7.006	[0.069]	-6.539	[0.099]
Firm performance	0.096	[0.782]	0.244	[0.464]	-0.305	[0.477]	-0.295	[0.471]	-5.312	[0.111]	-5.503	[0.100]
Firm size	0.000	[0.957]	0.003	[0.687]	0.002	[0.848]	0.001	[0.931]	-0.025	[0.694]	-0.033	[0.634]
Rival's firm performance	-0.515	[0.222]	-0.495	[0.232]	1.157	[0.022]	1.148	[0.023]	-0.111	[0.980]	-0.229	[0.959]
Rival's firm size	0.013	[0.002]	0.015	[0.001]	0.010	[0.064]	0.009	[0.081]	0.071	[0.161]	0.066	[0.191]
CEO pay	0.000	[0.982]	-0.000	[0.937]	-0.000	[0.592]	-0.000	[0.596]	0.000	[0.022]	0.000	[0.021]
CEO tenure	-0.002	[0.883]	-0.002	[0.854]	0.009	[0.451]	0.010	[0.420]	-0.008	[0.935]	-0.006	[0.954]
CEO risk propensity	-0.056	[0.209]	-0.062	[0.153]	-0.037	[0.480]	-0.032	[0.537]	0.304	[0.658]	0.318	[0.645]
Dedicated ownership	0.323	[0.582]	0.525	[0.354]	1.457	[0.069]	1.387	[0.094]	10.253	[0.049]	9.733	[0.073]
Transient ownership	0.381	[0.565]	0.372	[0.572]	1.414	[0.030]	1.388	[0.033]	7.304	[0.032]	7.269	[0.035]
Quasi-index ownership	-0.202	[0.499]	-0.114	[0.713]	-0.031	[0.934]	-0.022	[0.951]	8.394	[0.003]	8.339	[0.003]
Board size	-0.007	[0.826]	-0.021	[0.538]	-0.011	[0.725]	-0.012	[0.737]	-0.075	[0.789]	-0.056	[0.843]
Board independence	-0.004	[0.920]	0.005	[0.900]	0.021	[0.523]	0.022	[0.554]	0.229	[0.490]	0.210	[0.536]
Minority directors	0.027	[0.456]	0.041	[0.296]	0.067	[0.080]	0.065	[0.082]	0.827	[0.054]	0.798	[0.070]
Interlocking directorships	0.089	[0.609]	0.120	[0.462]	-0.100	[0.622]	-0.091	[0.661]	-0.702	[0.750]	-0.657	[0.761]
Female directors	0.023	[0.697]	0.028	[0.638]	-0.086	[0.061]	-0.087	[0.061]	0.025	[0.964]	0.013	[0.981]
Total analysts	0.012	[0.314]	0.012	[0.326]	0.018	[0.152]	0.019	[0.152]	0.070	[0.613]	0.076	[0.578]
Recommendation dispersion	-0.078	[0.430]	-0.056	[0.577]	-0.123	[0.325]	-0.123	[0.313]	0.398	[0.563]	0.386	[0.572]
Median recommendation	0.008	[0.873]	0.007	[0.880]	-0.002	[0.974]	-0.001	[0.981]	0.149	[0.720]	0.150	[0.720]
Total upgrades	-0.026	[0.198]	-0.022	[0.280]	-0.030	[0.115]	-0.031	[0.108]	0.064	[0.741]	0.050	[0.802]
Total downgrades	-0.000	[1.000]	0.002	[0.940]	0.009	[0.631]	0.008	[0.678]	-0.027	[0.845]	-0.032	[0.812]
Rival's competitive repertoire complexity	0.032	[0.574]	0.037	[0.541]								
Rival's competitive aggressiveness					0.011	[0.005]	0.011	[0.004]				
Year fixed effects	Included		Included		Included		Included		Included		Included	
Model characteristics												
R-squared	0.128		0.157						0.352		0.353	
Groups	79		79		79		79		79		79	
n	354		354		354		354		354		354	

All models feature robust standard errors

Table 17
Results for Board Turnover and Competitive Behaviors

	Competitive repertoire complexity				Competitive aggressiveness				Competitive repertoire dissimilarity			
	I		II		III		IV		V		VI	
Variables	*Estimate*	*p-value*	*Estimate*	*p-value*	*Estimate*	*p-value*	*Estimate*	*p-value*	*Estimate*	*p-value*	*Estimate*	*p-value*
Board turnover	**0.022**	**[0.766]**	**-0.088**	**[0.327]**	**0.105**	**[0.138]**	**0.091**	**[0.263]**	**0.756**	**[0.219]**	**0.869**	**[0.229]**
Rival's dedicated ownership			-1.218	[0.117]			-1.436	[0.228]			-0.490	[0.944]
Board turnover x Rival's dedicated ownership			**1.897**	**[0.007]**			**0.785**	**[0.497]**			**-1.861**	**[0.765]**
Controls												
Constant	0.190	[0.632]	0.223	[0.558]					-7.578	[0.046]	-7.252	[0.065]
Firm performance	0.088	[0.796]	0.174	[0.623]	-0.259	[0.542]	-0.215	[0.601]	-5.262	[0.120]	-5.401	[0.110]
Firm size	0.001	[0.937]	0.003	[0.658]	-0.001	[0.936]	-0.002	[0.841]	-0.024	[0.710]	-0.031	[0.653]
Rival's firm performance	-0.531	[0.195]	-0.478	[0.264]	1.054	[0.041]	1.042	[0.046]	-0.415	[0.927]	-0.568	[0.902]
Rival's firm size	0.013	[0.002]	0.014	[0.001]	0.012	[0.024]	0.010	[0.046]	0.070	[0.141]	0.066	[0.169]
CEO pay	0.000	[0.994]	-0.000	[0.943]	-0.000	[0.831]	-0.000	[0.808]	0.000	[0.024]	0.000	[0.022]
CEO tenure	-0.001	[0.926]	-0.002	[0.887]	0.009	[0.459]	0.010	[0.379]	0.010	[0.919]	0.013	[0.900]
CEO risk propensity	-0.060	[0.174]	-0.050	[0.258]	-0.025	[0.618]	-0.016	[0.753]	0.256	[0.713]	0.252	[0.722]
Dedicated ownership	0.329	[0.576]	0.417	[0.488]	1.366	[0.084]	1.284	[0.122]	10.284	[0.051]	9.903	[0.075]
Transient ownership	0.357	[0.586]	0.368	[0.595]	1.565	[0.021]	1.443	[0.028]	7.017	[0.036]	6.952	[0.039]
Quasi-index ownership	-0.216	[0.471]	-0.201	[0.526]	-0.031	[0.932]	0.002	[0.997]	8.082	[0.004]	8.086	[0.004]
Board size	-0.008	[0.805]	-0.017	[0.613]	-0.001	[0.968]	-0.005	[0.889]	-0.079	[0.780]	-0.066	[0.822]
Board independence	-0.003	[0.940]	0.001	[0.983]	0.015	[0.657]	0.018	[0.613]	0.240	[0.484]	0.226	[0.523]
Minority directors	0.026	[0.461]	0.038	[0.311]	0.057	[0.173]	0.057	[0.166]	0.806	[0.055]	0.781	[0.065]
Interlocking directorships	0.083	[0.631]	0.131	[0.422]	-0.089	[0.648]	-0.052	[0.781]	-0.731	[0.726]	-0.716	[0.731]
Female directors	0.018	[0.756]	0.031	[0.608]	-0.091	[0.033]	-0.092	[0.030]	-0.078	[0.886]	-0.099	[0.855]
Total analysts	0.011	[0.331]	0.009	[0.463]	0.018	[0.161]	0.019	[0.175]	0.057	[0.687]	0.065	[0.647]
Recommendation dispersion	-0.081	[0.415]	-0.079	[0.456]	-0.107	[0.380]	-0.104	[0.387]	0.362	[0.595]	0.368	[0.587]
Median recommendation	0.008	[0.861]	0.001	[0.990]	-0.005	[0.927]	-0.007	[0.910]	0.167	[0.688]	0.175	[0.678]
Total upgrades	-0.025	[0.199]	-0.021	[0.299]	-0.023	[0.243]	-0.025	[0.225]	0.097	[0.617]	0.083	[0.679]
Total downgrades	0.000	[0.991]	-0.001	[0.971]	0.008	[0.666]	0.006	[0.742]	-0.017	[0.903]	-0.019	[0.888]
Rival's competitive repertoire complexity	0.031	[0.630]	0.038	[0.553]								
Rival's competitive aggressiveness					0.011	[0.004]	0.011	[0.004]				
Year fixed effects	Included		Included		Included		Included		Included		Included	
Model characteristics												
R-squared	0.127		0.155						0.355		0.356	
Groups	79		79		79		79		79		79	
n	354		354		354		354		354		354	

All models feature robust standard errors

Table 18
Results for CEO Turnover and Competitive Behaviors

	Competitive repertoire complexity				Competitive aggressiveness				Competitive repertoire dissimilarity			
	I		II		III		IV		V		VI	
Variables	*Estimate*	*p-value*	*Estimate*	*p-value*	*Estimate*	*p-value*	*Estimate*	*p-value*	*Estimate*	*p-value*	*Estimate*	*p-value*
CEO turnover	**0.063**	**[0.454]**	**0.025**	**[0.809]**	**0.115**	**[0.253]**	**0.135**	**[0.193]**	**0.795**	**[0.466]**	**1.454**	**[0.340]**
Rival's dedicated ownership			0.424	[0.399]			-0.648	[0.437]			-0.947	[0.806]
CEO turnover x Rival's dedicated ownership			**0.564**	**[0.699]**			**-0.221**	**[0.872]**			**-9.300**	**[0.299]**
Controls												
Constant	0.195	[0.626]	0.081	[0.836]					-7.024	[0.064]	-6.517	[0.091]
Firm performance	0.089	[0.792]	0.109	[0.748]	-0.234	[0.574]	-0.206	[0.606]	-5.369	[0.095]	-5.559	[0.082]
Firm size	0.001	[0.907]	0.003	[0.757]	0.001	[0.895]	0.000	[0.994]	-0.018	[0.795]	-0.026	[0.730]
Rival's firm performance	-0.527	[0.207]	-0.515	[0.234]	1.136	[0.030]	1.119	[0.034]	-0.237	[0.957]	-0.169	[0.969]
Rival's firm size	0.012	[0.001]	0.013	[0.001]	0.011	[0.028]	0.010	[0.088]	0.064	[0.212]	0.056	[0.283]
CEO pay	-0.000	[0.978]	0.000	[0.956]	-0.000	[0.648]	-0.000	[0.595]	0.000	[0.032]	0.000	[0.058]
CEO tenure	-0.000	[0.993]	-0.001	[0.949]	0.010	[0.397]	0.012	[0.320]	0.012	[0.901]	0.016	[0.866]
CEO risk propensity	-0.060	[0.170]	-0.064	[0.144]	-0.021	[0.675]	-0.015	[0.764]	0.255	[0.710]	0.283	[0.678]
Dedicated ownership	0.334	[0.567]	0.432	[0.449]	1.371	[0.071]	1.289	[0.105]	10.388	[0.048]	9.830	[0.072]
Transient ownership	0.356	[0.590]	0.375	[0.566]	1.474	[0.030]	1.414	[0.036]	7.012	[0.039]	6.920	[0.046]
Quasi-index ownership	-0.222	[0.472]	-0.237	[0.456]	0.034	[0.927]	0.056	[0.877]	8.152	[0.003]	8.326	[0.003]
Board size	-0.013	[0.690]	-0.014	[0.666]	-0.014	[0.691]	-0.019	[0.609]	-0.145	[0.634]	-0.136	[0.666]
Board independence	0.000	[0.992]	0.002	[0.950]	0.020	[0.559]	0.024	[0.489]	0.279	[0.415]	0.282	[0.427]
Minority directors	0.030	[0.413]	0.038	[0.328]	0.065	[0.123]	0.063	[0.116]	0.869	[0.046]	0.790	[0.078]
Interlocking directorships	0.084	[0.619]	0.068	[0.699]	-0.062	[0.766]	-0.041	[0.843]	-0.754	[0.731]	-0.724	[0.738]
Female directors	0.022	[0.693]	0.025	[0.657]	-0.073	[0.095]	-0.076	[0.089]	0.020	[0.969]	0.003	[0.996]
Total analysts	0.012	[0.307]	0.011	[0.370]	0.019	[0.143]	0.020	[0.128]	0.072	[0.604]	0.076	[0.576]
Recommendation dispersion	-0.076	[0.445]	-0.077	[0.443]	-0.099	[0.432]	-0.101	[0.415]	0.434	[0.530]	0.436	[0.528]
Median recommendation	0.010	[0.836]	0.008	[0.876]	-0.003	[0.954]	-0.001	[0.991]	0.180	[0.659]	0.218	[0.604]
Total upgrades	-0.027	[0.167]	-0.025	[0.217]	-0.030	[0.114]	-0.032	[0.099]	0.046	[0.812]	0.042	[0.831]
Total downgrades	-0.001	[0.960]	0.000	[0.985]	0.004	[0.812]	0.003	[0.884]	-0.041	[0.760]	-0.053	[0.701]
Rival's competitive repertoire complexity	0.034	[0.560]	0.041	[0.493]								
Rival's competitive aggressiveness					0.011	[0.005]	0.011	[0.003]				
Year fixed effects	Included		Included		Included		Included		Included		Included	
Model characteristics												
R-squared	0.128		0.133						0.353		0.355	
Groups	79		79		79		79		79		79	
n	354		354		354		354		354		354	

All models feature robust standard errors

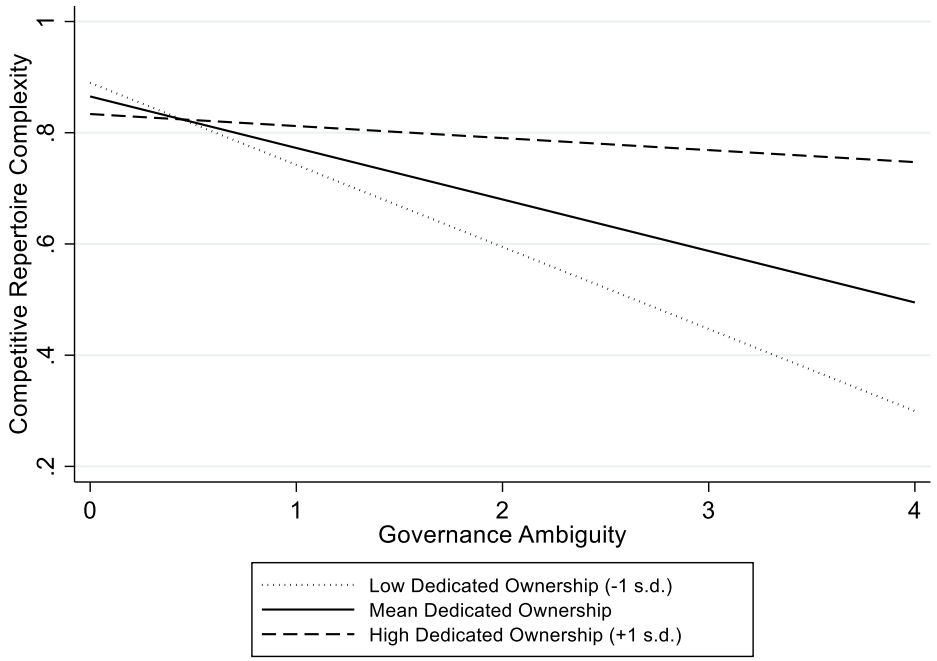

Figure 2 – Interaction Plot of Marginal Effects for Governance Ambiguity and Rival's Dedicated Ownership Predicting Competitive Repertoire Complexity

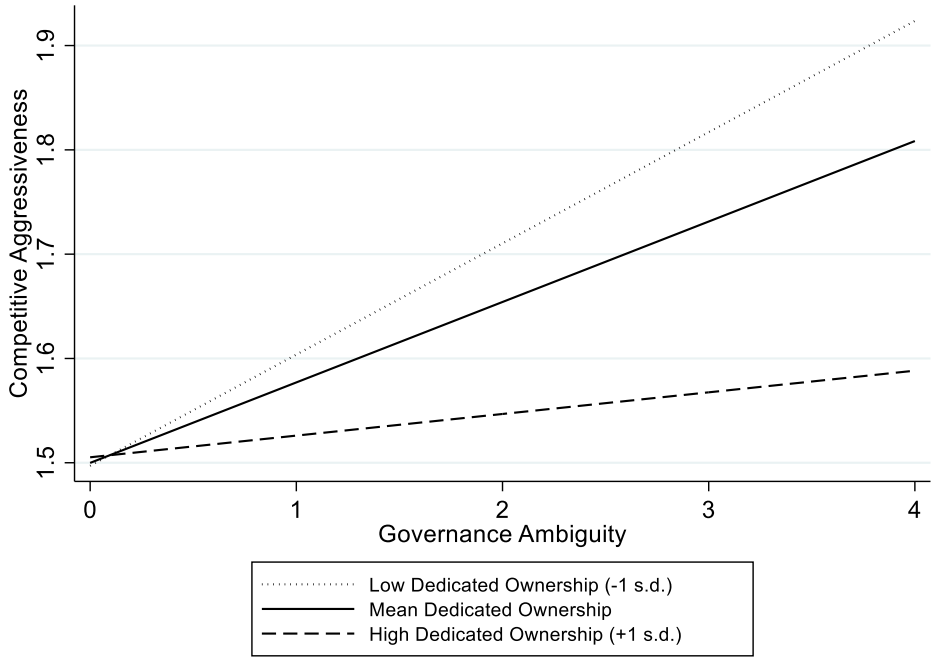

Figure 3 – Interaction Plot of Marginal Effects for Governance Ambiguity and Rival's Dedicated Ownership Predicting Competitive Aggressiveness

CHAPTER 10

DISCUSSION

This dissertation aims to advance understanding of corporate governance's role in the competitive landscape. Decades of research across multiple disciplines has shown that a focal firm's governance practices and events can influence its decisions, performance, and valuation (Cunat, Gine, & Guadalupe, 2012; Kesner & Sebora, 1994; Withers et al., 2012). There is little understanding, however, of the direct link between governance and competitive positioning (Leiblein et al., 2018). In this dissertation, I argue that a rival firm's governance changes can influence a focal firm's competitive behavior, and my results support this argument. More specifically, I theorize that some governance changes have ambiguous implications and multiple meanings that can reduce uncertainty about the rival firm's implementation abilities while increasing uncertainty about its future decisions and competitive behaviors. I further theorize that because of this governance ambiguity and impact on competitive uncertainty, the focal firm will adjust its competitive behaviors such that its repertoire of competitive actions will become less complex but more aggressive. My empirical tests provide some support for my theory. This is important for corporate governance research in strategy because while there may be no direct link between governance mechanisms and competitive positioning, my findings suggest they can influence the awareness between rival firms—and thus their competitive behaviors—in ways that affect their respective competitive positions.

Theoretical Contributions

I make several theoretical contributions. First, I contribute to perspectives on ambiguity and uncertainty. Economists generally use the two terms interchangeably, but social psychologists make clear distinctions between the two constructs (Strzalecki, 2013; Weick, 1995). My findings build on these distinctions and suggest ambiguity can have conflicting effects on uncertainty. This is important because delineating these two constructs in this way introduces a new perspective that can be used to reexamine established relationships and assumptions. For example, studies suggest organizations and individuals have difficulty maximizing profits when there is incomplete information (Carson et al., 2006; Hansen, 2014). However, when uncertainty is influenced by too much information, the challenges to maximizing profits may persist but differ in terms of its source and influence. Exploring such phenomena can lead to fruitful research.

Second, I contribute to the competitive dynamics literature and the AMC framework by introducing a new construct that can influence a focal firm's awareness of its chief rival. I argue that the rival's governance ambiguity affects the focal firm's awareness of the rival firm's motivation and capabilities. While research mostly focuses on awareness of a rival's competitive actions or resource allocations (Chen & Miller, 1994; Gimeno & Woo, 1999; Insead & Chatain, 2008), my findings suggest awareness of managerial abilities may also be an important factor. Further, my findings contribute to a growing research stream focusing on the awareness of competitive intentions (Levine, Bernard, & Nagel, 2017; Luoma et al., 2018) and recent scholarship examining the crossroads of governance and competitive dynamics. Specifically, I extend knowledge of

the relationship between a rival's governance events and the focal firm's competitive behaviors (Burchard et al., 2021; Connelly et al., 2019; Hill et al., 2019).

Third, by introducing the governance ambiguity construct, I contribute to the corporate governance literature. Decades of research has made little progress towards a definitive explanation for how some of these changes influence the firm (Cremers et al., 2019; Dalton et al., 1998; Kesner & Sebora, 1994; Krause et al., 2014). Researchers continue to be fixated on better understanding their effects, so have not considered that the little consensus on what these governance changes mean for the firm can have its own implications. By introducing governance ambiguity, I hope to encourage strategy researchers to embrace the possibility that the implications of some governance changes are simply elusive and that the implications of this elusiveness may deserve more attention. Continuing investigation into established perspectives may still be important, but this new perspective may encourage investigation into new relationships or provide an alternative explanation for perplexing and interesting findings. Further, research on governance changes typically employ either a firm-centric approach or investigate how outsiders such as shareholders and other non-competitor stakeholders evaluate these events (Armstrong et al., 2014; Bednar, 2012; Graffin et al., 2011). Aside from a few studies (Burchard et al., 2021; Hill et al., 2019), there is little exploration of how governance changes influence outsider behavior beyond simple approval or dissent for these changes. By introducing the construct and idea of governance ambiguity, I hope to further shift the focus of governance research towards a less firm-centric approach that prioritizes what governance means for the competitive landscape.

Finally, this study and my findings suggest that governance practices may have a collective effect on the external environment. The majority of research in the area focus on the individual effect of governance practices (Devers et al., 2007; Krause et al., 2014; Withers et al., 2012), but my study suggests changes to multiple types of governance mechanisms may collectively influence outsider evaluations. This is important because prior studies have investigated interactive effects between different types of governance aspects, but my findings suggest there may be an additive effect among these practices.

Practical Contributions

This study also makes several practical contributions. First, my findings suggest that rival firms may pay attention to each other's governance changes, and that these changes may influence their competitive behaviors. This is important because competitive actions can increase the executing firm's market share at the competitor's expense (Ferrier et al., 1999). Managers cognizant of this relationship can better prepare for a rival's competitive reactions when they must make governance changes and even take steps to prevent any increase in the competitor's competitive aggressiveness. For instance, managers may want to publicize how influential and helpful their dedicated investors are in improving firm efficiency.

Second, many times firms unnecessarily engage in some governance changes as part of routine adjustments to the leadership structure or as part of a symbolic management strategy (Westphal & Park, 2020). It is difficult for rival firms to decipher when the other's governance changes are unnecessary, a symbolic gesture, or actually required to make improvements. Rival firm managers should, therefore, consider that the other firm may misinterpret unnecessary or symbolic governance changes as a sign that

the firm making the changes is seeking to improve managerial inefficiencies. This misinterpretation can incite aggressive competitive behaviors in the other firm, which can be detrimental to the firm making the governance changes. Further, this can lead to an unnecessary war between the two rivals and erode the entire market, which harms both firms (Derfus et al., 2008). Managers may, therefore, want to avoid making governance changes when they are unnecessary or when the benefits of symbolic management do not outweigh the risk of war.

Limitations and Future Research

As with any study, this dissertation has limitations. For instance, despite my best efforts to establish causality between my variables of interest, it is difficult to completely rule out alternative explanations without utilizing a controlled experiment on executives of rival firms (Cohen et al., 2003). It is also difficult to rule out alternative theoretical explanations behind the relationships that are empirically supported in this study without observing the minds of executives to deduct their decision-making cognitive processes. Future research can employ qualitative methods to better observe this phenomenon.

Interesting scholarship may also emerge from further exploration of the relationship between ambiguity and uncertainty. This can be particularly relevant in the entrepreneurship context, given entrepreneurs face copious amounts of ambiguity and uncertainty when starting and growing their businesses (Townsend et al., 2018). We know little about how the relationship between ambiguity and uncertainty can affect their decision-making outcomes.

Future studies can also further investigate the deliberate use and influence of governance ambiguity. For example, firms may deliberately try to induce governance

ambiguity in attempts to throw off competitors. While it is unlikely that firms may replace their CEO to do so, it may be possible for firms to make duality, board turnover, classification, or other governance decisions in succession years in order to influence competitor awareness. It is possible that governance ambiguity may be used as a strategic tool to extract certain behaviors from competitors.

Finally, future research can investigate other consequences of governance ambiguity. This dissertation focuses on competitive behaviors but firms may respond to a rival's governance ambiguity in less confrontational ways. For example, studies suggest firm engagement in socially responsible behaviors can contribute to competitive advantage (Du, Bhattacharya, & Sen, 2011; McWilliams & Siegel, 2011). Activities that benefit competitive advantage in more subtle ways than competitive actions that are obviously aimed at gaining market share may be preferred for risk averse managers. Such an approach may have its merits over direct competition but may also have disadvantages. Investigating the relationship between governance ambiguity and such activities may result in fruitful research. Similarly, the implications of governance ambiguity and coopetition is another area worth examining (Ross, 2018). Coopetition requires contributions from, and trust between, involved parties (Hoffmann et al., 2018). Governance ambiguity in one party can increase suspicion from other involved parties regarding future actions and value extracted from the cooperative strategy. Investigating this relationship may result in important implications for firms and their competitive and cooperative environments.

CHAPTER 11

CONCLUSION

Becoming a Strategy Scholar

This dissertation is the culmination of my journey as a doctoral student in the field of strategy. It is perhaps appropriate then, that with this dissertation I tackle the very first troubling question I encountered upon beginning this journey—"am I a strategy scholar?" Unbeknown to me before more experienced scholars informed me, a commonly held view in the field is that many governance studies are often inappropriately labeled as "strategy." This was the first unexpected challenge of my doctoral student career as I exhaustively pondered why one would join a strategy Ph.D. program if not to become a strategy scholar. While not deliberate, this challenge may have helped shape my research identity and motivated this dissertation.

Leiblein et al. (2018) propose that *strategy* studies should focus on strategic decisions, which they define according to three characteristics: (1) interdependency with other decisions; (2) interdependency with other economic actors; and (3) interdependency across time. By examining corporate governance and the competitive behaviors between rival firms, I satisfy these criteria. First, most agree that governance mechanisms and events impact the firm and its most important decision-makers. Governance decisions then likely influence the other decisions these important decision-makers engage in, which in turn influence future governance decisions. Governance decisions are thus interdependent with other firm decisions. Second, in this dissertation, I argue that

governance decisions influence the competitive behaviors of a firm's most intense competitor. In my study, governance decisions are interdependent with other economic actors since the focal phenomenon occurs within firm dyads in which each firm pays attention to the other's governance events, and accordingly adjusts its competitive behaviors. Third, the decision to engage in competitive actions has both short- and long-term implications, and my theory of governance ambiguity also entails a temporal element. The focal decisions in this dissertation thus encompass all three characteristics of a strategic decision. This is, therefore, a *strategy* dissertation.

Further establishing the appropriateness of the *strategy* label, an underlying aspect of this dissertation is the pursuit of competitive advantage, a foundational topic in strategy research. By introducing a new governance perspective to this conversation, I hope this dissertation helps better establish not only that some governance research can be *strategy* but also that governance itself may have more competitive implications than presumed. Strategy research continues to establish a relationship between a focal firm's governance practices and its own performance and behavior, but there is little understanding of a more proximal relationship with competitive advantage, which can only exist if there is a competitor involved to base a relative comparison. I believe this dissertation helps governance research take one step further in that direction.

In sum, I believe this dissertation definitively establishes that I am a strategy scholar. While my research identity so far spans across several areas, this dissertation represents my main scholarly interest in competitive strategy. It is my hope that more governance research in the field can partake in a similar approach. By doing so, I believe strategy scholars can continue to contribute beyond what other disciplines contribute, and

shed the perception of not being *strategy*. I believe continual over-emphasis on a firm-centric approach can result in a missed opportunity, as strategy is well-positioned to provide interesting insight on the role of governance between competitors that other disciplines cannot provide. More research on how governance mechanisms and events impact the competitive environment can add value to the corporate governance field.

Main Takeaway

A wise man once told me that my dissertation is the one project in my career that I can study whatever I want and fulfill its intended purpose even with no meaningful empirical results. He emphasized how important it is to, therefore, be ambitious enough to pursue an idea that can have at least one grand takeaway. I believe the biggest takeaway from this dissertation is not any empirical result that supports a relationship between a competitor's governance events and a focal firm's competitive behaviors, but my theory of governance ambiguity. It is my hope that this new governance perspective can be the beginning of a new research stream in strategy and possibly in other disciplines. Multiple disciplines such as financial economics, law, and sociology investigate the implications of governance mechanisms. One consistency within and between all of these disciplines' studies is that we do not know exactly if and how these mechanisms influence the firm. I believe the consistency of this lack of consistency is important, and there is enough research throughout academia to warrant exploration into this idea. I hope that with this dissertation, I can contribute in this way to governance research. Given practitioners are equally perplexed when it comes to some governance practices, I hope such research can also lead to valuable practical implications. Only time will tell if this is a meaningful spark that will ignite that potential flame.

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