

WE ACT THEREFORE WE ARE:
A THEORY OF ACTION DRIVEN STRATEGY

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Abstract:

This dissertation examines the effects of competitive actions on strategic choice. Despite acknowledging that competitive behavior might be an important determinant of organizational strategy, researchers in strategic management have yet to explore how competitive actions that firms adopt to acquire competitive advantage can also encourage future strategic decisions. Competitive actions can be sources of strategic choice because they expose the firm to its competitive environment. This exposure to the competitive environment generates salient experience and knowledge that narrow managerial selection of strategic alternatives, therefore influencing strategic choice.

This dissertation develops a conceptual framework that links competitive dynamics to strategic choice literature and provides an empirical model grounded on observable and quantitative variables. Specifically, it tests how characteristics of competitive actions such as scope, and the use of action repertoires can directly influence strategic choices such as the adoption of diversification strategies, the divestment of assets, and the implementation of corporate social responsibility policies.

Results confirm the theoretical prediction that competitive actions are drivers of strategic choice. I found support that characteristics of actions like breadth and the diversity of repertoires that firms adopt to compete are motivators of strategic choice. Such findings indicate that previously neglected connections between competitive behavior and strategy are relevant and indicative that firms might access knowledge and experience previously obtained in the marketplace to decide which strategies to take.

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CHAPTER I

INTRODUCTION

Firms compete through actions and those actions create knowledge and experience.

Organizational theory and management literature examined how actions are firms' responses to environmental factors (Dutton and Jackson, 1987; Argyris and Schön, 1978; Chandler, 1962; Lawrence and Dyer, 1983) as they are means of adaptation, information, and coordination (Barley and Tolbert, 1997). This scholarship determines that actions result from rules and routines (March, 1981; Nelson and Winter, 1974), managerial intentions, competencies and decisions (Dutton and Jackson, 1987; March, 1981; Child, 1972, Thompson, 1967), conflict and negotiation among organizational actors (March, 1981, Dutton and Jackson, 1987); actions trigger organizational change (March 1981; Washington and Ventresca, 2004), and they enable organizational actors to build narratives to make sense of the environment (Weick, 1977, 1979; March, 1981). In strategic management, actions concretize managers' strategic vision and are "the mechanisms that shape what a company really does" (Gavetti and Rivkin, 2007: 420). Actions embody the firm's strategy (Porter, 1985) because it is through actions that firms position themselves in the market to attain above average performance (Porter, 1996; Ghemawat and Rivkin, 1999; Siggelkow, 2001, 2002).

Although it is accepted that actions are core elements of organizational life that affect functional aspects (Barley and Tolbert, 1997), the performance, and the survival of organizations (Argyris and Schön, 1978; Chandler, 1962; Lawrence and Dyer, 1983; Dutton and Jackson, 1987), limited attention has so far been given to the idea that actions, in particular competitive actions, might define and determine the type of decisions and choices organizations make. Nevertheless, business narratives hint that actions may be important triggers of firms' decisions and choices. For example, the Wrigley Company started as a soap and sundries concern but it was the fact that it offered complimentary gum sticks to its customers that prompted its entry in the confectionary business and led to its eventual dominance of this market (Wrigley Company website, n.d.). Amazon, the worldwide web retailer, started its operations as an online bookstore and built capabilities such as superior customer service and unique web features on this market before expanding to other businesses (Fundinguniverse.com, n.d.; Rivlin, 2005). Such narratives seem to indicate that actions adopted by firms to acquire competitive edge might motivate their ulterior decisions and choices. The central argument of this dissertation is that competitive actions may be important determinants of organizational search and have important effects in strategic decision and choice. This logic is consistent with the statement that suggest that "actions taken as the result of decisions at one point in time affect the future decisions of the focal organization" (Greve & Taylor, 2000: 57); therefore, the present dissertation builds on the idea that competitive actions, which are externally directed, specific, and detectable competitive moves deployed by the firm with the purpose of improving its competitive position (Chen, Smith, & Grimm, 1992; Miller and Chen, 1996b; Ferrier, Smith, and Grimm, 1999; Ferrier, 2001; Ferrier, MacFhionnlaioich, Smith, and Grimm, 2002; Ferrier and Lyon, 2004), may have an effect on

organizational strategy, because they provide knowledge, experience, and resources that affect the framework of strategic options for the firm.

In Aristotelian philosophy, a person becomes who she is through what she does (Kraut, 2016).

The notion that actions influence long-term behaviors and that the way individuals act has important implications on defining who they are and, consequently, the choices they make, is also largely accepted by social psychologists (Block, 1971; Caspi, Bem, and Elder, 1989; Caspi and Roberts, 2001; Caspi, Elder, and Herbener, 1990). Individuals develop abilities and inclinations in part from exposure to situations and experiences (Lerner, 2016). These situations and experiences are factors that guide them into becoming who they are. From a practical point of view, and as an example, it is discernable that a mountain climber does not start by climbing the Everest; instead, it is more plausible that the experience provided by the exposure to less challenging environments may determine whether this person will want to pursue more complex and difficult climbing activities in the future or continue to engage in the same usual ones.

Similarly, competitive actions the firm adopts increase exposure to the competitive environment guiding the development of long-term strategies. In other words, the firm's competitive behavior may disclose the kind of strategic choices the firm is prepared to undertake at a later time.

The competitive and cooperative dimensions of the organizational environment entail that actions of one firm affect those of another even inadvertently (March, 1996). The focus of strategic thought, in particular competitive dynamics, has been mostly on how firms' actions affect their competitors' behaviors (Chen *et al.*, 1992; Miller and Chen, 1994; Hambrick, Cho, and Chen, 1996). But like human actions affect both self and others, competitive actions are likely to shape the firm and its actual strategy, decisions, and choices. While the value of

competitive actions as stimulus of organizational choice (Rindova, Ferrier, and Wiltbank, 2010) and the influence of competitive behavior in the firm's strategy (Hambrick *et al.*, 1996; Hutzschenreuter and Israel, 2009; Lamberg, Tikkanen, Nokelainen, and Suur-Inkeroinen, 2009) have been mentioned in the literature, no systematic approach to the best of my knowledge has so far been taken to examine competitive actions as drivers of strategic choice.

The present dissertation advances the idea that competitive actions affect firm strategy. First, it argues that search processes are closely associated with competitive behavior as they may be triggered by action outcomes such as experience and knowledge. Then, it develops the idea that competitive actions and their characteristics become the underlying rationale of specific strategic choices as they offer to the firm an exposure to the competitive environment that enables the generation of a stock of resources that will then predictably influence future choices by revealing potential strategic opportunities and narrowing the strategic alternatives available to the firm.

This research defines a theoretical gap in the literature that examines sources of strategic decision and choice by exploring the possibility that strategic choice may derive from competitive actions and the experience and knowledge they generate. It also strengthens the link between competitive dynamics literature and strategic choice theory by advancing that the effects of competitive behavior extend beyond competitors' analysis and influence the firm's long-term choices.

Competitive actions may be the most defining of all organizational actions not only because firms depend on competitive actions for performance and survival (Lamberg *et al.*, 2009; Derfus, Maggitti, Grimm, and Smith, 2008) but also because firms compete through actions (Barnett and Hansen, 1996; Ndofor, Sirmon, and He, 2011). Research in competitive dynamics produced a

wealth of evidence indicating that the firm's success and performance may be explained by the type, intensity, and quality of its competitive actions and the dynamic interactions they provoke (Hambrick *et al.*, 1996). Like human actions that can only be understood in their specific context (MacIntyre, 1994), organizational actions connect the firm to its environment (Mutch, Delbridge, and Ventresca, 2006). They are an important, if not the main mechanism for loose coupling that can be identified as situation drivers of organizational decision-making. People act because they perceive the effects of their actions (Hommel, 1998). Likewise, the perception of competitive actions' effects such as the attainment of competitive advantage and performance differentials (Chen, 1996; Ferrier *et al.*, 1999; Ferrier, 2001; Rindova *et al.*, 2010; Ndofor *et al.*, 2011) determines firm future strategic choice.

Besides conveying information about the firm's competitive position and evoking perceptual effects, competitive actions allow firms to learn, engage in search, build experience, and acquire knowledge of markets and the interactions therein (Lamberg *et al.*, 2009; Derfus *et al.*, 2008). The same way isolated actions we take every day imprint our future behavior, the firm's exposure to the competitive environment through actions leaves a residue of experience and knowledge that affects its expectations and future behavior. The residual effect that the firm acquires from exposure to the environment is gathered through learning and generates a stock of resources such as experience and knowledge; this learning process is not based on reinforcement mechanisms and is therefore independent from actual success or failure (Bolles, 1972), but relies on singular problem-solving skills that trigger search and can determine future paths or choices (Argyris, 1996; Greve and Taylor, 2000). Indeed, competitive dynamics literature found that competitive superiority is often achieved through constant and creative competitive activity

triggered by the dynamism of competitive environments rather than by the repetitive execution of actions (D'Aveni, 1994; Ferrier *et al.*, 1999).

Competitive actions are tri-dimensional as they assume resource deployment, variety, and time (Andrevski, Brass, and Ferrier, 2016). This dissertation predicts that the dimensions of competitive actions namely their scope and the number and type of actions adopted by the firm through a repertoire shape strategic choice. The number of competitive actions, the scope of these actions, and the type of competitive repertoire deployed are dimensions that define how the firm is exposed to its competitive environment and allow the generation a particular kind of organizational stock, composed of experience and knowledge, that is available to identify alternatives for future decisions and choice. This dissertation hypothesizes that the scope of competitive actions, which defines the number of different markets and regions the firm is able to reach, and the lines of business (Hambrick *et al.*, 1996) and new technologies that the firm is able to explore through competitive actions, controls the firm's competitive exposure. Broad competitive exposure generates more valuable experience and knowledge. This experience and knowledge may determine then whether the firm can choose related and unrelated diversification strategies such as mergers and acquisitions, decide on asset divestment strategies or engage in corporate social responsibility (CSR).

The competitive dynamics scholarship embraces the notion that the competitive environment is shaped by innovative interaction among competing firms (Derfus *et al.*, 2008; Schumpeter, 1976), creating what is famously known as the "perennial gale of creative destruction" (Schumpeter, 1976: 89). Authors describe competitive actions as novel given that they are not prompted by competitors' behavior and environmental pressures (MacMillan, 1982; Hambrick *et*

al., 1996; Ndofor *et al.*, 2011), they challenge the market status quo (Ferrier *et al.*, 1999; Jacobson, 1992), and they presume the evaluation of alternative options (March and Simon, 1958; Greve and Taylor, 2000). Generally, research in competitive dynamics was able to link creative competitive actions to performance because these actions assume the firm's awareness of new market opportunities and its willingness to evaluate alternative choices (Haleblian, McNamara, Kolev, and Dykes, 2012). Through diverse competitive repertoires the firm is in a great position to acquire and store different types of experience and knowledge (Miller and Chen, 1994, 1996; Ferrier and Lyon, 2004; Ndofor *et al.*, 2011). The assembly and deployment of resources required by diverse repertoires of actions indicate the firm's ability to learn and to creatively adapt to shifting and challenging competitive situations (Ndofor *et al.*, 2011) and is therefore likely to motivate particular strategic choices. In alignment with this reasoning, I argue that the use of diverse repertoires in competitive settings and the exposure it offers to market opportunities promotes the acquisition of a stock of resources that increases the set of strategic alternatives available to the firm and narrows strategic choice, leading to organizational diversification, in particular related diversification, divestitures, or to strategies based on innovative solutions to social and environmental issues in the form of corporate social responsibility (McWilliams and Siegel, 2000; Hull and Rothenberg, 2008).

This dissertation seeks to make three contributions. First, it links competitive behavior to strategic choice by emphasizing the role of tactical competitive behavior in the context of strategic policy. There have been calls to explore in more detail how competitive actions may shape firm strategy and accordingly, this study offers a preliminary insight on how firms may adopt strategic decisions based on the way they compete.

Second, it contributes to competitive dynamics literature by laying the groundwork of a theory of competitive action that enlarges the consequences of competitive action beyond its effects on competitors and firm performance. It examines specifically how competitive actions generate a special kind of organizational stock, composed of experience and knowledge, that impacts strategic decisions and choice. Like slack resources allow firms to invest in innovation, experimentation, and new strategies (Bourgeois, 1981; Bateman and Zeithaml, 1989; Lamberg *et al.*, 2009), and facilitate competitive activity (Young, Smith, and Grimm, 1996; Ferrier, 2001), this stock of experience and knowledge is acquired from exposure to the competitive environment through actions and may be used at discretion at a future time. Finally, it provides an empirically a general model, grounded on specific observable variables and workable hypotheses, that links competitive actions to strategic choice and demonstrates how organizational action and competition are instrumental to the adoption of strategic decisions. It quantitatively demonstrates how the number of actions adopted yearly by the firm, the broadness of their impact in terms of geographical markets, innovation, and technology, and the diversity in repertoire deployment affects the undertaking of diversification, asset divestment, and corporate social responsibility.

CHAPTER II

COMPETITIVE ACTIONS AND STRATEGIC CHOICE

In this chapter I develop the theoretical arguments for the relationships in the model. I briefly survey literature on sources of strategic choice and search, and on competitive actions and their dimensions. Then I explore in more detail how competitive actions can be the source of strategic decisions and choice by evaluating how the adoption of competitive actions and the learning opportunities they afford to firms contribute to the generation of a stock of experience and knowledge that affects the availability of alternative choices in the strategic process.

Sources of Strategic Choice

Apart from acts of nature that are beyond human control, most of the voluntary acts that individuals engage in are determined by their choices (Velmans, 2003). Choice links human conscientiousness and volition to action (Donagan, 2017; Hodgson, 2005); because individuals chose and they are then likely to act on their choices (Donagan, 2017). In their daily lives, individuals face mostly insignificant choices, which are processed in an automatic manner; however, it is expected that the consequences of some choices are important enough to require attention and complex processes of deliberation. Research confirms common sense wisdom that decisions that are difficult and important involve more cognitive effort and time than trivial ones (Chaiken and Maheswaran, 1994; Petty and Wegener, 1998; Sela and Berger, 2012). The

essence of choice has been at the center of the scientific debate for a long time and it is a fundamental enquiry in several scientific fields such as philosophy, psychology, economics, and neuroscience. While the philosophical discussion centers on whether human choice is deterministic or a result of free will (Velmans, 2003; Hodgson, 2005), in psychology, emphasis is given to deviations from rationality and to the psychological biases that infallibly taint human choice (cf. Santos and Rosati, 2015). In neo classical economics, individual behavior is understood in terms of choice and how the choice of actions is a means to optimally satisfy individuals' needs and goals (Davis, 2003). However, choice is viewed as instrumentally rational (Davis, 2003) and its contingency upon profit maximization narrows significantly the number of alternatives available to the economic agent (Child, 1997). Still, the notion of perfectly rational economic behavior has been consistently challenged by neurological experiments that show how economic decisions often depart from the predetermined expectations of the rational model as human behavior is guided by different brain functions (Burnham, 2013; Kahneman and Tversky, 1979). The exam of the mechanics of choice revealed, for instance, that different parts of the brain are involved in automatic or choice dependent valuations and tests found that the anticipated reward or cost in a choice, also called subjective value, engages different regions of the brain depending on how relevant that subjective value is for choice options (Grueschow *et al.*, 2016). For the Austrian school of economics, choice is essentially the result of human action. In this perspective, which views entrepreneurship or profit seeking speculation as the force behind all economic events, the exercise of deliberate choice and its underlying value judgment is the essence of economic behavior (Kirzner, 1997; von Mises, 1949). The phenomenon of choice is therefore omnipresent in science and it is also an important subject of the strategic management scholarship.

The relationship between cognition and action is central to organizational thought (Thomas, Clark, and Gioia, 1993; Dutton and Jackson, 1987; Daft and Weick, 1984; Hambrick and Mason, 1984) and indispensable to understand the processes through which organizations make deliberate choices and act on these to thrive. Most organizational theories assume that action stems from choice, which can be viewed as the result of expectations and their subjective value, as the matching process between the rules of the organization and the demands of the environment, or as the result of interactions among organizational actors (March, 1981, 1996; Nelson and Winter, 1974). Through cognitive processes that include choice problems, the influence of the environment on the organization is interpreted and the issues considered relevant are selected to determine organizational action (Dutton and Jackson, 1987; Thomas *et al.*, 1993). Although human choice may be significantly defined by genetic factors (Hodgson, 2005; Ogletree and Oberle, 2008), organizations cannot strictly speaking reclaim similar genetic determinism. However, organizational choice is a part of the deliberative processes that are imprinted in the organization by its founding members' previous experience (Eggers and Kaplan, 2013), it is influenced by the internal values and political processes of negotiation that take place within the organization, and it is shaped by the constraints and demands of the environment on the organization (Child, 1998; March, 1996). Through choice, organizational cognition is transformed into action; cognitive processes based on the firm's expectations and value systems determine search for adequate alternatives that then leads to action (March, 1981; 1996).

In strategic management, industrial organization economists have shown more concern with the need to provide a rational recipe for strategic optimum than with the exam of the effects of environmental constraints and demands on the firm's processes of choice. Under the influence of the neo-classical paradigms of perfect information and optimization (Nelson and Winter, 1982;

Kirzner, 1997) they limit strategic choice to the selection of sets of activities that are exclusive to the firm and bound to lead to superior performance (Porter, 1985, 1996; Siggelkow, 2002). In their perspective, strategy is a value creation proposition exclusive to the firm that directs the firm's activities towards a particular positioning whose only goal is to guarantee performance results above those of the competitors (Porter, 1996; Brandenburger and Stuart, 1996).

Accordingly, firms engage in search mainly to choose which activities will outperform those of their competitors and choice is equivalent to bundling those activities together in a rational and unique way subordinated to performance goals (Gavetti and Rivkin, 2007; Porter, 1996; Siggelkow, 2002). Therefore, for industrial organization economics search is a rational assessment of the fit between the environment and the firm, and strategic choice equates to the firm's ability to choose activities that create unique value and are potential sources of superior performance (Porter, 1996; Bradenburg and Stuart, 1996), with scarce attention being offered to the managerial cognitive processes that are behind choice and decision (Gavetti and Rivkin, 2007).

For behavioralists, it is cognition that guides the search process and strategic choice. The behavioral perspective highlights the centrality of cognitive processes in firm's activities and proposes that the logic and psychology of human choice are behind administrative processes (Simon, 1947; Gavetti, Greve, Levinthal, and Ocasio, 2012). In contrast with the industrial organization theorists for whom strategy is hooked in the firm's concrete activities, which are the core and target of search, the behavioral theory (Cyert and March, 1963) emphasizes the role of human cognition in the choice process (Cyert and March, 1963; Gavetti *et al.*, 2012) and extends the limits of rational choice to include alternative rationality rules such as satisficing, or selecting the first alternative deemed satisfactory by the decision maker (Cyert and March, 1963; March,

1978; Gavetti *et al.*, 2012). By challenging the core assumptions of classic economic theory and introducing bounded rationality in organizational processes, the behavioral perspective makes search a “sine qua non” condition in the choice process (Gavetti *et al.*, 2012; Cyert and March, 1963). In this framework search and choice become interdependent (Cyert and March, 1963); search is active, problem driven, and akin to a discovery process and choice implies the estimation of alternatives that are rationally bounded due to the limited cognitive power of the decision maker (March, 1981) and the absence of “complete knowledge and anticipation of the consequences that will follow on each choice” (Simon, 1947: 81). Therefore, and given bounded rationality, only a fraction of choice alternatives is available to managers (Gavetti *et al.*, 2012) and the complexity of choosing the most satisficing alternative requires that they attempt to sensibly anticipate the potential consequences of their choices (Simon, 1947; March, 1978; Gavetti and Levinthal, 2000; Gavetti *et al.*, 2012). Although the behavioral perspective spawned several explanations on the source and process of strategic choice, its main problem remains how to choose the best course of action, given the constraints imposed on the decision maker and the presence of numerous and at times conflicting goals within the organization.

Strategic management scholarship based on the behavioral framework emphasizes the importance of flexible managerial reasoning in organizational choices and in the strategic decision process (Papadakis, Lioukas, and Chambers, 1998; Gavetti *et al.*, 2012) and proposes that the cognitive essence of strategic choice is bounded rational foresight through which it is possible to roughly predict the consequences of alternative choices (Gavetti *et al.*, 2012). For behavioral theorists, strategy includes the selection of both major organizational directions and minor competition-oriented actions (Hambrick and Mason, 1984), and is affected by the managerial representation of the firm’s competitive environment (Gavetti *et al.*, 2012). Within

the boundaries of the cognition-based strategic thought, the upper echelons perspective specifically ascertains that strategy reflects top management values and cognitive bases (Hambrick and Mason, 1984). In this perspective strategic choice and decision are the outcome of the cognitive skills of top executives and are shaped by their particular background demographic characteristics (Hambrick and Mason, 1984). In the behavioral tradition, thus, cognitive processes are behind choice. Other authors focus on strategic choice that is driven by external events and influenced by environmental forces (Bateman & Zeithalm, 1989).

Organizations seek intelligence through planning, economizing, and analyzing (March, 2006); they are viewed as powerful agents of deliberate rational choice whose performance and survival are intrinsically dependent upon their choices. In the organizational context, therefore, choice is presumed to be as thoughtful and as rational as possible given the information available to the decision maker. However, human decisions including those that involve economic goals often deviate from rationality parameters (Santos and Rosati, 2015). Psychological biases such as framing and the selection of irrelevant information (Santos and Rosati, 2015) affect choice and decision-making processes. Managerial decisions, in particular, are frequently shaped by feedback and escalation of commitment; managers are more likely to choose strategies that reinforce past decisions due to their bias towards self-justification and the need to rationally justify previous choices (Bateman and Zeithalm, 1989). Studies found that individuals use heuristics to simplify their decision-making process (Tversky and Kahneman, 1973) and the availability heuristics is often used to assess how easily certain associations can be recalled by the mind (Tversky and Kahneman, 1973). Managers are likely to use readily available information that was collected in their minds through recent experiences to make decisions or

choose. Strategic choice is then an outcome of cognitive processes that are influenced by the psychological biases of the decision maker and environmental feedback.

Strategic choice can also be understood as the result of a dynamic search process that ties the cognition mechanisms that interpret and shape the relationship between the firm and its environment to the activities over which search occurs (Gavetti and Rivkin, 2007; Thietart, 2015). In this perspective, the temporal dimension embedded in the dynamic forces that influence both managerial cognition and the firm's search activities will have a particular and recognizable effect on strategic choice (Gavetti and Rivkin, 2007).

A survey of literature on sources of strategy indicates that strategic choice is theoretically framed as a result of managerial cognition (Gavetti *et al.*, 2012; Hambrick and Mason, 1984), is embodied in bundles of activities placed together to achieve a positioning goal and superior performance (Porter, 1996; Ghemawat and Rivkin, 1999; Siggelkow, 2001, 2002; Gavetti and Rivkin, 2007), or is the outcome of search processes that combine both managerial cognition and organizational actions synchronized in time (Gavetti and Rivkin, 2007). For most economic and organizational theories choice is a determinant of action (cf. March, 1996; von Mises, 1949). Action is conceptualized as strategic action resulting from planning and deliberation. These models of organizational choice are largely based on planning that is intended to circumvent the fact that reality is unpredictable, unstable, and ambiguous while accepting that there are internal and external constraints on decision making (Cyert and March, 1963; March, 1978). Given that expectations may be frustrated by unforeseen events and that preferences change, some point out that actions are likely sources of new organizational objectives as actions' effects result in the development of new preferences and new intentions (March, 1981). If that is the case, actions

enable firms to redesign and readapt organizational goals and preferences and may become determinants of organizational choice by facilitating new behavior. Authors assert that organizational action influences and alters the interpretation, evaluation, and the value of future alternatives and is the source of changes in decision making processes (Greve and Taylor, 2000; Weick, 1990).

In this dissertation, I advance the idea that competitive actions influence managerial choice by exposing the firm to the environment and generating experience and knowledge resources that are likely to affect managerial decision-making processes. Experience and knowledge gathered through environmental exposure will impact managerial choice by uncovering psychological biases in choice as individuals are likely to make choices based on previous and more salient experiences (Tversky and Kahneman, 1973).

Authors stressed how competitive actions are important to firm strategy (Hambrick *et al.*, 1996). I posit that tactical competitive actions may direct strategic choice as they expose firms to their competitive environment, thereby influencing future firm behavior, opening the way to new strategic directions, and impelling the discovery of new alternatives for strategic choice.

Search Resulting from Action

Choice implies alternatives and the ranking of these alternatives. The choice or selection of a strategy assumes a previous search for alternatives because not all alternatives are readily available to the decision maker (Cyert and March, 1963; Gavetti *et al.*, 2012). The organizational process of search may be regarded as a process of inquiry in which choice is the match between the best alternative and the strategic goal. Search and choice are part of the organizational

decision process (Argyris, 1976) that is activated by problems and the need to solve them (Cyert and March, 1963; Eggers and Kaplan, 2013). These problems exist objectively (Lai and Grønhaug, 1994; Eggers and Kaplan, 2013), are waiting to be discovered (Eggers and Kaplan, 2013), or are constructed by managerial decisions (Agre, 1982; Eggers and Kaplan, 2013). However, actions conceived either as exploratory means to detect opportunities (Eggers and Kaplan, 2013; Tripsas and Gavetti, 2000; Gavetti, 2005; Gavetti, Levinthal, and Rivkin, 2005; Gavetti, 2012) and build new capabilities (Eggers and Kaplan, 2013) or as improvisational responses based on previous experience and skills can also be triggers of organizational search (Gavetti, 2005). The efficacy of the decision-making process is dependent on information collected from previous actions and environmental feedback that is absorbed by the organization through learning mechanisms (Argyris, 1976). Accordingly, both previous actions and feedback from the environment contain the information necessary for search and choice.

Models of organizational search are based on different theoretical perspectives and assumptions. Search, in the behavioral tradition, is an adaptation process that synchronizes the aspiration levels of the organization with its performance goals such that performance below certain levels will prompt search for solutions to level that differential (Cyert and March, 1963; Levinthal and March, 1981). In the behavioral framework, search results from failure to attain goals (Cyert and March, 1963; Gavetti *et al.*, 2012) or from success that guarantees availability of slack (March, 1981; Tyler and Caner, 2016; Chen, 2008; Chen and Miller, 2007; Greve, 2003). In this perspective, slack is valuable to the firm because it amounts to a stock of resources that exceeds those needed for the continuing operations of the firm (Bourgeois, 1981; Singh, 1986) and that might have been committed to some other organizational goal (Levinthal and March, 1981). If the firm has an excess of resources that can be diverted to activities different than the usual, then

the firm will be able to engage in a wider search, one that is not centered around the solution for the problem of meeting failed aspirations or performance shortfalls but is instead aimed to broader strategic goals (George, 2005; Voss, Sirdesmukh, and Voss, 2008; Kuusela, Keil, and Maula, 2016). Therefore, this stock of available resources or slack gives the firm freedom of choice by allowing a search that is not reasonably justified by specific problems or normal activities (Levinthal and March, 1981; Troilo, De Luca, and Atuahene-Gima, 2013) but may nevertheless be necessary to the achievement of strategic goals.

In this dissertation, I suggest that outcomes of action such as experience and knowledge may prompt a search that is similar to slack search. Slack resources allow firms to engage in a distal search, a type of search that is carried out outside the firm's usual area of business (Cyert and March, 1963) and results in a wider range of available alternatives. When a firm is exposed to the environment through its actions, it is predictable that this exposure will have consequences on the firm's behavior. Previous research suggests that firms engage in search, action, and learning because competition is dynamic and requires constant action and innovation to attain performance results (Derfus *et al.*, 2008; Barnett and McKendrick, 2004). This research indicates that competitive environments stimulate learning because firms compete for superior performance by engaging in competitive interaction with their rivals (Derfus *et al.*, 2008). I propose that competitive actions expose the firm to the competitive environment and this exposure generates a stock of experience and knowledge in the firm. Experience and knowledge are absorbed through learning and determine search. This search is discretionary and proactive, and in that manner similar to slack search, because it is rooted in the availability of excess resources of experience and knowledge. As the domain of search becomes wider, an increased number of alternatives, more varied and complex, will be available for the firm. Previous

research in organizational learning distinguishes between passive search that is situated within the limits of managerial schemes and confirms previous biases, and active search that relies on exceptional interpretations of problems that lead to new strategies (Greve and Taylor, 2002; Argyris, 1996). In the perspective adopted in this dissertation, outcomes of action such as experience and knowledge are combined into a pool of resources that affects the type of search the firm undertakes and the results of that search. Here actions prompt search and are then likely to influence choice and shape future strategic behavior.

Competitive Actions as Source of Search and Strategic Choice

Firms that face competition need to act (Barnett and Hansen, 1996) and competitive actions, which are the firm's response to its competitive environment prompt search, new actions, and learning (Derfus *et al.*, 2008). Competitive actions have a dual role for the firm: they are elements of adaptation and elements of change. As elements of adaptation, actions facilitate the firm's adjustment to the existing conditions of the competitive environment and to competitors' challenges. As elements of change, they introduce new terms of competitive engagement, disrupt market conditions by creating pressure on competitors, and influence shifts in competitive positioning (Chen *et al.*, 1992; Chen and Miller, 1994; Chen and Hambrick, 1995; Lamberg *et al.*, 2009; Chen, Katila, McDonald, and Eisenhardt, 2010). In order to adapt to a competitive environment in an effective way and to be able to exert influence upon it, firms need to make choices that are congruent with their strategic goals.

Core to the competitive dynamics research and the Austrian school philosophy is the ability of competitive actions to disrupt the competitive environment, creating competitive advantages for some firms and weakening the competitive position of others (Chen, 1996; Ferrier *et al.*, 1999;

Ferrier, 2001; Rindova *et al.*, 2010). The rivalry assumption in competitive dynamics is grounded on the power of tactical competitive actions, which are specific, purposeful, and visible moves designed to build an advantage to the firm and to provoke responses from competitors (Smith *et al.*, 1991). Tactical competitive actions are easy to deploy because they imply less resource and effort commitment from the firm than strategic actions, but these properties also make them less stable as they are generally easier to imitate, inviting more retaliation from rival firms (Smith *et al.*, 1991; Chen *et al.*, 1992; Connelly, Tihanyi, Certo, and Hitt, 2010). Studies found that certain action characteristics such as timing, speed, and intensity are related with competitive advantage and lead to above average performance (Derfus *et al.*, 2008; Ferrier, 2001; Nadkarni, Chen, and Chen, 2016). Although the competitive dynamics literature has focused on competitive actions mainly as sources of performance (Young *et al.*, 1996; Grimm, Lee, and Smith, 2006; Chen *et al.*, 2010), this dissertation develops the argument that competitive actions are coordinated and unified by strategic goals (He, Mahoney, and Wang, 2009; Miller and Chen, 1994, 1996a) and affect strategic choice. Researchers acknowledge that tactical competitive actions are not only the building blocks of the firm's competitive behavior but also important motivators of firm strategy (Hambrick *et al.*, 1996; He *et al.*, 2009). In sum, through tactical competitive actions, firms are able to compete successfully, influence their competitive context, and define strategic objectives that are coherent with their competitive behavior.

Competitive Action as Information. Competitive actions are visible in the market (Chen and Miller, 1994; Chen and Hambrick, 1995; He *et al.*, 2009; Ndofor *et al.*, 2011) and can convey information about the firm to market participants and to the firm's internal and external stakeholders (Smith *et al.*, 1991; Chen and Hambrick, 1995; Rindova *et al.*, 2010). Authors

remark that firms observe other firms' behaviors to establish their roles in the market (White, 1981; Miller and Chen, 1996b), and organizational actions in general convey information about the firm (Greve and Taylor, 2000). Researchers showed how in nascent markets competitive actions function as ambiguity reduction mechanisms that provide information cues to market participants about the firm's strategy (Rindova *et al.*, 2010) and how language used in competitive settings by rival firms affects actions and market relationships (Rindova, Becerra, and Contardo, 2004). They suggest that competitive advantage results both from resource deployment and exchange and the interpretations and communications among firm stakeholders about this exchange (Rindova *et al.*, 1992; Rindova and Fombrun, 1999). Additionally, there is evidence that firms rely on the interpretation of past competitive actions to evaluate their competitive position and decide on their future behavior (Lamberg *et al.*, 2009; Teece, Pisano, and Shuen, 1997).

Characteristics of competitive actions disclose the firm's competitive intentions and allow competitors to decipher what type of behavior to expect from the firm. For instance, the use of aggressive actions, that are fast, intense, and resource consuming (Yu, Subramaniam, and Cannella, 2009; Nadkarni *et al.*, 2016), is highly visible in the competitive arena and likely to leave an impression on competitors and customers. Likewise, the scope of a competitive action indicates to the market how many of its resources the firm is willing to employ toward the goal of acquiring competitive advantage and how its operations might be affected by the move (Hambrick *et al.*, 1996; Chen and MacMillan, 1992). For instance, the opening of an 800,000 square-foot high tech service center using advanced robotics by Amazon in 2016 can be seen as a competitive action of broad scope that signals that the firm is aiming to consolidate leadership in the retail industry (Nickelsburg, 2016). The competitive repertoire of the firm communicates to

the firm's competitors and its customers that the firm possesses a specific portfolio of competition moves (Ferrier, 2001; Ferrier and Lee, 2002; Ferrier and Lyon, 2004; Chen and Miller, 2012), which is an effective way to encourage or discourage competition. Diverse repertoires are difficult to imitate and indicate that the firm is proficient in adapting to environmental changes, a condition that is likely to discourage rivals' responses (Miller & Chen, 1996a); on the other hand, simple repertoires, especially in active competitive environments, communicate the firm's focus on a limited number of goals, are easy to imitate, and therefore encourage competitors' responses (Miller and Chen, 1996a).

Competitive Action as Innovative Behavior. Competitive dynamics scholarship characterizes the nature of the initial competitive action as novel behavior (Hambrick *et al.*, 1996; MacMillan, 1982) that challenges the market status quo (Chen and Hambrick, 1995; Ferrier *et al.*, 1999; Jacobson, 1992). Competitive actions can be narrow or broad in scope (Hambrick *et al.*, 1996). Actions with narrow scope are incremental, easy to implement, and require strictly the necessary amount of resources and capabilities for the firm to compete at adequate level (Smith *et al.*, 1991). These actions are based on comparable attributes (MacMillan, McCaffery, and Van Wijk, 1985; Chen *et al.*, 1992; Hambrick *et al.*, 1996) and although they introduce some disruption in the market and potential change in competitive positions, they are less resource intensive, require less commitment, and limit search to the extant competition domain. An important premise of the competitive dynamics literature is that initiating actions are predictive of competitors' responses and research results show that the scope, the intensity, and the implementation requirements of competitive actions affect the number and the timing of rivals' responses (Smith *et al.*, 1989; Chen and MacMillan, 1992; Chen *et al.*, 1992). Significantly researchers found that tactical actions are more likely to determine tactical responses from competitors (Smith *et al.*, 1991). For

example, when a firm decides on a price cut to obtain competitive advantage, this move is likely to prompt a competitor's price cut, because this tactical action is easy to interpret and imitate, and a retaliatory price cut is adequate to undermine at least temporarily the competitive advantage of the initiating firm (Smith *et al.*, 1991).

In competitive environments, however, firms may be motivated to adopt actions that go beyond usual, "small change" competitive behavior. Firms may be compelled to adopt tactical competitive actions that create a stronger and more permanent competitive advantage, undermining their competitors' ability to develop such advantage quickly (Rindova *et al.*, 2010; Chen *et al.*, 2010) and enabling the firm to achieve complete market dominance. These competitive actions are inherently novel and initiated by the firm as a result of their own internal search processes and creativity sources; they are not prompted by competitors' behavior (Hambrick *et al.*, 1996), and they determine change in the firm's set of capabilities, technologies, products and services (Greve and Taylor, 2000). Behavioral theorists explain the adoption of such novel, non-imitative actions as the result of wider search processes. Indeed, in the behavioral perspective search is characterized as a discovery process that may lead to innovation (Greve and Taylor, 2000; Gavetti *et al.*, 2012). Researchers in this tradition found that low performance levels led firms to adopt imitative actions (Massini, Lewin, and Greve, 2005; Schwab, 2007; Gavetti *et al.*, 2012) while low performance coupled with organizational slack generated innovative behavior (Salge, 2011, Gavetti *et al.*, 2012). Recent empirical studies in competitive dynamics confirm that successful firms often engage in innovative competitive behavior through R&D actions. Their results demonstrated that high performing firms adopt more R&D competitive moves and that the adoption of these moves allows them to obtain extra knowledge about the market and competitors (Chen *et al.*, 2010).

Initiating actions indicate innovative behavior because they presume learning processes, suggest alternative options, and provoke changes in managerial cognition (March and Simon, 1958; Greve and Taylor, 2000). In the competitive dynamics literature, in tune with the Austrian perspective, authors compare the adoption of new competitive actions to innovation and offer as an example the original frequent flyer program created by American Airlines in the aviation industry (Hambrick *et al.*, 1996). Recent research found that in the pharmaceutical industry the adoption of novel competitive actions is promoted by the availability of technological resources that insulate the firm from mimetic behavior (Ndofor *et al.*, 2011). Also, given that these novel actions are radical, complex, visible and can be perceived as a threat, they are likely to challenge rival firms' operative and managerial processes and affect their responses (MacMillan *et al.*, 1985). Novel actions introduce new elements in the competitive arena that are similar to innovation, so much so that they may be deemed inconceivable by the firm's rivals in certain circumstances (Ndofor *et al.*, 2011) because innovation presumes knowledge that is private to its creators (Greve and Taylor, 2000). In this dissertation I suggest that the element of novelty introduced by competitive actions changes the conversation inside the firm and among market participants. In the market, these actions modify the competitive environment as firms shift to different competitive positions. They also enable their creators to reach other market participants. Depending on the breadth of the disruption and the depth of its effects, some rival firms may be driven to abandon the market. Within the firm, the implementation of such novel competitive actions opens discussions about alternative competitive strategies and encourages the development of new resource bundling and capabilities (Ndofor *et al.*, 2011). Innovative actions stimulate managerial cognition and learning, and encourage awareness to new opportunities, which in the competitive environment are potential sources of competitive advantage (Nadkarni

et al., 2016). Innovation increases the number of alternatives available to the decision maker (March and Simon, 1958) affecting the boundaries of organizational choice (Greve and Taylor, 2000). The introduction of a new product or the expansion of product lines with new features will define new technological and competitive standards that expose more alternatives and stimulate new ways of competing. For example, the commercial release of the iPod by Apple in the early 2000s changed radically the music industry standards with the introduction of groundbreaking features at a time when other available music playing devices were still using controls better suited for the “defunct” Sony “Walkman” (Hornby, 2013). Therefore, by creating new market conditions, introducing new standards, and exposing the firm to a new competitive environment, competitive actions are likely to influence the firm’s strategic choice.

Competitive Action and Learning. Competitive actions, defined as externally oriented, specific, and detectable moves adopted by firms to obtain competitive advantages (Chen *et al.*, 1992; Miller and Chen, 1996b; Ferrier, 2001; Ferrier *et al.*, 2002), are mechanisms used by the firm to adapt to the competitive environment and respond to both internal and external demands. The competitive dynamics literature acknowledges that competitive actions provide learning opportunities for the firm (Derfus *et al.*, 2008; Ndofor *et al.*, 2011). Organizational learning is an adaptive process that enables the continuing adjustment between the firm and its environment (Levinthal and Marino, 2015; Child, 1997) and this process is facilitated by the social interactions on which the firm relies to operate and by the social knowledge that is embedded in its rules and principles (Kogut and Zander, 1996), therefore affecting organizational action.

In the organizational framework, learning is environmentally dependent and geared towards “what the firm can do” (Kogut and Zander, 1976). Learning is generated both through the firm’s

direct experience that is encoded in its memory as routines and tacit knowledge, and through benchmarking, that entails comparisons with rival firms (Eggers and Kaplan, 2013). Firms can therefore learn and acquire relevant knowledge from their own experience or from the experiences of others. In the competitive dynamics literature, studies found that firms learn from rivals (Rivkin, 2000; Csaszar and Siggelkow, 2009; Chen *et al.*, 2010) and that rivals' search processes influence search within the firm (Katila and Chen, 2008; Katila, Bahceci, and Miikkulainen, 2010; Chen *et al.*, 2010). In certain circumstances, when there is reliable environmental information available to predict future needs and preferences in the market (Pisano, 1994; Clark and Fujimoto, 1991), firms can also "learn before doing" by stipulating plans and programs to generate useful and applied knowledge (Pisano, 1994).

A central premise of this dissertation is that firms learn from their own experience or "learn by doing", particularly when they do not possess all the information necessary to predict the effects of their own actions (Pisano, 1994; Argote, 1999; Eisenhardt and Tabrizi, 1995). Research found that competition in dynamic environments influences the firm's learning capacity and the acquisition of competitive advantage (Eisenhardt and Tabrizi, 1995; Pisano, 1994). This research supports the main argument of this dissertation that competitive actions and the exposure to the competitive environment they provide allow firms to learn while competing (Ndofor *et al.*, 2011) and that the outcome of this learning process, a stock of experience and knowledge, can be used by the firm to assess new opportunities and narrow its future strategic choice.

Authors state that learning and adaptation are requirements of effective organizational action (Argote, 1999; Cyert and March, 1963; Huber, 1991; Levitt and March, 1988; March and Olsen, 1976; March and Simon, 1958; Levinthal and Marino, 2015). To understand the process through

which actions as mechanisms of learning and adaptation influence the firm's choices and behavior it is necessary to assume that the firm is an entity whose plasticity, or capacity to adapt to environmental conditions (Levinthal and Marino, 2015), has implications on future behavior. Such perspective diverges from a view that represents the firm as rigid and non-plastic, with adaptive processes that depend mainly on reinforced behavior executed through rules and routines (Nelson, 1994; Gavetti and Rivkin, 2007). Research in management found that organizational plasticity, defined as the firm's capacity to adapt its policies according to the feedback obtained from previous actions (Lave and March, 1975; Levinthal and Marino, 2015), enables a better coordination between organizational policies and environmental feedback, and that in dynamic environments in particular, higher levels of plasticity that rely on less routinized behavior are more effective (Levinthal and Marino, 2015). In neuroscience, plasticity is the brain capacity to balance between adaptability that determines learning and stability that maintains abilities and memories (Merzenich, Van Vleet, and Nahum, 2014). Experiments showed that the brain physiology changes in areas that are related with the acquisition of knowledge and skills obtained through actions (Maguire, Woollett, and Spiers, 2006; Hübner *et al.*, 2010).

In organizational theory, authors stress that innovative actions are sources of learning through which the set of choices available to the firm is amplified (Greve and Taylor, 2000). Based on this idea that learning acquired through action impacts the mindsets of individuals, I suggest in this dissertation that competitive actions, through a process that replicates the way learned behavior impacts the brain's functioning and structure, allow firms to acquire experience and knowledge that is likely to determine and shape their future behavior and structure. Competitive actions, as sources of learning and innovation that is based on new experience and knowledge, disclose new opportunities for the firm and influence the strategic choices of the firm. These may

include diversification and divestitures, which are decisions that impact the structure of the firm, or its “physiology”.

Effects of Learning from Competitive Actions on Strategic Choice

Previously, I explored the notion that competitive actions transmit information, indicate innovative behavior, and are the basis for organizational learning. In this section, I examine the process through which competitive actions expose firms to their competitive environment and how this exposure activates learning by creating resources that influence strategic behavior.

Firms are communities of knowledge that facilitate coordination, communication, and adaptation (Pisano, 1994; Kogut and Zander, 1996). By encapsulating the firm’s intentions, motivations, and goals (March, 1981), organizational actions trigger search to generate knowledge (Eggers and Kaplan, 2013). In the behavioral or evolutionary point of view, organizational choice relies on learning as a necessary mechanism of search given that this perspective challenges the rational assumption of optimization and depends on managerial decision for satisficing solutions (Argote, 1999; Chen *et al.*, 2010; Gavetti *et al.*, 2012). The behavioral perspective tends to emphasize a type of search that is problem driven. Indeed, some describe organizational learning as a solving problem process prompted by performance shortfalls (Von Hippel and Tyre, 1993; Dosi and Marengo, 1993, Iansiti and Clark, 1994; Pisano, 1994). Learning viewed as problem solving relies on search that is single minded and local, which implies that solutions and alternatives are found the vicinity of the problem (Cyert and March, 1963; Chen *et al.*, 2010). In the traditional competitive dynamics framework where performance is the sought-after effect of competitive behavior, managers engage in local search in their attempts to solve performance shortcomings (Chen *et al.*, 2010). In the present research, however, I suggest that competitive

behavior influences strategic choice. When considering future strategies managers are likely to engage in wider and deeper search processes that look beyond the vicinity of problems. As stated previously, search prompted by the availability of experience and knowledge resources can be compared to slack search. Slack search, in the behavioral framework, is adaptive and mindless, unlikely to be approved in times of scarcity or resource constraint, and economically unjustified (Cyert and March, 1963; Levinthal and March, 1981). Slack search promotes innovative behavior (Bourgeois, 1981; Troilo *et al.*, 2013), suggesting that the firm is looking for information to build knowledge that is beyond its current level (Troilo *et al.*, 2013; Katila and Ahuja, 2002). In sum, competitive actions expose the firm to the environment and that exposure prompts a type of search that is not rooted in specific performance problems but instead in the availability of particular resources such as experience and knowledge. This search is likely to lead to the discovery of new opportunities, and therefore influences strategic choice.

Learning and Choice. Organizational behavior is mostly learned behavior that reacts to environmental feedback (March, 2006). Evolutionary learning assumes that organizations acquire knowledge through the accumulation of experience from which they are able to derive heuristics or rules of thumb that simplify the deliberative phase of the decision process and let the organization deal with uncertainty in an effective way (Pisano, 1994; March, 1981). This model of learning is adaptive as it relies on the replication of success and generation of variety (March, 2006). It is predicated in reinforced learning mechanisms where the value of actions is determined by a consistent sequence of action trials that leads to the behavioral change (Thorndike, 1911; Gershman *et al.*, 2016). Actions are reinforced by rewards or punishments that together with the influence of other relevant stimuli determine subsequent actions (Cowie and Davison, 2016; Skinner, 1969). The value of the action is estimated from experience, which

determines the probabilistic choice of future actions; a positively reinforced action is more likely to be repeated and a negative one more likely to be ignored (Gershman *et al.*, 2016).

Similar to reinforcement processes that are based on historical comparisons (Gillan *et al.*, 2016), models of organizational search and choice involve comparison between sequences of organizational actions and feedback from the environment that provide the information necessary for adopting subsequent behavior (Argyris, 1976). Reinforced learning makes future behavior contingent on the effects of actions (Thorndike, 1911; Cowie and Davison, 2016); likewise, evolutionary models of organizational search and choice stipulate that firms learn from action (March, 1981) and following the reinforcement principle (Thorndike, 1911), actions that are successful are more likely to be repeated (March 1991, 2006; Levinthal and March, 1993; Greve and Taylor, 2000). Therefore, through successful and consistent actions firms acquire experience (Lamberg *et al.*, 2009) and knowledge of “how things work” (Nelson and Winter, 1982; Lamberg *et al.*, 2009). In the evolutionary paradigm, consistent repetition builds experience and knowledge that are encapsulated in organizational rules and routines (March, 1991; Nelson and Winter, 1982; Levinthal and March, 1993) and guide present and future behavior (March, 1981; Levitt and March, 1988).

In this dissertation, I suggest that firms may also acquire knowledge and experience through a different learning mechanism. Authors have suggested that firms learn from a diversity of sources. For example, firms can reclaim a build-in mechanism of learning or “genetic” propensity to behave in a certain way. Studies show that firms’ behaviors are conspicuously influenced by the experience and knowledge of their founding and early members (Burton, Sorensen, and Beckman, 2002; Gong, Baker, and Miner, 2005; Klepper and Sleeper, 2005,

Shane and Khurana, 2003; Eggers and Kaplan, 2013). Others have challenged the prevalence of reinforced systems and suggested that firms learn by identification (Bandura and Walters, 1963; Kogut and Zander, 1996) or through membership in communities of practice (Lave and Wenger, 1991; Kogut and Zander, 1996). Authors remark that by mere access to information firms may increase their recognition of opportunities and ideas for new competitive actions (Andrevski *et al.*, 2016). Organizational learning has traditionally depended upon successful action that controls the likelihood of incorporation of experience and knowledge in organizational systems, determining imitation, performance or survival (March, 2006).

The present dissertation theorizes that firms “learn while acting” and acquire experience and knowledge by exposure to the competitive environment rather than from persistent trials. Firms learn by analyzing how their competitive actions affect the market and their competitors and then assess the results of the exposure to particular market conditions in a manner that is similar to experiential learning. Experiential learning is based on active involvement in specific learning experiences, the analytical assessment of these experiences, and the application of decision-making and problem-solving skills to use the ideas acquired through the experiences in later situations (Kolb, 1984). In the competitive dynamics literature there are suggestions that the dynamism of the competitive environment is more likely to influence successful firms than the repetition of competitive actions (D’Aveni, 1994; Ferrier *et al.*, 1999). Researchers in this field argue that firms learn new ways to compete both from previous experience and from observing the current conditions in the market (Miller and Chen, 1994). Studies found that firms that employ diverse action repertoires are more exposed to the market idiosyncrasies and therefore are able to obtain more information about their customers and competitors (Miller and Chen, 1996a; Delacroix and Swaminathan, 1991) and more feedback from the competitive environment

(Miller and Chen, 1996a). Some scholars mention how firms that compete in market niches are exposed to a variety of behaviors and unorthodox ideas (Burt, 1987; Erickson, 1988; Miller and Chen, 1996b) that influence their future behavior (Miller, 1993; Chen and Miller, 1994; Miller and Chen, 1996b), while others suggest that an exposure to diverse environmental contexts facilitates learning through iterative comparisons and improves the firm's flexibility (Ndofor *et al.*, 2011).

The exposure to the competitive environment through actions and the ability to effectively assess the consequences and effects of these actions create a residual effect that is stored by the firm as experience and knowledge. All knowledge acquired by the firm is maintained and accumulates within the firm's systems to be used whenever needed even when its source or history is no longer identified (March, 1978). Hence, the residual knowledge that results from competitive actions and the environmental exposure they afford is likely to impact future organizational choices, just like seemingly isolated actions we take every day can leave an imprint in our behavior and determine future decisions. Research in psychology found that mind or psychological resources such as optimism, sense of personal control, and the ability to find meaning in experiences act as reserves that not only enable individuals to deal with difficult events and the vicissitudes of life (Taylor, 1983) but also promote better choices (Frankl, 1963; Seligman, 1998, Taylor, 1989; Taylor *et al.*, 2000). I contend that experience and knowledge retained from exposure to the competitive environment build a stock of resources that firms can tap when circumstances require. The availability of such resources shapes the choice of strategic policies.

Decision-making processes are tainted by psychological bias. Firms' exposure to the environment through action generates resources for the firm that are valuable in future choice; the experience that managers collect in this process is likely to remain salient in future occasions. A variety of studies in different fields of knowledge such as marine biology and energy consumer behavior has examined the effects of the availability bias in decision-making (for example, Liedtka, 2015; Frederiks *et al.*, 2015). Kahneman and Tversky (1979) found that decision makers overvalue options that are easy for them to imagine and a number of studies have identified various situations in which decision making is influenced by recent experiences and similar cases (Liedtka, 2015; Frederiks *et al.*, 2015). These studies, that range from consumer behavior to marine mammal surveys, confirm that individuals rely on instantly available information that is easily and quickly accessible when making a decision. I propose that experience and knowledge collected through action in the competitive environment is likely to influence managers' processes of choice by narrowing the available alternatives.

In sum, a firm that possesses a pool or stock of experience and knowledge in certain markets is likely to undertake strategic choices such as diversification or corporate social responsibility. This stock of resources may be deployed in a manner that is similar to the use of slack resources by firms. In behavioral theory, slack is an important determinant of firm behavior (Chen and Miller, 2007; Chen, 2008; Greve, 2003; Tyler and Caner, 2016). The availability of slack resources determines the type of actions a firm is able to undertake (Kuusela *et al.*, 2016) and may be used at different occasions. For example, slack may function as a buffer that protects the firm in case of performance difficulties (George, 2005) or as an extra supply of resources that offers flexibility and freedom to act and can be deployed to implement strategic actions (Kuusela *et al.*, 2016).

Like slack resources that offer leeway for firms to implement strategic activities (Bourgeois, 1981; Sharfman, Wolf, Chase, and Tansik, 1988) and adopt strategic innovation (Nohria and Gulati, 1996; Danneels, 2008; 2013), the experience and knowledge that the firm gathers through competitive actions is likely to narrow the strategic alternatives open to the firm as it prompts information that is readily available and quickly accessible from previous environmental exposure. In the next chapter I examine how characteristics of competitive actions such as scope, and the repertoire of actions deployed by the firm contribute to the creation of a stock of resources such as experience and knowledge that narrows strategic choice and influences the adoption of strategies such as organizational diversification, both related and unrelated, divestitures, and corporate social responsibility.

CHAPTER III

THE EFFECTS OF COMPETITIVE ACTIONS' CHARACTERISTICS ON DIVERSIFICATION STRATEGIES, DIVESTITURES, AND CORPORATE SOCIAL RESPONSIBILITY

In this chapter of the dissertation, I develop a set of hypotheses that will test how the scope of competitive actions and the firm's repertoire of competitive actions are determinants of strategic choices such as organizational diversification, related and unrelated diversification, divestitures, and corporate social responsibility (CSR). Additionally, I hypothesize that organizational slack is likely to moderate the association between action scope and repertoire and diversification. Finally, I hypothesize that slack moderates the association between action scope and repertoire and CSR.

Competitive actions

A core argument in competitive dynamics is that the firm's financial performance depends on how the firm's competitors respond to its competitive actions (Chen *et al.*, 1992; Miller and Chen, 1994; Hambrick *et al.*, 1996; Ketchen, Snow, and Hoover, 2004; Tsai, Su, and Chen, 2011). Research in competitive dynamics emphasizes the role of competitive actions in the creation of competitive advantage (Chen, 1996; Ferrier *et al.*, 1999; Ferrier, 2001; Rindova *et al.*, 2010) and explores how the characteristics of competitive actions generate financial performance

by influencing competitors' responses (Smith *et al.*, 1991; Chen and Miller, 1994; Miller and Chen, 1996; Derfus *et al.*, 2008; Ndofor *et al.*, 2011). Specifically, studies reveal that actions with broad scope and action repertoires are efficient ways for the firm to protect its competitive advantage, as they elicit few and slow responses from competitors (Smith *et al.*, 1989; Chen *et al.*, 1992) and contribute to the erosion of competitors' market share and the dethronement of market leaders (Ferrier *et al.*, 1999). The present dissertation shifts the attention from performance results to the effects of competitive actions on strategic choice by investigating how specific characteristics of actions may lead to the adoption of strategies such as diversification, divestitures, and CSR.

This research explores the possibility that strategic choice is influenced by the firm's market exposure and by learning mechanisms that create a stock of experience and knowledge resources for the firm. The amount of such resources and their salience and availability is likely then to narrow the set of available alternatives for strategic choice. Overall, it predicts that a stock of experience and knowledge acquired through competition will affect the firm's growth by encouraging the exploitation of current capabilities and the acquisition of new ones through diversification or will lead, under certain circumstances, to the divestiture of some of the firm's assets. Other possible strategic direction stemming from competitive actions is the adoption of CSR initiatives.

Action scope

Competitive dynamics traditionally refers to the scope of a competitive action as the amount of resources the firm deploys in a particular competitive move or, in other words, to the proportion of resources the firm spends in a particular action to gain and sustain an advantage over its

competitors (Hambrick *et al.*, 1996). The amount of resources involved in a competitive action determines therefore how pervasive the action is because it is likely that larger resource deployments reach a larger number of competitors (Chen *et al.*, 1992). Actions with broad scope indicate that the firm is competitively bold because they involve significant resource deployments that have major impact on the firm's operations, thereby setting the firm apart from other firms that pursue more conservative and incremental moves (Hambrick *et al.*, 1996). For instance, in 2004 when Apple introduced flat panel monitors on its line of computers the then CEO Steve Jobs declared it as the "largest high-resolution computer display ever", admittedly taking aim at its competitors and characterizing this move as daring and as unbeatable as could be (New York Times, 2004). Additionally, this type of actions is the source of extensive learning opportunities for the firm because it exposes the firm to a larger set of competitors and their varied competitive behaviors (Ndofor *et al.*, 2011) and to larger domains of competition namely new regions and new lines of product and service (Hambrick *et al.*, 1996).

Competitive dynamics literature explains how awareness, motivation, and capabilities are determinants of competitive behavior (Chen and Miller, 1994; Smith *et al.*, 1991, 2001; Chen *et al.*, 2007). In previous studies (see, for example, Smith *et al.*, 2001 and Chen *et al.*, 2007), awareness is defined as the firm's capability to acquire new information, decipher market cues, and perceive opportunities that arise from its exposure to this new information (He *et al.*, 2009). Markets are information networks and the exposure to information enables the detection of new opportunities (Penrose, 1959; Andrevski *et al.*, 2016). Researchers found that firms in the same business market have equal access to information and that they acquire their distinctive capabilities mainly from their ability to internally process and analyze that information (Hambrick, 1981). If a firm is exposed to a larger competitive domain, it is likely that the number

of information sources available to the firm increases and research suggests that firms have mechanisms to manage increased information levels (Thomas *et al.*, 1993). Therefore, as the firm operates in larger competitive settings and interacts with a greater number of competitors and customers, it also acquires more skills to understand its competitors' motivations and behaviors (Chen *et al.*, 1992; Tsai *et al.*, 2011), their resource prioritization, and their resource deployment (Porac, Thomas, Wilson, Paton, and Kanfer, 1995). The exposure to a larger competitive domain facilitates the discovery of opportunities to expand and the benefits to gain from exploring such opportunities are likely to motivate future strategic behavior. The mergers and acquisitions literature links early action in merger and acquisition waves to firms' awareness of opportunities and willingness to develop such opportunities (Haleblian *et al.*, 2012).

Furthermore, learning perspectives emphasize that the exposure to diverse markets with different types of customers and competitors impacts managerial cognition and generates more awareness of different alternatives to cater and to serve customers (Levitt and March, 1988; Miller and Chen, 1994). Overall, firms that undertake competitive actions with wide scope set themselves apart as bold innovative players while firms that adopt actions with narrow scope, in smaller market domains, and affecting but a few competitors are predictably limiting their competitive experience and knowledge (Hambrick *et al.*, 1996).

Exposure to the competitive environment through actions that reach new and increasingly large competitive domains, such as regions, business markets, and product and service lines, will result in the acquisition of valuable experience and knowledge for the firm. By learning how the market works, the firm is experimenting and developing resources (Chang, 1996) such as experience and knowledge that will influence its future choices. Research in management claims that diversification strategies are associated with the efficient use of the firm's resources through

synergies and cost efficiency (Mackey, Barney, and Dotson, 2017) and that the firm's experience and knowledge base of its industry determines its capability of assessing diversification opportunities (Chang, 1996). Studies that modeled diversification as part of search processes that match the firm's organizational capabilities to industries (Matsusaka, 2001) concluded that diversification is a value creating strategy (Gomes and Livdan, 2004). The competitive dynamics literature suggests that firms that have similar resource profiles are more likely to be competitively interdependent by sharing the competitive environment and vying for the same resources (Chen, Su, and Tsai, 2007; Porac and Thomas, 1990). Also, firms are likely to acquire competitors, suppliers, or firms in related markets when seeking market power (Hitt, Ireland, and Harrison, 2001; Iyer and Miller, 2008). Therefore, I predict that actions that offer a large exposure to the competitive environment may lead to strategies of related diversification because through them the firm acquires a specific knowledge of the commonalities it shares with its competitors and thorough understanding of the opportunities available for expansion in areas that are within its knowledge base and offer synergies. Both competitor information and opportunity awareness are conditions that bolster the firm's growth needs and motivate mergers and acquisitions of related businesses.

In competitive settings there is a possibility that firms might lose their resources and capabilities to rivals in which case firms need to build strong resource-capability bases to mitigate the risk of these losses. Given that firms "learn by doing" (Argote, 1999; Eisenhardt and Tabrizi, 1995; Pisano, 1994; Derfus *et al.*, 2008) and then apply that learning to future actions (Derfus *et al.*, 2008), it is likely that the stock of experience and knowledge derived from environmental exposure to a wider number of competitors is acquired through exploitative learning, which is based on the firm's existing capabilities (March, 1991; Levinthal and March, 1993; Danneels,

2008). Levinthal (2017) argues that prior exploitative investments and learning determine the firm's set of capabilities and its awareness to business opportunities. Therefore, broad scope competitive actions can create awareness of competitive opportunities in related businesses and motivate strategies of related diversification aimed to acquire similar resources and capabilities that protect against future competitive attacks and retaliation. This suggestion follows the slack argument according to which excess resources may be used in exploitation strategies that do not require the acquisition of additional knowledge but instead use and refine existing competencies (March, 1991; Levinthal and March, 1993; Danneels, 2008; Chang, 1996).

Authors argue that firms seek acquisitions that create economies of scale and scope (Bailey and Friedlaender, 2001; Iyer and Miller, 2008). Research in strategic management has consistently reported that relatedness in firms' portfolios of business allows resource transfers that create efficient and profitable synergies within the firm (Weiss, 2016). Additionally, and confirming previous research that found that entry into new markets is primarily shaped by the firms' redeployment of existing capabilities (Helfat and Raubitschek, 2000; Klepper and Simmons, 2000; Mitchell, 1989; Kapoor and Furr, 2015), recent empirical findings show that when entering new businesses diversifying firms may be seeking to leverage their current set of assets (Kapoor and Furr, 2015). It is reasonable then to predict that actions with broad competitive scope can motivate the strategic acquisition of assets that will create synergies within the firm.

In sum, I hypothesize that actions with broad scope create awareness of opportunities in the market and commonalities among competitors that encourage growth strategies such as diversification. This type of actions is also likely to motivate the firm to undertake related diversification strategies, which reinforce market power, create cost efficiency and synergies,

and constitute insurance against future competitive attacks. The stock of experience and knowledge acquired through broad scope competitive actions is assimilated through exploitative learning and will lead to the adoption of diversification strategies, and to related diversification.

Hypothesis 1: Action scope is positively associated with diversification.

Hypothesis 1a: Action scope is positively associated with related diversification.

By enabling “learning by acting” competitive actions generate a stock of experience and knowledge for the firm and are the source of innovative behavior. Firms derive their purpose from a logic of cost efficiency but they also offer “a context of discourse and learning that promotes innovation and motivated behavior” (Kogut and Zander, 1996: 511). Although their degree of innovativeness may vary, competitive actions are initiated or created by the firm without being prompted by rivals’ behavior (MacMillan, 1982; Hambrick *et al.*, 1996) so that they are results of the firm’s innate capacity to innovate. Actions of broad scope in particular might be particularly conducive to innovative decisions and strategies. The exposure to wider domains of competition is likely to fuel the firm’s innovative behavior because it increases the number of market interactions and consequent experience to the firm. Previous studies found that experience leads to creativity because it builds awareness to alternative choices and to potential new reconfigurations of knowledge (Amabile, 1997; Rietzschel, Nijstad, and Stroebe, 2007; Shane, 2000; Argote and Myron-Spektor, 2011). Consistent behavior generates experience that is unambiguous and has a stronger impact on learning processes that lead to knowledge creation (Argote and Myron-Spektor, 2011). Learning processes leading to innovation are explorative in nature and they encourage expansion to new markets and domains (Danneels, 2008). Choice that is rooted in exploration is overlooked by narrow problemistic search and relates to search for

“innovations that would not be approved in face of scarcity but have strong subunit support” (Cyert and March, 1963: 279). Research has highlighted how firms are able to explore opportunities and enter new markets based on their extant experience and knowledge (Levinthal, 2017). Although in strategic management initial resource endowments are accepted as main determinants of innovation, there has been research on the effects of experience on innovation (Cattani, 2005; Klepper, 2002). This research finds that firms that acquire experience and knowledge in a particular market or industry might do so without a specific anticipation of the future use of these resources but are in a better position to explore new technological domains (Cattani, 2005). This insight is useful to explain how competitive actions with broad scope allow the acquisition of experience and knowledge that is valuable in the future to enter unrelated domains of business. An example of how competitive actions may be determinants of new market entry is Amazon. When it started as a book web merchant in 1995, Amazon sold in all 50 states and 45 other countries during its first month of activity. At the time its CEO declared, "Within the first few days, I knew this was going to be huge, it was obvious that we were onto something much bigger than we ever dared to hope" (Quittner, 1999).

In competitive dynamics, awareness is equated with attentiveness to market processes and signals (Chen, 1996; Levinthal and Rerup, 2006; Lamberg *et al.*, 2009). Managers are expected to systematically scan and evaluate the environment in order to identify issues that affect their firms' functioning (Jackson and Dutton, 1988; Dutton and Jackson, 1987). Since actions with broad scope reach and affect a large number of market participants, they are a means through which the firm acquires a deep awareness of market opportunities and threats. In the previous section, I suggested that exploitative learning mechanisms explain the adoption of growth strategies based on experience and knowledge that is related to current capabilities and resource

base. The exposure to larger domains is also likely to increase attention to market signals and develop creativity that derives from experience and knowledge of how the market works (Nelson and Winter, 1982; Lamberg *et al.*, 2009). A higher awareness level and creativity emerging from experience will likely motivate the firm to look beyond its current boundaries for new and more promising opportunities to grow. The perception of new opportunities is associated with the increase of alternatives for action (Staw, Sandelands, and Dutton, 1981; Thomas *et al.*, 1993) and with projections of positive outcomes (Jackson and Dutton, 1988; Thomas *et al.*, 1993).

Although research in diversification found that strategies of related diversification usually outperform unrelated diversification in terms of value creation (Mackey *et al.*, 2017; Rumelt, 1977; Weiss, 2016), recent studies were able to determine that strategies of unrelated diversification are value creating for the firm when they involve a high level of managerial capabilities and are undertaken under the right conditions (Mackey *et al.*, 2017). Empirical studies in finance found that unrelated diversification strategies are means to the exploration of new productive opportunities that increase the value of the firm (Mackey *et al.*, 2017; Gomes and Livdan, 2004). Additionally, the stock of experience and knowledge acquired through innovative broad scope actions is likely to determine search into new domains and result in a set of alternatives that are relevant in terms of strategic choice. In fact, some authors argue that search without exploration might be detrimental to the firm's innovation processes and performance results (Cattani, 2005). Therefore, experience and knowledge might determine extensive search, that implies entry into unrelated businesses or markets (Levinthal and March, 1981; Chang, 1996), and lead to new strategic paths such as the adoption of new products, technologies, and services in unrelated areas of business.

Firms that adopt broad scope competitive actions have been considered bold and creative (Hambrick *et al.*, 1996), which may indicate a propensity to explore new ways of cater for their customers, enlarge their customer base, and get ahead of competitors. I hypothesize then that competitive actions with broad scope, by increasing exposure to the market and its participants, influence the firm's acquisition of a stock of experience and knowledge that will impact the firm's ability to act innovatively. Experience and knowledge foster the discovery of new market opportunities and creativity and competitive boldness motivate the exploration of new opportunities through strategies of unrelated diversification.

Hypothesis 2: Action scope is positively associated with unrelated diversification.

There is scarce investigation on how competitive actions may lead to the sale of under-performing assets through divestitures. The same mechanisms that explain how actions with broad scope can lead to diversification strategies may also explicate how that type of competitive move can result in divestitures. Although traditionally diversification and divestments have been studied separately and under different theoretical assumptions, they can also be viewed as consequences of a larger issue, that of the scope of the firm (Chang, 1996). Such approach, relying on evolutionary arguments, explains that performance gaps may lead to both diversification and divestiture decisions and how the firm's knowledge base may determine both entry and exit decisions (Chang, 1996). In a study adopting a fine-grained analysis of divestitures in a specific industry, researchers were able to find that partial divestitures are associated with growth and with retention of foundational knowledge (Dutt and Vidal, 2016). I argue in this dissertation that learning acquired through competitive actions enables strategic alternatives that may either result in diversification or divestment. In previous sections, I suggested that by

affording an exposure to the competitive environment that creates a stock of experience and knowledge in the firm, broad scope actions are crucial in the detection of new strategic opportunities of growth through related and unrelated diversification. Such experience and knowledge may also signal that given the circumstances the best strategic choice is the divestiture of assets. For example, in 2012 Microsoft decided to divest its Zune music platform abandoning indefinitely the portable media player market and allowing rival Apple to take over its market share (Chen and Jorgensen, 2016).

Firm experience associated with learning results in organizational actions and outcomes (Bergh and Lim, 2008). The same learning process that may uncover an opportunity to grow through diversification may expose an opportunity to divest. Previous research found that firms divest as part of search and selection processes (Chang, 1996), as a way to improve efficiency in resource allocation within the firm, and to redirect focus to core businesses (Mackey *et al.*, 2017; Bergh and Lim, 2008). Empirical findings show that previous relevant experience and knowledge impact the financial success of divestitures (Bergh and Lim, 2008). Therefore, it might be expected that experience and knowledge acquired through competitive actions, particularly ones that are pervasive, may in particular circumstances direct the firm to the divestment of assets. Duhaime and Grant (1984) suggest that divestitures can be profitable strategic choices when firms do not want to face the eventual decline of less profitable business units. Their empirical findings show that large diversified firms divest units that are less profitable and less dependent of other units (Duhaime and Grant, 1984). I anticipate that firms might be able to detect an “opportunity to divest” through market interactions and realize that some activities are not worth pursuing and should be abandoned. The stock of experience and knowledge on which the firm relies for strategic choice offers leeway for the adoption of growth strategies but can also lead to

resource release strategies when the assessment of the competitive environment determines that divesting particular assets may constitute a better option. Recent empirical research found that in cases of underperformance, a divestment strategy is pursued if firms have slack resources (Kuusela *et al.*, 2016). This research aligns with previous theorizing that slack resources impact organizational action and increase strategic options. It also reinforces the argument that by adopting competitive actions with broad scope the firm obtains a stock of experience and knowledge of its competitive environment that determines its strategic choice and may determine asset divestments.

Hypothesis 3: Action scope is positively associated with divestitures.

Scholars in competitive dynamics argue that is important to understand competition through a perspective that embraces corporate social responsibility issues and stakeholders' participation (Chen and Miller, 2012; 2015). Theoretical arguments for the reconceptualization of the competitive dynamics paradigm propose the inclusion of forms of competition that rely more on cooperation than retaliation and increase the attention given to stakeholders' needs and concerns (Chen and Miller, 2015). So far advances in this area have been scarce (Chen and Miller, 2015). In this dissertation it is suggested that competitive actions can be determinants of choices that express the firm's involvement in social and environmental issues. To explain how, it is important to acknowledge that firms are increasingly more dependent on their stakeholders (Kotter, 2005) and that these stakeholders are increasingly more critical of economic and business activities that may have negative impact on society and environment (Padmar *et al.*, 2010).

Competitive actions expose the firm to the market and its participants and actions with broad scope in particular are more likely to create awareness of opportunities and threats and motivate the pursuit of new strategic directions. Competitive actions can be sources of responsible firm behavior towards society and environment. Competitors and consumers evaluate firm's behavior by observing its competitive actions and therefore these can be an effective means to communicate the firm's environmental, philanthropic, and social profile.

A cornerstone of the present research is how exposure to broader competitive domains creates experience and knowledge that trigger awareness to new opportunities and motivation to adopt them. In management literature it is suggested that a firm that has extensive interaction with its stakeholders may be presented with a larger and better set of opportunities from which to choose (Harrison, Bosse, and Phillips, 2010). The adoption of a stakeholder perspective holds promise for the firm in terms of new opportunities that may be exposed from interaction with customers and in certain cases, competitors (Chen and Miller, 2015; Porter, 1998). The pursuit of CSR initiatives that were discovered by the exposure to larger sets of stakeholders will then likely translate into a competitive advantage for the firm.

Corporate social responsibility is characterized as an innovative strategy (McWilliams and Siegel, 2000; Hull and Rothenberg, 2008) because it implies investments in newer and more updated technologies and on systems and processes that reflect the concern for social and environmental issues (McWilliams and Siegel, 2000). In the area of ecological sensitivity, for example, firms may find economic opportunities by adopting new activities and processes that are ecologically more benign. These include energy and waste management processes, more efficient input-output ratio of production, ecological labeling and marketing practices, and the

development of environmental-friendly products (Bansal and Roth, 2000). Research aiming to establish the determinants of corporate ecological sensitivity found that competitiveness and the pursuit of competitive advantage were motivations for ecological behavior and that in some industries firms were able to find strategic niches and to present themselves as the “green alternative” (Bansal and Roth, 2000). It is likely therefore, that the experience and knowledge acquired through broad scope competitive actions creates awareness in the firm of new areas of social and environmental concern, stimulates a creative approach to the management of these issues, and leads to competitive advantage. I adopt an argument that is similar to the CSR’s slack resources hypothesis (Surroca, Tribó, and Waddock, 2010; Waddock and Graves, 1997) that proposes that organizational slack stimulates the adoption of CSR by providing the firm with enough financial resources to undertake this strategy (McGuire, Sundgren, and Schneeweis, 1988; Surroca *et al.*, 2010). The exposure of the firm to a wider competitive environment, which induces more awareness of social and environmental concerns, generates a stock of experience and knowledge that may prompt distal and proactive search. This type of search, based on the availability of resources, promotes the quest for new solutions, creates a wider set of choices, and facilitates innovation in general. Additionally, and following the slack hypothesis’ arguments, this excess of experience and knowledge resources may offset some of the risks of undertaking uncertain strategies such as CSR.

Thus, I hypothesize that the stock of experience and knowledge acquired through competitive actions of broad scope increases the firm’s awareness of social and environmental concerns and, given the salience of this experience in managers’ mind and the effects of availability bias, will lead to the selection of innovative strategies such as CSR.

Hypothesis 4: Action scope is positively associated with corporate social responsibility.

Action repertoire

Competitive actions are usually carried out through sequences of aggregated moves that express the firm's willingness to acquire competitive advantage by deploying efficient competitive attacks (Ferrier *et al.*, 1999; Young *et al.*, 1996; Ferrier, 2001). The set of competitive actions used by the firm, or its competitive repertoire (Ferrier, 2001; Miller and Chen, 2012), indicates how the firm competes, which can be either through the adoption of varied and complex actions or the concentration on a few specific and simpler moves (Miller and Chen, 1996; Ferrier and Lyon, 2004). Research linked financial performance to the firm's choice of repertoire; repertoire simplicity, or the firm's concentration on a few simple actions, was associated with poor financial results, particularly in dynamic environments (Miller and Chen, 1996; Ferrier *et al.*, 1999; Ferrier and Lyon, 2004; Rindova *et al.*, 2010; Larrañeta, Zahra, and Gonzalez, 2014) while complexity and variety in competitive behavior was determinant of financial success (Ferrier, 2001; Ndofor *et al.*, 2011).

Diverse repertoires require that the firm apply considerable effort into learning and therefore improve the firm's learning capacities (Larrañeta *et al.*, 2014). Learning acquired through diverse repertoires is essential to the reconfiguration of resources, the development of flexibility, and consequently, a suitable adaptation to market changes and can therefore be used in future strategic actions (Miller and Chen, 1994). The way the firm assembles its set of competitive actions signals its ability to creatively deploy resources and capabilities (Ferrier *et al.*, 1999). Through diverse repertoires the firm engages in valuable internal learning experiences from interaction with its customers, competitors, and markets (Larrañeta *et al.*, 2014). Also, diverse

repertoires allow an exposure to more aspects of customers and competitors' activities (Delacroix and Swaminathan, 1991; Miller and Chen, 1996). Diverse repertoires are difficult to imitate and through them the firm is able to explore at length privileged relationships with its customers, further increasing the number and type of actions the firm is then able to undertake and creating a familiarity with the market that translates into experience and knowledge.

Increased market exposure and consequent development of learning processes through diverse repertoires build experience and knowledge of competitive environment that alert managers to opportunities and impact the firm's set of strategic choices. In one hand, diverse repertoires are bound to activate internal learning, which is based on and refines existing capabilities. On the other, these repertoires are more resource consuming since they require prompt availability of resources to support multiple competitive actions (Larrañeta, *et al.*, 2014), new configurations, and effective attacks that create obstacles to appropriate and timely responses from competitors (Ferrier and Lyon, 2004). Accordingly, given the boosting on internal learning and the need to replenish depleted resources, related diversification strategies are plausible and adequate choices when the firm needs to build on similar capacities and resources to grow. Additionally, market exposure through a variety of actions facilitates the detection of other firms with similar resources and capabilities. Thus, I predict that diverse repertoires of action provide the firm with a wider set of strategic choices and given that they activate internal learning that refines existing capabilities, they are likely to determine exploitation strategies implicit in related diversification.

Hypothesis 5: Action repertoire is positively associated with diversification.

Hypothesis 5a: Action repertoire is positively associated with related diversification

Exposure to the competitive environment through diverse repertoires creates experience and knowledge that determine the set of strategic choices available to managers. Indeed, repertoires can be seen as alternatives of choice (March and Simon, 1958). This dissertation contends that the stock of resources a firm acquires through exposure to competition leads to strategies of growth and innovation based on acquired knowledge and experience. Studies show that experience promotes behavior diversity and change in managerial competitive posture (Miller and Chen, 1994), while behavior simplicity leads to inertia (Huber, 1991; Miller and Chen, 1994). Experience is also determinant of proactive learning and explorative behavior that is based on information, market diversity, and motivation to seize opportunities (Chen and Miller, 1994; March, 1991).

Diverse repertoires generate more market feedback (Miller and Chen, 1996a) thereby creating more alertness to opportunities (Miller and Chen, 1994; Ndofor *et al.*, 2011); however, these opportunities may come in the form of divestitures instead of growth strategies. Through the interaction with competitors and customers that diverse repertoires generate (Miller and Chen, 1996a; Delacroix and Swaminathan, 1991), it is possible that the firm realizes that in some areas of its business it cannot compete at reasonable level with its competitors or offer the products or services desired by its clients. Additionally, these repertoires are resource-intensive (Larrañeta *et al.*, 2014), and may lead to resource depletion, which can require the divestment of assets.

Studies found that firms simplify their repertoires when they attain good performance levels because financial performance affects search incentives and creates complacency in managers (March, 1988; Miller, 1994; Lant, Milliken, and Batra, 1992; Starbuck and Milliken, 1988; Weick, 1987; Miller and Chen, 1996a). Some authors emphasize that there are benefits in focusing on specific businesses and allocate resources and effort to specific activities (Miller and

Chen, 1996a). Therefore, the same reasoning that I used to argue that diverse repertoires may lead to growth strategies can justify divestitures in particular circumstances.

Hypothesis 6: Action repertoire is positively associated with divestitures.

Diverse repertoires of actions expose the firm to the competitive environment, raise awareness of new opportunities, and develop flexibility and knowledge to creatively adapt to new competitive coordinates. Thus, a firm adopting this type of repertoires may be particularly apt to adopt CSR initiatives. Given that CSR motivates search of new ways of competing through strategies of differentiation (McWilliams and Siegel, 2000, 2001; Hull and Rothenberg, 2008) and investment in activities that are more responsible towards society and environment, a firm that acquires experience and knowledge based on diverse action repertoires is likely to be more skilled at evaluating new ways to manage social and environmental concerns. The exposure to markets, its participants, and new trends in customer demand are conditions for the creation of awareness of social and environmental problems. Literature in CSR consistently points to the need of equating stakeholders' expectations in the adoption of CSR initiatives (McWilliams, Siegel, and Wright, 2006). From a competition point of view, the exposure to markets and increasing numbers of consumers and competitors may place the firm in an advantageous point to deliver socially responsible actions, either through the creation of new products and services, the redesign of the existing ones, the reconfiguration of resources and capabilities, and the improvement of packaging and distribution systems (Surroca *et al.*, 2010), or through the adoption of philanthropic actions addressed at particular stakeholders.

The stock of experience and knowledge acquired through diverse repertoires may also function as a buffer that helps the firm to deal with the uncertainty of adopting CSR policies. Given that

experience is linked to creativity (Argote and Miron-Spektor, 2011) and that CSR initiatives may be seen as an innovative way to pursue competitive advantage and growth (McWilliams and Siegel, 2000; Hull and Rothenberg, 2008), I suggest that the stock of experience and knowledge that the firm acquires by undertaking diverse repertoires influences strategic choice and may lead to the adoption of CSR.

Hypothesis 7: Action repertoire is positively associated with corporate social responsibility.

The moderating effect of organizational slack

Awareness and motivation are important explanations of competitive behavior. However, the firm also needs to match the opportunities in the competitive environment with its own capabilities, particularly when adopting and implementing competitive actions (Chen *et al.*, 2007; Miller and Chen, 2012). The availability of slack resources reinforces the firm's capabilities (Lamberg *et al.*, 2009) and facilitates the adoption of actions with broad scope and the use of diverse repertoires of action. The presence of organizational slack is bound to affect the way the firm deploys its resources and develops its capabilities toward particular strategic decisions. Slack resources increase the firm's ability to identify new opportunities (Danneels, 2008; Salge and Vera, 2013) and allow investment in new talent, ideas, and technologies that lead to higher innovation rates and more flexibility to adapt to new market conditions (Lamberg *et al.*, 2009). Eisenhardt and Tabrizi (1995) found that early exposure to markets consolidates firms' experience and knowledge and speeds up product and service innovation. Additionally, innovative behavior triggers technological change and is associated with performance (Lee *et al.*, 2000; Hutzschenreuter and Israel, 2009). In the CSR area, new process innovation is a vehicle for the implementation of responsible practices (McWilliams and Siegel, 2000; Christmann,

2000; Surroca *et al.*, 2010) and CSR initiatives can be sources of innovation by engaging firms' in more responsible ways of doing business.

This dissertation suggests that competitive actions have an important role in enabling the firm's acquisition of a stock of experience and knowledge that is likely to narrow strategic selection.

This stock of resources influences the processes through which a firm becomes aware of its competitive environment and motivated to take advantage of opportunities to grow or to engage in socially responsible strategies. Here, I predict that organizational slack will reinforce a firm's ability to fully take advantage of its innovative competitive actions. Slack resources are necessary for the exploration of new market and technological domains (Bourgeois, 1981; Singh, 1986; Danneels, 2008) and they are the basis for firm growth as they offer the necessary resource cushion that allows the unconstrained pursuit of new strategic directions (Sharfman *et al.*, 1988; Bourgeois, 1981; Danneels, 2008).

It is likely therefore that the presence of slack resources will strengthen the relationship between broad scope competitive actions and diverse repertoires of action and diversification, as slack resources will facilitate the adoption of growth strategies. I also hypothesize that slack resources are likely to strengthen the pursuit of innovative strategies such as CSR that may be the result of search processes prompted by actions of broad scope and diverse repertoires of action.

Hypothesis 8: Organizational slack moderates the relationship between (a) action scope and diversification, (b) action scope and corporate social responsibility, such that organizational slack strengthens these relationships.

Hypothesis 9: Organizational slack moderates the relationship between (a) action repertoires and diversification, (b) action repertoires and corporate social responsibility, such that organizational slack strengthens these relationships.

CHAPTER IV

METHODS

Data and Sample

Annual financial and corporate data is collected from Standard and Poor's COMPUSTAT industrial databases for North America. Data on mergers and acquisitions is collected from COMPUSTAT's Segments database available in the Wharton Research Data Services (WRDS). Divestitures are collected from SDC Platinum Merger and Acquisition Database provided by Thomson Financial. Corporate social responsibility data is collected from the MSCI ESG database, usually called KLD. The starting population for this research project consists of all S&P 500 US-based firms for the years between 2009 and 2015. The choice of this temporal span follows previous research suggestions that periods of environmental stability are more adequate to assess competitive activity (Nadkarni *et al.*, 2016); during the period of time between the beginning of 2009 and the end of 2015 the competitive environment did not suffer from environmental jolts and in 2009 the economy was in steady recovery from the downturn that started on December 2007 (Temin, 2010). The sampling method for this study is based on prior research in competitive dynamics and the starting sample includes all firms in the S&P 500 index with the exclusion of firms in the financial and insurance industries, as well as business service industries, because their competitive moves cannot be observed through public records and are

therefore not easily detectable (Ferrier, 2001; Derfus *et al.*, 2008; Nadkarni *et al.*, 2016). From those firms I select 250 as my final sample.

Competitive actions are specific and observable therefore likely to be reported in the business news (Derfus *et al.*, 2008; Miller and Chen, 1994). Data on competitive actions and their features is collected from the Ravenpack News Analytics Database which contains press releases and news articles collected from the Dow Jones Financial Wires, the Wall Street Journal, Barron's, and Marketwatch since January 2000.

Measurement

Dependent Variables

Firm performance. I include a firm performance measure. Return on assets (ROA), an accounting measure that is widely used in strategy studies to measure operational performance is calculated as net income divided by total assets (Schmalensee, 1985; Finkelstein and Boyd, 1998; Petrenko, Aime, Ridge, and Hill, 2015). Given that my hypotheses reflect the deployment of resources and managerial decisions, this measure of operational performance will capture the expected effects of diversification and corporate philanthropy on the firm's operations and returns (Petrenko *et al.*, 2015).

Diversification. The outcomes of this study are diversification actions taken by firms following tactical competitive actions. Diversification actions are long-term strategic actions that involve substantial commitment from firms and deploy significant resources. Examples are, among others, mergers and acquisitions (Nadkarni and Barr, 2008). Divestitures are also included as an outcome because these actions divest important resources of a firm and are therefore important

strategic decisions. Diversification is measured with the entropy index that is commonly used in the diversification literature (Jacquemin and Berry, 1979; Palepu, 1985; Robins and Wiersema, 2003). The total diversification index is:

$$DT = \sum_{i=1}^N P_i \ln (1/P_i)$$

where P_i = proportion of business activity (sales) in SIC code i for a firm with N different 4-digit SIC businesses. The unrelated entropy index, DU, is measured in the same manner using 2-digit SIC codes:

$$DU = \sum_{i=1}^N P_i \ln (1/P_i)$$

where P_i = proportion of business activity (sales) in SIC code i for a firm with N different 2-digit SIC businesses. The related entropy index (DR) is calculated as the difference between total and unrelated diversification, as $DT - DU = DR$ (Robins and Wiersema, 2003).

Corporate social responsibility. CSR will be measured as an aggregate net score of various dimensions, as commonly used in studies in this area (Petrenko *et al.*, 2015; Choi and Wang, 2009; Hillman and Keim, 2001; Hull and Rothenberg, 2008).

Divestitures. Divestitures were used in previous strategy studies as a turnaround strategy that constitutes a response to external factors (Nadkarni and Barr, 2008) or a measure of strategic change (Sanders, 2001; Quigley and Hambrick, 2012). I create a divestiture measure by regressing several predictors, net income, leverage, current ratio, and entropy, on a dummy divestiture propensity variable. I then use the predicted value as my divestitures measure.

$$\hat{(DIVEST)} = \beta_0 + \beta_1 \text{NETINCOME} + \beta_2 \text{LEVERAGE} + \beta_3 \text{CURRENTRATIO} + \beta_4 \text{ENTROPY} + u$$

Independent Variables

Action scope. Action scope is defined as “the competitive magnitude or relative scale and significance of the firm’s actions” (Hambrick *et al.*, 1996: 664); “a firm’s actions can be considered in terms of their scope, or the extent of the firm’s operations that are affected by the moves (Chen and MacMillan, 1992). Initiatives taken only in one product line or one region are relatively narrow in scope, while others affect the company’s full range of operations, all of its products and markets (Porter, 1980)” (Hambrick *et al.*, 1996: 666).

To operationalize scope, I created a composite measure aggregating the five types of major tactical competitive actions: new pricing actions, new product actions, new capacity actions, new marketing actions, and new market expansion actions, following previous studies in competitive dynamics (for example, Connelly *et al.*, 2017). These categories were organized yearly by company and reflect not only the number of competitive actions undertaken by the company in one year but also the novelty of such actions.

Action repertoire. Competitive repertoire simplicity may be manifested in certain aspects of competitive repertoires: range, concentration, and dominance. In this study I use range as the measure of diverse repertoire. Range is the total number of types of market-oriented actions taken by the firm within a certain period of time. For example, a small repertoire has a small range of actions. The competitive repertoire of a firm expresses the total number of unique actions taken by a firm each year (Miller and Chen, 1996). To construct this measure, I use the index build in previous competitive dynamics studies (Miller and Chen, 1996). This index take

the number of actions in each of the j ($=1, \dots, 5$) categories for each of the i ($=1, \dots, 250$) companies in the year t ($=2009, \dots, 2015$): $\chi_{i,j,t}$.

Action repertoire range is measured with:

R or range index count measures the number of types of actions, $R_{i,t} = \text{count} (A_{i,j,t});$
 j

The smaller the range, the simpler the repertoire is. Inversely, the more diverse a repertoire the larger the range (Miller and Chen, 1996; Larrañeta *et al.*, 2014). For this measure, I collected the same categories of competitive actions that I used for the scope measure.

Slack. Slack is measured with absorbed or recoverable slack (Bourgeois, 1981; Ferrier and Lyon, 2004; Iyer and Miller, 2008; Nadkarni *et al.*, 2016). Absorbed slack are the excess of resources that were absorbed into the cost structure but can be recovered when needed (Singh, 1986; Haleblan *et al.*, 2012). This measure is therefore consistent with the hypothesis that the relationship between action scope and repertoire and diversification strategies and CSR may be reinforced by the availability of slack resources.

Control variables

Firm level variables. Included are controls that have influence on the adoption of competitive actions. At firm level, I control for firm size, measured as the logarithm of total employees (Larrañeta *et al.*, 2014; Nadkarni *et al.*, 2015). I introduced this control because competitive activity, in particular the adoption of competitive actions, is influenced by the size of the firm (Connelly *et al.*, 2010; Ndofor *et al.*, 2011;). Additionally, firm size affects the type of repertoires that the firm undertakes (Ferrier *et al.*, 1999; Miller and Chen, 1996; Chen and

Hambrick, 1995). I control for firm age (Miller and Chen, 1996a, 1996b), for prior performance (Ferrier, 2001; Andrevski *et al.*, 2016), and for firm leverage (debt/equity) as a measure of firm's financial flexibility as these variables have impact on competitive behavior at firm level according to previous research. Organizational slack was accounted for because availability of resources can influence the adoption of competitive actions (Ndofor *et al.*, 2011; Petrenko *et al.*, 2015). Controls for R&D intensity (R&D spending/total sales), capital intensity (fixed assets/total book assets), and advertising intensity (advertising spending/total sales) were included to capture firm's innovation and marketing investments (Iyer and Miller, 2008; Andrevski *et al.*, 2016).

Industry level variables. In the analysis, industry-level controls are included, following previous empirical studies in competitive dynamics. Industry concentration, measured with the Herfindhal-Hirschman index (HHI) of industry concentration calculated for each two-digit SIC code for each year (Scherer and Ross, 1990; Ferrier and Lyon, 2004; Larrañeta *et al.*, 2014; Nadkarni *et al.*, 2016), is controlled for as concentration creates entry barriers and may have impact on competition within the industry (Ferrier, 2001; Nadkarni *et al.*, 2016). Given that the analysis concerns the adoption of diversification strategies, I control for average levels of diversification in the industry as these can influence firms' decisions. I include year and industry dummies to control for time and systematic differences in industries (Haleblian *et al.*, 2012; Kuusela *et al.*, 2016). I also control for industry CSR levels, as some industries are likely to be environmentally and socially friendlier than others.

Analysis

Data is set up as a dynamic panel containing lagged dependent variables and estimated with the first difference Arellano and Bond estimator which uses the generalized method of moments (GMM) (Arellano and Bond, 1991; Arellano and Bover, 1995; Greene, 2008). The Arellano and Bond estimator is adequate for data that has a small number of time periods with the likelihood of endogeneity between the independent and dependent variables, many individual cross-sectional units, and a dynamic independent variable (Roodman, 2009; Alessandri and Seth, 2014) and addresses concerns such as fixed effects and the potential endogeneity of regressors (Roodman, 2009). The GMM estimator is robust to potential autocorrelation and heteroskedascity (Roodman, 2009). My instrumentation strategy follows the Arellano and Bond approach and I use lagged values of the endogenous regressors as instruments (Roodman, 2009; Alessandri and Seth, 2014). The consistency of this strategy depends on the validity of the instruments and on the assumption that the error term does not carry serial correlation (Beck, Levine, and Loayza, 2000; Beck and Levine, 2004). For all the models in my dissertation, I failed to reject the null hypothesis of no autocorrelation in the first-differenced errors. Therefore, it seems reasonable to assume that there is no serial correlation in the error terms (Alessandri and Seth, 2014; Roodman, 2009).

Following previous research, I test for the validity of my instruments using the Hansen and the difference-in-Hansen statistics (for example, Alessandri and Seth, 2014). The null hypothesis in these statistics is that the specified regressors are appropriate instruments. In my tests, I failed to reject the null hypothesis and therefore I conclude that my regressors are appropriate instruments.

The models are as following:

General model:

$$Y_{i,t} = \beta_0 + \beta_1 Y_{i,t-1} + \beta_2 X_{i,t-1} + \beta_3 Z^*_{i,t-1} + \beta_4 Z^{**}_{i,t-1} + u_{i,t}$$

$$u_{i,t} = v_i + \gamma_t + e_{it}$$

Transformation using first-differences

$$\Delta Y_{i,t} = \beta_1 \Delta Y_{i,t-2} + \beta_2 \Delta X_{i,t-2} + \beta_3 \Delta Z^*_{i,t-2} + \beta_4 \Delta Z^{**}_{i,t-2} + u_{i,t}$$

$$\Delta u_{i,t} = \Delta v_i + \Delta \gamma_t + e_{i,t} = \Delta e_{i,t}$$

where

Y = dependent variable

X = independent variable

Z* = industry control variables

Z** = firm control variables

u = error term (v – industry specific effect, γ – year specific effect, e – observation specific effect)

Model 1

$$DIV_{i,t} = \beta_0 + \beta_1 DIV_{i,t-1} + \beta_2 SCOPE_{i,t-1} + \beta_3^* [INDCONTROLS]_{i,t-1} + \beta_4^{**} [FCONTROLS]_{i,t} +$$

$$\beta_5^{**} [PRIORPERF]_{i,t-1} + u_{i,t}$$

$$u_{i,t} = v_i + \gamma_t + e_{i,t}$$

Transformation using first-differences

$$\Delta DIV_{i,t} = \beta_1 \Delta DIV_{i,t-2} + \beta_2 \Delta SCOPE_{i,t-2} + \beta_3^* \Delta [INDCONTROLS]_{i,t-2} + \beta_4^{**} \Delta [FCONTROLS]_{i,t-2}$$

$$+ \beta_5^{**} \Delta [PRIORPERF]_{i,t-2} + u_{i,t}$$

$$\Delta u_{i,t} = \Delta v_i + \Delta \gamma_t + e_{i,t} = \Delta e_{i,t}$$

Model 1a

$$\text{RDIV}_{i,t} = \beta_0 + \beta_1 \text{RDIV}_{i,t-1} + \beta_2 \text{SCOPE}_{i,t-1} + \beta_3^* [\text{INDCONTROLS}]_{i,t-1} + \beta_4^{**} [\text{FCONTROLS}]_{i,t} + \beta_5^{**} [\text{PRIORPERF}]_{i,t-1} + u_{i,t}$$

$$u_{i,t} = v_i + \gamma_t + e_{i,t}$$

Transformation using first-differences

$$\Delta \text{RDIV}_{i,t} = \beta_1 \Delta \text{RDIV}_{i,t-2} + \beta_2 \Delta \text{SCOPE}_{i,t-2} + \beta_3^* \Delta [\text{INDCONTROLS}]_{i,t-2} + \beta_4^{**} \Delta [\text{FCONTROLS}]_{i,t-2} + \beta_5^{**} \Delta [\text{PRIORPERF}]_{i,t-2} + u_{i,t}$$

$$\Delta u_{i,t} = \Delta v_i + \Delta \gamma_t + e_{i,t} = \Delta e_{i,t}$$

Model 1b

$$\text{UDIV}_{i,t} = \beta_0 + \beta_1 \text{UDIV}_{i,t-1} + \beta_2 \text{SCOPE}_{i,t-1} + \beta_3^* [\text{INDCONTROLS}]_{i,t-1} + \beta_4^{**} [\text{FCONTROLS}]_{i,t} + \beta_5^{**} [\text{PRIORPERF}]_{i,t-1} + u_{i,t}$$

$$u_{i,t} = v_i + \gamma_t + e_{i,t}$$

Transformation using first-differences

$$\Delta \text{UDIV}_{i,t} = \beta_1 \Delta \text{UDIV}_{i,t-2} + \beta_2 \Delta \text{SCOPE}_{i,t-2} + \beta_3^* \Delta [\text{INDCONTROLS}]_{i,t-2} + \beta_4^{**} \Delta [\text{FCONTROLS}]_{i,t-2} + \beta_5^{**} \Delta [\text{PRIORPERF}]_{i,t-2} + u_{i,t}$$

$$\Delta u_{i,t} = \Delta v_i + \Delta \gamma_t + e_{i,t} = \Delta e_{i,t}$$

Model 1c

$$\text{DIVEST}_{i,t} = \beta_0 + \beta_1 \text{DIVEST}_{i,t-1} + \beta_2 \text{SCOPE}_{i,t-1} + \beta_3^* [\text{INDCONTROLS}]_{i,t-1} + \beta_4^{**} [\text{FCONTROLS}]_{i,t} + \beta_5^{**} [\text{PRIORPERF}]_{i,t-1} + u_{i,t}$$

$$u_{i,t} = v_i + \gamma_t + e_{i,t}$$

Transformation using first-differences

$$\Delta \text{DIVEST}_{i,t} = \beta_1 \Delta \text{DIVEST}_{i,t-2} + \beta_2 \Delta \text{SCOPE}_{i,t-2} + \beta_3^* \Delta [\text{INDCONTROLS}]_{i,t-2} + \beta_4^{**} \Delta [\text{FCONTROLS}]_{i,t-2} + \beta_5^{**} \Delta [\text{PRIORPERF}]_{i,t-2} + u_{i,t}$$

$$\Delta u_{i,t} = \Delta v_i + \Delta \gamma_t + e_{i,t} = \Delta e_{i,t}$$

Model 1d

$$CSR_{i,t} = \beta_0 + \beta_1 CSR_{i,t-1} + \beta_2 SCOPE_{i,t-1} + \beta_3^* [INDCONTROLS]_{i,t-1} + \beta_4^{**} [FCONTROLS]_{i,t} + \beta_5^{**} [PRIORPERF]_{i,t-1} + u_{i,t}$$

$$u_{i,t} = v_i + \gamma_t + e_{i,t}$$

Transformation using first-differences

$$\Delta CSR_{i,t} = \beta_1 \Delta CSR_{i,t-2} + \beta_2 \Delta SCOPE_{i,t-2} + \beta_3^* \Delta [INDCONTROLS]_{i,t-2} + \beta_4^{**} \Delta [FCONTROLS]_{i,t-2} + \beta_5^{**} \Delta [PRIORPERF]_{i,t-2} + u_{i,t}$$

$$\Delta u_{i,t} = \Delta v_i + \Delta \gamma_t + e_{i,t} = \Delta e_{i,t}$$

Model 1e (interaction model)

$$DIV_{i,t} = \beta_0 + \beta_1 DIV_{i,t-1} + \beta_2 SCOPE_{i,t-1} + \beta_3^* [INDCONTROLS]_{i,t-1} + \beta_4^{**} [FCONTROLS]_{i,t} + \beta_5^{**} [PRIORPERF]_{i,t-1} + u_{i,t} + \beta_6 (DIV_{i,t} \times SLACK_{i,t}) + u_{i,t}$$

$$u_{i,t} = v_i + \gamma_t + e_{i,t}$$

Transformation using first-differences

$$\Delta DIV_{i,t} = \beta_1 \Delta DIV_{i,t-2} + \beta_2 \Delta SCOPE_{i,t-2} + \beta_3^* \Delta [INDCONTROLS]_{i,t-2} + \beta_4^{**} \Delta [FCONTROLS]_{i,t-2} + \beta_5^{**} \Delta [PRIORPERF]_{i,t-2} + \beta_6 \Delta (DIV_{i,t-2} \times SLACK_{i,t-2}) + u_{i,t}$$

$$\Delta u_{i,t} = \Delta v_i + \Delta \gamma_t + e_{i,t} = \Delta e_{i,t}$$

Model 1f (interaction model)

$$CSR_{i,t} = \beta_0 + \beta_1 CSR_{i,t-1} + \beta_2 SCOPE_{i,t-1} + \beta_3^* [INDCONTROLS]_{i,t-1} + \beta_4^{**} [FCONTROLS]_{i,t} + \beta_5^{**} [PRIORPERF]_{i,t-1} + u_{i,t} + \beta_6 (SCOPE_{i,t} \times SLACK_{i,t}) + u_{i,t}$$

$$u_{i,t} = v_i + \gamma_t + e_{i,t}$$

Transformation using first-differences

$$\Delta \text{CSR}_{i,t} = \beta_1 \Delta \text{CSR}_{i,t-2} + \beta_2 \Delta \text{SCOPE}_{i,t-2} + \beta_3^* \Delta [\text{INDCONTROLS}]_{i,t-2} + \beta_4^{**} \Delta [\text{FCONTROLS}]_{i,t-2} \\ + \beta_5^{**} \Delta [\text{PRIORPERF}]_{i,t-2} + \beta_6 \Delta (\text{SCOPE}_{i,t-2} \times \text{SLACK}_{i,t-2}) + u_{i,t}$$

$$\Delta u_{i,t} = \Delta v_i + \Delta \gamma_t + e_{i,t} = \Delta e_{i,t}$$

Model 2

$$\text{DIV}_{i,t} = \beta_0 + \beta_1 \text{DIV}_{i,t-1} + \beta_2 \text{REPERTOIRE}_{i,t-1} + \beta_3^* [\text{INDCONTROLS}]_{i,t-1} + \beta_4^{**} \\ [\text{FCONTROLS}]_{i,t} + \beta_5^{**} [\text{PRIORPERF}]_{i,t-1} + u_{i,t}$$

$$u_{i,t} = v_i + \gamma_t + e_{i,t}$$

Transformation using first-differences

$$\Delta \text{DIV}_{i,t} = \beta_1 \Delta \text{DIV}_{i,t-2} + \beta_2 \Delta \text{REPERTOIRE}_{i,t-2} + \beta_3^* \Delta [\text{INDCONTROLS}]_{i,t-2} + \beta_4^{**} \Delta \\ [\text{FCONTROLS}]_{i,t-2} + \beta_5^{**} \Delta [\text{PRIORPERF}]_{i,t-2} + u_{i,t}$$

$$\Delta u_{i,t} = \Delta v_i + \Delta \gamma_t + e_{i,t} = \Delta e_{i,t}$$

Model 2a

$$\text{RDIV}_{i,t} = \beta_0 + \beta_1 \text{RDIV}_{i,t-1} + \beta_2 \text{REPERTOIRE}_{i,t-1} + \beta_3^* [\text{INDCONTROLS}]_{i,t-1} + \beta_4^{**} \\ [\text{FCONTROLS}]_{i,t} + \beta_5^{**} [\text{PRIORPERF}]_{i,t-1} + u_{i,t}$$

$$u_{i,t} = v_i + \gamma_t + e_{i,t}$$

Transformation using first-differences

$$\Delta \text{RDIV}_{i,t} = \beta_1 \Delta \text{RDIV}_{i,t-2} + \beta_2 \Delta \text{REPERTOIRE}_{i,t-2} + \beta_3^* \Delta [\text{INDCONTROLS}]_{i,t-2} + \beta_4^{**} \Delta \\ [\text{FCONTROLS}]_{i,t-2} + \beta_5^{**} \Delta [\text{PRIORPERF}]_{i,t-2} + u_{i,t}$$

$$\Delta u_{i,t} = \Delta v_i + \Delta \gamma_t + e_{i,t} = \Delta e_{i,t}$$

Model 2b

$$\text{DIVEST}_{i,t} = \beta_0 + \beta_1 \text{DIVEST}_{i,t-1} + \beta_2 \text{REPERTOIRE}_{i,t-1} + \beta_3^* [\text{INDCONTROLS}]_{i,t-1} + \beta_4^{**} \\ [\text{FCONTROLS}]_{i,t} + \beta_5^{**} [\text{PRIORPERF}]_{i,t-1} + u_{i,t}$$

$$u_{i,t} = v_i + \gamma_t + e_{i,t}$$

Transformation using first-differences

$$\Delta \text{DIVEST}_{i,t} = \beta_1 \Delta \text{DIVEST}_{i,t-2} + \beta_2 \Delta \text{REPERTOIRE}_{i,t-2} + \beta_3^* \Delta [\text{INDCONTROLS}]_{i,t-2} + \beta_4^{**} \Delta [\text{FCONTROLS}]_{i,t-2} + \beta_5^{**} \Delta [\text{PRIORPERF}]_{i,t-2} + u_{i,t}$$

$$\Delta u_{i,t} = \Delta v_i + \Delta \gamma_t + e_{i,t} = \Delta e_{i,t}$$

Model 2c

$$\text{CSR}_{i,t} = \beta_0 + \beta_1 \text{CSR}_{i,t-1} + \beta_2 \text{REPERTOIRE}_{i,t-1} + \beta_3^* [\text{INDCONTROLS}]_{i,t-1} + \beta_4^{**} [\text{FCONTROLS}]_{i,t} + \beta_5^{**} [\text{PRIORPERF}]_{i,t-1} + u_{i,t}$$

$$u_{i,t} = v_i + \gamma_t + e_{i,t}$$

Transformation using first-differences

$$\Delta \text{CSR}_{i,t} = \beta_1 \Delta \text{CSR}_{i,t-2} + \beta_2 \Delta \text{REPERTOIRE}_{i,t-2} + \beta_3^* \Delta [\text{INDCONTROLS}]_{i,t-2} + \beta_4^{**} \Delta [\text{FCONTROLS}]_{i,t-2} + \beta_5^{**} \Delta [\text{PRIORPERF}]_{i,t-2} + u_{i,t}$$

$$\Delta u_{i,t} = \Delta v_i + \Delta \gamma_t + e_{i,t} = \Delta e_{i,t}$$

Model 2d (interaction model)

$$\text{DIV}_{i,t} = \beta_0 + \beta_1 \text{DIV}_{i,t-1} + \beta_2 \text{REPERTOIRE}_{i,t-1} + \beta_3^* [\text{INDCONTROLS}]_{i,t-1} + \beta_4^{**} [\text{FCONTROLS}]_{i,t} + \beta_5^{**} [\text{PRIORPERF}]_{i,t-1} + u_{i,t} + \beta_6 (\text{REPERTOIRE}_{i,t} \times \text{SLACK}_{i,t}) + u_{i,t}$$

$$u_{i,t} = v_i + \gamma_t + e_{i,t}$$

Transformation using first-differences

$$\Delta \text{DIV}_{i,t} = \beta_1 \Delta \text{DIV}_{i,t-2} + \beta_2 \Delta \text{REPERTOIRE}_{i,t-2} + \beta_3^* \Delta [\text{INDCONTROLS}]_{i,t-2} + \beta_4^{**} \Delta [\text{FCONTROLS}]_{i,t-2} + \beta_5^{**} \Delta [\text{PRIORPERF}]_{i,t-2} + \beta_6 \Delta (\text{REPERTOIRE}_{i,t-2} \times \text{SLACK}_{i,t-2}) + u_{i,t}$$

$$\Delta u_{i,t} = \Delta v_i + \Delta \gamma_t + e_{i,t} = \Delta e_{i,t}$$

Model 2e (interaction model)

$$CSR_{i,t} = \beta_0 + \beta_1 CSR_{i,t-1} + \beta_2 REPERTOIRE_{i,t-1} + \beta_3^* [INDCONTROLS]_{i,t-1} + \beta_4^{**} [FCONTROLS]_{i,t} + \beta_5^{**} [PRIORPERF]_{i,t-1} + u_{i,t} + \beta_6 (REPERTOIRE_{i,t} \times SLACK_{i,t}) + u_{i,t}$$

$$u_{i,t} = v_i + \gamma_t + e_{i,t}$$

Transformation using first-differences

$$\Delta CSR_{i,t} = \beta_1 \Delta CSR_{i,t-2} + \beta_2 \Delta REPERTOIRE_{i,t-2} + \beta_3^* \Delta [INDCONTROLS]_{i,t-2} + \beta_4^{**} \Delta [FCONTROLS]_{i,t-2} + \beta_5^{**} \Delta [PRIORPERF]_{i,t-2} + \beta_6 \Delta (REPERTOIRE_{i,t-2} \times SLACK_{i,t-2}) + u_{i,t}$$

$$\Delta u_{i,t} = \Delta v_i + \Delta \gamma_t + e_{i,t} = \Delta e_{i,t}$$

where

DIV – diversification; RDIV – related diversification; UDIV – unrelated diversification

REPERTOIRE – repertoire of competitive actions

CSR – corporate social responsibility

SCOPE – scope of competitive action

SLACK – absorbed slack

FIRM CONTROLS – firm size, firm age, prior performance, firm leverage, inventory intensity,

SGA intensity, R&D intensity, capital intensity, advertising intensity, long term slack, and

potential slack

INDUSTRY CONTROLS - industry concentration, industry average diversification, industry

average CSR, year and industry dummies

u - error term (v – industry specific effect, γ – year specific effect, e – observation specific effect)

CHAPTER V

RESULTS

Table 1 displays the correlation table and descriptive statistics. Tables 2 through 8 display the results for the tests of hypotheses, with unstandardized coefficients and the standard errors in parentheses. I report the number of observations for each model, the Wald Chi², the AR(2) test statistic, the Hansen test, and the difference-in-Hansen test. I also include, for each model, the results of the analysis with controls only. In this chapter I present the results for each hypothesis in the dissertation. I find support for hypotheses 1, 1a, 3, 5, and 5a. I also find marginal support for hypothesis 7 and partial support for hypothesis 8 and 9. I do not find support for hypotheses 2, 4, and 6.

My hypothesis 1 predicted that action scope is positively associated with diversification. This prediction is supported. Table 2 displays the results for the GMM dynamic panel estimation of the effects of action scope and repertoire on diversification strategies. In Model 1 of this table, the results show a positive and significant influence of action scope on diversification ($\beta=0.001$; $p < 0.001$).

I hypothesized that action scope is positively associated related diversification in H1a. Model 1a on Table 3 shows that there is support for this hypothesis ($\beta=0.001$; $p < 0.01$). I also

hypothesized in Hypothesis 2 that action scope would be positively associated with unrelated diversification; Model 1b in Table 4 shows that the two variables have a non-significant relationship. Therefore, H2 is not supported. I address possible explanations for this non-significant result in the discussion part of this dissertation.

In Hypothesis 3, I posited the association between action scope and the firm's propensity to divest. Table 5, Model 1c, shows that this relationship is indeed strong and significant ($\beta=0.004$; $p < 0.001$), giving full support to my prediction.

I hypothesized that action scope would be positively related to CSR in H4. This hypothesis is not supported with results of the GMM estimator showing a positive but non-significant association (Table 6, Model 1d). I will explore this result in the discussion.

I found a strong positive and significant relationship between the firm's repertoire of action and its diversification strategy (Hypothesis 5). Table 2 displays in Model 2 that repertoire influences positively the adoption of diversification strategies ($\beta=0.03$; $p < 0.001$). I also find support for Hypothesis 5a that predicted a positive relationship between repertoire and related diversification ($\beta=0.020$; $p < 0.001$). This result is displayed in Table 3, Model 2a.

I did not find support for Hypothesis 6. Model 2b on Table 5 shows a non-significant relationship between the repertoire of a firm and its propensity to divest. However, results shown in Model 2c on Table 6 show that the repertoire of actions a firm possesses is marginally associated with its adoption of CSR ($\beta=0.347$; $p < 0.05$). Hypothesis 7 is therefore supported.

Finally, on hypotheses 8 and 9, I predicted that organizational slack would influence the adoption of strategies of diversification and CSR by the firm. Table 7 shows that I found partial support

for Hypothesis 8 that predicted that organizational slack moderates the relationship between action scope and both diversification and CSR. Although model 1e shows a non-significant influence of the moderation variable on the relationship between scope and diversification, Model 1f shows that the interaction term for CSR is positive and significant ($\beta=0.085$; $p < 0.01$), therefore supporting my prediction that organizational slack strengthens the association between scope and CSR.

Finally, I hypothesized that organizational slack moderates the relationship between repertoire and both diversification and CSR (H9). This hypothesis is also partially supported. The results for the GMM estimator are positive and significant for CSR ($\beta=1.68$; $p < 0.001$) (Table 8, Model 2e) but non-significant and negative for diversification (Table 8, Model 2d).

CHAPTER VI

DISCUSSION AND CONCLUSION

This dissertation develops a theory of action driven strategy. Strategic management and competitive dynamics research has explored the connection between competitive actions and firm performance by analyzing the effects of actions that firms adopt to create competitive advantage and market dominance on their competitors' behaviors and performance (Miller and Chen, 1994; Hambrick *et al.*, 1996). In this study I follow calls from the competitive dynamics scholarship to extend the effects of competitive actions into other organizational areas (Rindova *et al.*, 2010; Lamberg *et al.*, 2009) and I examine their role as drivers of strategic choice. In my set of hypotheses, I propose and test the association between characteristics of competitive actions such as scope and the use of repertoires of actions and the adoption of the most important organizational strategies namely diversification, divestitures, and CSR. I suggest that competitive actions expose the firm to its competitive environment and I anticipate that this exposure creates resources such as knowledge and experience that are likely to be salient in managers' minds and narrow the alternatives available for strategic choice. The results of my empirical tests show that overall there are significant associations between the scope of competitive actions and the repertoires used by the firm and the firm's choice of strategy and that these associations should be considered when theorizing about the effects of competition on strategic behavior.

Action Scope and Repertoire and the Adoption of Diversification Strategies

I theorized that actions with broad scope would be associated with the adoption of diversification strategies. My arguments were based on the idea that competitive actions with broad scope are likely to reach a larger number of competitors (Chen *et al.*, 1992; Ndofor *et al.*, 2011) and expose the firm to new geographic markets, require the use of new technologies, and stimulate new lines of products and services (for example, Hambrick *et al.*, 1996). This exposure is then likely to create experience and knowledge of the competitive environment and trigger strategic choice motivated by the salience of such knowledge and experience in managerial cognition. The results of my test of hypothesis show that broad scope competitive actions are related to both strategies of organizational diversification and related diversification.

I also found that, as I posited, diverse repertoires of actions are motivators of organizational diversification and related diversification. My arguments sustain the competitive dynamics literature findings that indicate that diverse repertoires are source of creativity and improve the firm's learning capacities by providing flexibility and adaptation to market variation (Miller and Chen, 1994). I predicted that diverse repertoires would boost internal learning and expose the firm to a selection of customers' and competitors' activities thereby encouraging firm growth and expansion to similar and related areas of business.

The results of this study do not however show support for the relationship between action scope and unrelated diversification. My arguments were largely based on the idea that actions of broad scope might be sources of explorative learning. Exploration in organizational learning research has been linked to expansion to new markets (Danneels, 2008) and I based my reasoning on the

fact that Amazon, for example, started its operations in one single business targeting a large number of geographical markets at the same time, a move that preceded its entry into several businesses. I figured broad scope competitive behavior would be likely to generate a richer discovery process and determine entry into new and unrelated industries. My test of hypothesis does not confirm my reasoning. I found that actions of broad scope do not determine the adoption unrelated diversification strategies and are not therefore determinants of entry into unrelated businesses. A reason for this lack of association between broad scope actions and unrelated diversification might be that these actions do not generate the kind of explorative learning that is necessary to enter new business areas. Another possible reason might be that firms undertake unrelated diversification for motives other than firm's growth or market dominance. Strategic management studies found that related diversification consistently outperforms unrelated diversification because of its ability to leverage economies of scope and synergy across multiple businesses (see, for example, Mackey *et al.*, 2017). Recent findings reveal that specific conditions need to be in place for unrelated diversification to lead to value creation (Mackey *et al.*, 2017). It might be that my suggestion that market exposure is a way to promote explorative learning that then leads to the choice of entry into unrelated businesses is not the process through which competitive behavior might drive unrelated diversification.

Action Scope and Repertoire and the Adoption of Divestitures

I predicted in this dissertation that competitive actions of broad scope and diverse repertoires of action would be associated with divestiture strategies. Both hypotheses 3 and 6 address an important gap in management literature which is the investigation of the impact of competitive actions in divestitures. Generally, when a firm exits a market the competitive environment

softens (Chen and Jorgensen, 2016) as this exit encourages rivals to seize the firm's market share. Although studies have examined the conditions and antecedents of restructuring decisions and divestment of assets (for example, Bergh and Lim, 2008; Trahms, Ndofor, and Sirmon, 2013) and authors found the positive results that these strategies may bring to the firm (Dutt and Vidal, 2016), less attention has been given to the association between competitive behavior and divestments. Managers and investors observed that the spin-offs undertaken after the credit crisis of 2008-2009 were not generally adopted for defensive reasons but as a proactive strategic choice (Smith and Thomas, 2011). This assessment strengthens my belief that divestitures may be the result of managerial choice that is not motivated by external events such as crises or economic downturns but instead guided by efficiency and good reasoning. In my test of hypothesis, I found that competitive actions of broad scope have a strong and positively significant relationship with divestitures. This result supports my argument that competitive behavior may drive strategic actions such as divestitures. Indeed, experience and knowledge obtained from exposure to larger competitive settings influence managerial decisions of abandoning particular businesses where the firm may not be able to sustain its competitive advantage in the future.

I did not find support for Hypothesis 6. Diverse repertoires of action are not associated with divestitures. My reasoning for this association was related to the fact that the variety of actions used by the firm as its competitive repertoire is resource-intensive and may lead to resource depletion (Larrañeta *et al.*, 2014), thereby triggering resource divestments. But findings show that this resource depletion does not motivate divestitures. Divestitures can be understood within the evolutionary search process as a way for firms to retire from some businesses they deem less attractive (Chang, 1996; Bergh and Lim, 2008). Recent perspectives look at divestitures as a

restructuring asset decision that diverts firm resources into more profitable areas of business, often as a response to technological innovation and change (Dutt and Vidal, 2016). In this dissertation, I did not find that the experience and knowledge generated by the environmental exposure provided by diverse repertoires were a determinant of divestitures, neither as an asset reconfiguration strategy nor as an adaptation to new technological environments.

Action Scope and Repertoire and the Adoption of Corporate Social Responsibility

In hypotheses 4 and 7, I posited that competitive behavior in the form of broad scope actions and diverse repertoires would be associated with the adoption of CSR strategies. I based my arguments on the fact that CSR strategies are innovative and may be prompted by a deeper understanding of consumers' needs and market conditions that the exposure provided by broad and diverse competitive behavior is likely to promote. I did not find support for my predicted positive association between competitive actions with broad scope and CSR (H4). However, my results show a marginally positive and significant relationship between diverse repertoires and CSR (H7).

Although the exposure of the firm to larger competitive settings through actions of broad competitive scope is likely to create a stronger opportunity awareness, it does not lead to the adoption of CSR. These results are surprising as it is plausible that experience and knowledge of consumers and markets may be determinants of innovative strategies such as CSR. However, these strategies imply significant investments that the firm might not want or be able to adopt. This financial link seems to be relevant because I found that the presence of slack resources significantly and positively moderates the relationship between action scope and the adoption of CSR initiatives (H8). Therefore, although results for hypothesis 4 contradict my expectation that

competitive behavior might be a driver of CSR, I found that this competitive behavior does indeed contribute for the adoption of CSR in the presence of available financial resources, i.e., slack.

These results should motivate a more thorough investigation of the effects of competitive behavior in CSR. Previous research found that often firms adopt “green” initiatives as competitive devices that create competitive advantage (Bansal and Roth, 2000). It is important therefore to study the links between competition and CSR and find the different mechanisms that might explain the influence of competitive actions on the adoption of socially responsible strategies. I anticipate that competitive actions may influence the adoption of different social responsibility strategies. For example, it may be that competitive actions are drivers of environmentally friendly strategies but not of philanthropic and socially oriented policies. A finer grained construct of CSR might be needed to understand the possible role of competition on CSR strategies.

The Moderating Effect of Organizational Slack in Strategic Choices Driven by Action Scope and Repertoire

Hypothesis 8 and 9 suggest that organizational slack strengthens the association between action with broad scope and diverse repertoires of action and the choice of diversification strategies and CSR. The logic for these hypotheses is that the availability of slack provides the firm with a resource cushion that sanctions search into new market domains thereby amplifying strategic choice. From the point of view of managerial decision-making, it seems plausible that resource availability will reinforce managerial availability bias towards particular choices that might derive from salient and recent experience on the competitive arena.

However, I did not find support for my prediction that the presence of slack resources would strengthen the relationship between both action scope and repertoire and diversification. From my test of hypotheses, I conclude that the adoption of competitive actions with broad scope and the reliance on diverse repertoires of action drives the choice of strategies of diversification without requiring the presence of extra internal resources such as slack. However, as mentioned before, the presence of financial resources in the form of organizational slack influences the effects of competitive behavior on CSR strategies. My interpretation of this result is that firms might deem that CSR initiatives requires the availability of financial resources that help minimize the risk involved in adopting such innovative strategies. When diversifying, however, it is more likely that firms seek different sources of financing such as external financing and debt. Organizational slack will not in the case of diversification influence the association between competition and strategic choice.

Limitations

This research has limitations. First, it is intended as an introductory approach to a theory of competitive action that extends the prediction of effects of competitive behavior on organizational performance to strategic choice. The idea that tactical competitive actions can be drivers of strategy has been hinted in the competitive dynamics literature (for example, Rindova *et al.*, 2010) and can be extrapolated from business accounts reported in the press or firms' websites. I started this investigation by looking at decision-making mechanisms that are likely to stimulate managerial attention to particular strategic choices. I theorized that through the acquisition of resources such as knowledge and experience in the competitive environment, managers are bound to be influenced by the salience of such experience and make their strategic

decisions accordingly. I predicted that managers' choice would be influenced by the availability bias but it is plausible that other biases and heuristics may affect managerial decision processes.

This is a first attempt to look at how characteristics of competitive actions might drive strategic choice by offering an environmental exposure to the competitive environment. However, I do not explore all characteristics of competitive action that might drive strategic choice. For example, my model does not include action timing. Timing is an important dimension of competitive behavior that has been examined extensively in the first mover advantage literature but that has also a very distinctive relevance in competitive dynamics (Lee *et al.*, 2000; Chen and Macmillan, 1992; Ferrier *et al.*, 1999; Andrevski *et al.*, 2016). Outside the scope of this study is also competitive aggressiveness (Nadkarni *et al.*, 2015) and repertoire complexity (Connelly *et al.*, 2017), characteristics that are likely to have impact in the firm's choice of strategic directions.

Finally, although I chose a variety of strategic alternatives, competitive behavior might lead to other choices. In future research it would be particular adequate to adopt finer grained measures of CSR. Competitive behavior plausibly affects a firm's social and environmental profile but perhaps it does so at different levels. A more detailed examination of the association between competitive action characteristics and the different aspects of socially responsible policies is warranted for a better understanding of this relationship.

Conclusion

This dissertation has implications for the strategic management literature for several reasons. First, this research links competition to strategic choice. This relationship is important to understand how firms perform and survive in the marketplace and the present dissertation offers

an alternative explanation on how tactical competitive behavior may be the source of important strategic policies.

Second, it introduces an action driven theory of strategy. This perspective offers an innovative approach to possible sources of strategic choice. It hypothesizes and finds preliminary results that competitive behavior may drive the firm's choice of strategy. Therefore, it lays ground for a future more detailed examination of the links between competition and strategy. Research in competitive dynamics predominantly explores the effects of competitive actions on organizational performance based on the assumption that competitors' responses amplify or decrease the financial results of competitive moves. The present study extends the theoretical framework of this field of knowledge by acknowledging that the firm itself is influenced by its competitive behavior. By shifting the focus of extant research in competition to strategic choice, my dissertation opens the door to the exam of the conditions under which a variety of strategic alternatives such as diversification, divestitures, and CSR influences performance. Future studies should take on the task of determining if the link between tactical and strategic behaviors has financial repercussions on the firm.

Finally, the present dissertation presents an empirical model based on observable variables that measures how the number of tactical actions a firm adopts yearly, the scope of these actions in terms of new geographic markets affected, new technologies used, and innovation in product lines and services as well as the diversity of actions employed in competition, drives the adoption of a variety of strategic alternatives such as diversification, divestitures, and CSR.

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APPENDICES
APPENDIX A: TABLES

Table 1. Descriptive statistics and correlation coefficients.

Variable	Mean	s.d.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Scope	27.1	1.03																
2. Repertoire	1.96	0.04	0.74															
3. Diversification	0.11	0.00	0.22	0.15														
4. CSR	1.89	0.10	0.37	0.35	0.17													
5. Divestitures	0.76	0.05	0.27	0.25	0.13	0.09												
6. Age	35.5	0.58	0.05	0.11	0.17	0.16	0.17											
7. Leverage	0.82	0.37	0.00	(0.02)	0.07	0.00	0.01	0.03										
8. ROA	0.07	0.00	0.12	0.11	(0.03)	0.12	(0.03)	(0.06)	(0.02)									
9. Current Ratio	1.91	0.04	0.03	(0.04)	(0.08)	0.01	(0.12)	(0.32)	(0.04)	0.21								
10. Inventory Intensity	0.09	0.00	0.13	(0.06)	(0.02)	(0.08)	(0.00)	0.07	0.00	0.04	0.15							
11. SGA Intensity	0.23	0.00	0.15	0.11	(0.01)	0.18	(0.04)	(0.23)	0.00	0.10	0.24	(0.07)						
12. R&D Intensity	0.03	0.00	0.84	(0.02)	0.07	0.09	(0.05)	(0.15)	(0.01)	0.16	0.39	0.03	0.48					
13. Advert. Intensity	0.02	0.00	0.04	0.13	(0.03)	0.07	(0.06)	(0.11)	(0.00)	0.17	0.17	0.03	0.42	0.39				
14. Capital Intensity	0.08	0.00	0.14	(0.09)	(0.04)	(0.12)	0.03	0.17	0.00	(0.28)	(0.23)	(0.16)	(0.25)	(0.34)	(0.35)			
15. Size	3.29	0.04	0.38	0.31	0.09	0.22	0.17	0.33	0.01	0.15	(0.25)	(0.01)	(0.11)	(0.01)	0.12	(0.23)		
16. Potential Slack	(0.82)	0.37	0.00	0.02	(0.07)	(0.00)	(0.01)	(0.03)	(1.00)	0.02	0.04	(0.00)	(0.00)	0.01	0.00	0.00	0.01	
17. Long Term Slack*	0.23	0.17	0.08	0.02	0.04	0.00	(0.01)	(0.04)	(0.00)	0.04	(0.00)	(0.02)	0.00	(0.01)	(0.02)	(0.02)	0.04	0.00

*scaled by 1000

Table 2. Effects of Action Scope and Repertoire on Diversification

	Controls		Model 1		Model 2	
	DV: Diversification		DV: Diversification		DV: Diversification	
Constant	0.00	(0.00)	-0.091	(0.09)	0.00	(0.00)
Diversification	0.316***	(0.10)	0.307***	(0.09)	0.28***	(0.09)
Average Diversification	0.15	(0.26)	0.348	(0.24)	0.09	(0.16)
Concentration	-0.05	(0.16)	-0.029	(0.16)	0.00	(0.00)
Age	0.00	(0.00)	0.00	(0.00)	0.00	(0.00)
Leverage	0.00	(0.00)	0.00	(0.00)	0.00	(0.00)
Potential Slack	0.00	(0.00)	0.00	(0.00)	0.00	(0.01)
Size	0.013	(0.01)	-0.005	(0.01)	0	(0.01)
Current Ratio	-0.001	(0.01)	-0.008	(0.01)	-0.13	(0.18)
Inventory Intensity	-0.097	(0.17)	-0.064	(0.18)	0.03	(0.09)
SGA Intensity	0.011	(0.09)	0.031	(0.10)	0.78*	(0.46)
R&D Intensity	0.433	(0.45)	0.38	(0.43)	-0.85	(0.60)
Advertising Intensity	-0.588	(0.55)	-0.566	(0.58)	0.07	(0.18)
Capital Intensity	0.031	(0.18)	0.105	(0.18)	0.00	(0.00)
Long Term Slack	0.00	(0.00)	0.00	(0.00)	-0.19**	(0.09)
ROA	-0.210**	(0.09)	-0.188**	(0.09)	-0.19**	(0.09)
Scope			0.001***	(0.00)		
Repertoire				>	0.03***	(0.01)
Observations	1,133		1,133		1,133	
Wald Chi2	819.83		217.78		473.66	
Arellano-Bond Test for AR(2) in first differences	-4.08		-4.157		-4.131	
Hansen Test	116.94		135.64		133.21	
Difference in Hansen Test	54.76		75.55		71.41	

Standard errors are in parentheses; *p<0.05, **p<0.01, ***p<0.001

Table 3. Effects of Action Scope and Repertoire on Related Diversification

	Controls		Model 1a		Model 2a	
	DV: Related Diversification		DV: Related Diversification		DV: Related Diversification	
Constant	0.00	0.00	-0.09	(0.09)	0.00	(0.00)
Related Diversification	0.38***	(0.08)	0.31***	(0.07)	0.33***	(0.07)
Average Diversification	-0.12	(0.24)	0.02	(0.25)	0.07	0.25
Concentration	0.02	(0.16)	0.04	(0.16)	0.12	(0.17)
Age	0.00	(0.00)	0.00	(0.00)	0.00	(0.00)
Leverage	0.00	(0.00)	0.00	(0.00)	0.00	(0.00)
Potential Slack	0.00	(0.00)	0.00	(0.00)	0.00	(0.00)
Size	0.004	(0.01)	-0.01	(0.01)	0.00	(0.01)
Current Ratio	-0.003	(0.01)	-0.01	(0.01)	-0.01	(0.01)
Inventory Intensity	0.06	(0.16)	0.11	(0.17)	0.04	(0.17)
SGA Intensity	-0.02	(0.10)	-0.03	(0.10)	0.01	(0.09)
R&D Intensity	0.53	(0.45)	0.54	(0.45)	0.74	(0.47)
Advertising Intensity	-0.63	(0.50)	-0.57	(0.48)	-0.84*	(0.50)
Capital Intensity	0.08	(0.17)	0.18	(0.18)	0.13	(0.17)
Long Term Slack	0.00	(0.00)	0.00	(0.00)	0.00	(0.00)
ROA	-0.16*	(0.09)	-0.15*	(0.09)	-0.15*	(0.08)
Scope			0.001**	(0.00)		
Repertoire					0.02***	(0.01)
Observations	1,133		1,133		1,133	
Wald Chi2	663.82		166.21		393.51	
Arellano-Bond Test for AR(2) in first differences	-4.46		-4.4		-4.63	
Hansen Test	120.52		134.93		131.79	
Difference in Hansen Test	64.68		72.57		76.75	

Standard errors are in parentheses; *p<0.05, **p<0.01, ***p<0.001

Table 4. Effects of Action Scope on Unrelated Diversification

	Controls		Model 1b	
	DV: Unrelated Diversification		DV: Unrelated Diversification	
Constant	0.00	(0.00)	0.011	(0.05)
Unrelated Diversification	0.41***	(0.16)	0.51***	(0.11)
Average Diversification	0.23*	(0.13)	0.22*	(0.12)
Concentration	-0.09	(0.11)	-0.12	(0.12)
Age	0.00	(0.00)	0.00	(0.00)
Leverage	0.00	(0.00)	0.00	(0.00)
Potential Slack	0.00	(0.00)	0.00	(0.00)
Size	0.01*	(0.01)	0.002	(0.01)
Current Ratio	0.003	(0.00)	-0.001	(0.00)
Inventory Intensity	-0.152	(0.10)	-0.16	(0.11)
SGA Intensity	0.033	(0.04)	0.05	(0.04)
R&D Intensity	-0.20	(0.25)	-0.27	(0.26)
Advertising Intensity	0.083	(0.36)	0.11	(0.32)
Capital Intensity	-0.052	(0.09)	-0.08	(0.10)
Long Term Slack	0.00	(0.00)	0.00	(0.00)
ROA	-0.042	(0.06)	-0.04	(0.06)
Scope			0.00	(0.00)
Observations	1,133		1,133	
Wald Chi2	164.21		186.1	
Arellano-Bond Test for AR(2) in first differences	-2.29		-3.23	
Hansen Test	74.32		91.81	
Difference in Hansen Test	43.51		58.27	

Standard errors are in parentheses; *p<0.05, **p<0.01, ***p<0.001

Table 5. Effects of Action Scope and Repertoire on Divestitures

	Controls		Model 1c		Model 2b	
	DV: Divestitures		DV: Divestitures		DV: Divestitures	
Constant	0.33	(0.44)	0.19	(0.44)	0.13	(0.41)
Divestitures	0.74***	(0.16)	0.63***	(0.14)	0.72***	(0.15)
Average Diversification	-0.73	(0.89)	0.23	(0.83)	-0.05	(0.82)
Concentration	-1.06	(0.70)	-0.76	(0.65)	-0.16	(0.60)
Age	0	(0.00)	0.00	(0.00)	0.00	(0.00)
Leverage	0.001	(0.00)	0.00	(0.00)	0.00	(0.00)
Potential Slack	0	(0.00)	0.00	(0.00)	0.00	(0.00)
Size	0.09*	(0.05)	0.05	(0.05)	0.07	(0.05)
Current Ratio	-0.007	(0.09)	-0.07	(0.10)	-0.02	(0.09)
Inventory Intensity	-1.01	(0.88)	-0.90	(0.90)	-0.90	(0.88)
SGA Intensity	0.11	(0.41)	0.09	(0.44)	0.33	(0.40)
R&D Intensity	-2.48	(1.81)	-1.81	(1.70)	-0.57	(1.63)
Advertising Intensity	-3.252	(2.73)	-2.47	(2.53)	-4.41*	(2.41)
Capital Intensity	-2.8***	(1.08)	-2.37**	(1.12)	-2.56**	(1.06)
Long Term Slack	0	(0.00)	0.00	(0.00)	0.00	(0.00)
ROA	-1.72***	(0.51)	-1.46***	(0.50)	-1.45***	(0.51)
Scope			0.004***	(0.00)		
Repertoire					0.06	(0.03)
Observations	1,127		1,127		1,127	
Wald Chi2	667.49		651.2		473.66	
Arellano-Bond Test for AR(2) in first differences	-4.18		-4.3		-4.26	
Hansen Test	120.8		135.76		126.38	
Difference in Hansen Test	43.89		60.69		48.03	

Standard errors are in parentheses; *p<0.05, **p<0.01, ***p<0.001

Table 6. Effects of Action Scope and Repertoire on Corporate Social Responsibility

	Controls DV: CSR		Model 1d DV: CSR		Model 2c DV: CSR	
Constant	-6.07**	(2.62)	0.00	0.00	0.00	0.00
CSR	0.38***	(0.06)	0.39***	(0.06)	0.33***	(0.06)
Average CSR	-0.02	(0.17)	-0.08	(0.17)	-0.07	(0.16)
Concentration	1.204	(2.42)	0.95	(2.53)	1.23	(2.33)
Age	-0.008	(0.01)	-0.01	(0.01)	-0.007	(0.01)
Leverage	0.001	(0.00)	0.00	(0.00)	0.001	(0.00)
Size	0.43**	(0.20)	0.37*	(0.21)	0.33	(0.23)
Current Ratio	0.07	(0.13)	-0.004	(0.16)	-0.02	(0.15)
Inventory Intensity	6.25	(4.50)	7.75*	(4.62)	6.98	(5.01)
SGA Intensity	2.13	(2.73)	2.55	(2.76)	2.89	(2.66)
R&D Intensity	-2.64	(4.08)	-3.56	(4.73)	-3.71	(4.85)
Adv. Intensity	-1.7	(4.59)	2.44	(1.75)	1.99	(1.73)
Capital Intensity	3.25*	(1.88)	-4.77	(4.33)	-4.8	(4.09)
Absorbed Slack	0.00	0.00	0.00	0.00	0.00	0.00
Immediate Slack	-0.27	(0.65)	-0.09	(0.65)	0.11	(0.76)
ROA	0.18	(1.28)	-0.15	(1.29)	0.01	1.37
Scope			0.005	(0.01)		
Repertoire					0.35*	(0.18)
Observations	1,215		1,215		1,215	
Wald Chi2	5333.94		4820.3		2670.73	
Arellano-Bond Test for AR(2) in first differences	-4.17		-4.34		-4.01	
Hansen Test	124.87		124.55		130.97	
Difference in Hansen Test	58.47		51.79		62.08	

Standard errors are in parentheses; *p<0.05, **p<0.01, ***p<0.001

Table 7. Effects of the interaction between Action Scope and Slack on Diversification and Corporate Social Responsibility

	Controls		Model 1e		Controls		Model 1f	
	DV: Diversification				DV: CSR			
Constant	-0.112	(0.09)	-0.12	(0.09)	0.00	(0.00)	0.00	(0.00)
Diversification	0.31***	(0.10)	0.35***	(0.09)				
CSR					0.37***	(0.06)	0.38***	(0.06)
Avg. Diversif.	0.293	(0.27)	0.35	(0.23)				
Average CSR					-0.07	(0.15)	0.11	(0.15)
Concentration	-0.013	(0.17)	-0.05	(0.17)	0.91	(2.06)	-0.53	(2.15)
Age	0.00	(0.00)	0.00	(0.00)	0.00	(0.01)	0.00	(0.01)
Leverage	0.00	(0.00)	0.00	(0.00)	0.00	(0.00)	0.00	(0.00)
Potential Slack	0.011	(0.01)	0.00	(0.00)	0.00	(0.00)	0.00	(0.00)
Size	0.002	(0.01)	0.00	(0.01)	0.23	(0.18)	0.19	(0.22)
Current Ratio	-0.06	(0.16)	-0.015*	(0.01)	-0.03	(0.13)	-0.12	(0.16)
Inventory Intensity	-0.06	(0.16)	0.025	(0.17)				
SGA Intensity	0.016	(0.12)	0.00	(0.00)	1.44	(1.80)	0.00	(0.00)
R&D Intensity	0.465	(0.47)	0.30	(0.42)	-2.66	(6.21)	-6.01	(6.24)
Adv. Intensity	-0.407	(0.59)	-0.57	(0.56)	9.26	(10.2)	6.75	(9.04)
Cap. Intensity	0.098	(0.18)	0.16	(0.18)	6.02	(3.97)	7.010*	(4.06)
Imm. Slack					0.10	(0.64)	0.52	(0.70)
ROA	-0.20**	(0.10)	-0.14	(0.09)	1.25	(1.23)	1.57	(1.23)
Scope			0.001	(0.001)			-0.03**	(0.01)
Absorb_Slack			0.07	(0.11)			-1.40	(2.17)
Scope*Slack			0.001	(0.002)			0.09**	(0.04)
Observations	1,204		1,204		1,230		1,230	
Wald Chi2	181.34		218.62		7648.15		4102.45	
Arellano-Bond Test for AR(2) in first differences	-4.00		-4.40		-4.45		-4.5	
Hansen Test	112.5		131.98		127.51		135.05	
Difference in Hansen Test	52.22		62.20		53.07		60.66	

Standard errors are in parentheses; *p<0.05, **p<0.01, ***p<0.001

Table 8. Effects of the interaction between Repertoire and Slack on Diversification and Corporate Social Responsibility

	Controls		Model 2d		Controls		Model 2e	
	DV: Diversification				DV: CSR			
Constant	-0.112	(0.09)	0.00	(0.00)	0.00	(0.00)	0.00	(0.00)
Diversification	0.31***	(0.10)	0.35***	(0.09)				
CSR					0.37***	(0.06)	0.368***	(0.06)
Avg. Diversif.	0.293	(0.27)	0.382*	(0.22)				
Average CSR					-0.17	(0.14)	-0.16	(0.14)
Concentration	-0.01	(0.17)	0.02	(0.17)	0.017	(2.33)	-0.16	(2.15)
Age	0.00	(0.00)	0.00	(0.00)	-0.006	(0.01)	0.00	(0.01)
Leverage	0.00	(0.00)	0.00	(0.00)	-0.002	(0.00)	0.00	(0.00)
Potential Slack	0.011	(0.01)	0.00	(0.00)	0.00	(0.00)	0.00	(0.00)
Size	0.002	(0.01)	0.00	(0.01)	0.26	(0.18)	0.21	(0.20)
Current Ratio	-0.06	(0.16)	-0.01	(0.01)	-0.01	(0.13)	-0.15	(0.15)
SGA Intensity	0.02	(0.12)	-0.05	(0.16)	1.10	(1.84)	0.00	(0.00)
R&D Intensity	0.47	(0.47)	0.10	(0.14)	-3.89	(6.89)	-6.09	(6.34)
Adv. Intensity	-0.41	(0.59)	0.65	(0.44)	11.7	(9.60)	8.05	(10.1)
Capital Intensity	0.09	(0.18)	-0.81	(0.59)	7.72*	(4.63)	9.67**	(4.44)
Immediate Slack					-0.004	(0.60)	0.63	(0.73)
ROA	-0.20**	(0.10)	-0.15	(0.09)	1.781	(1.40)	2.04	(1.38)
Repertoire			0.03	(0.02)			-0.26	(0.25)
Absorb_Slack			0.00	(0.00)			-2.58	(2.62)
Repertoire*Slack			-0.013	(0.05)			1.68***	(0.81)
Observations	1,204		1204		1,215		1,215	
Wald Chi2	181.34		501.02		4664.36		3353.77	
Arellano-Bond Test for AR(2) in first differences	-4.00		-4.38		-4.43		-4.76	
Hansen Test	112.5		126.28		123.65		137.9	
Difference in Hansen Test	52.22		56.13		55.42		70.39	

Standard errors are in parentheses; *p<0.05, **p<0.01, ***p<0.001

APPENDIX B: FIGURES

Figure 1. Theoretical Model

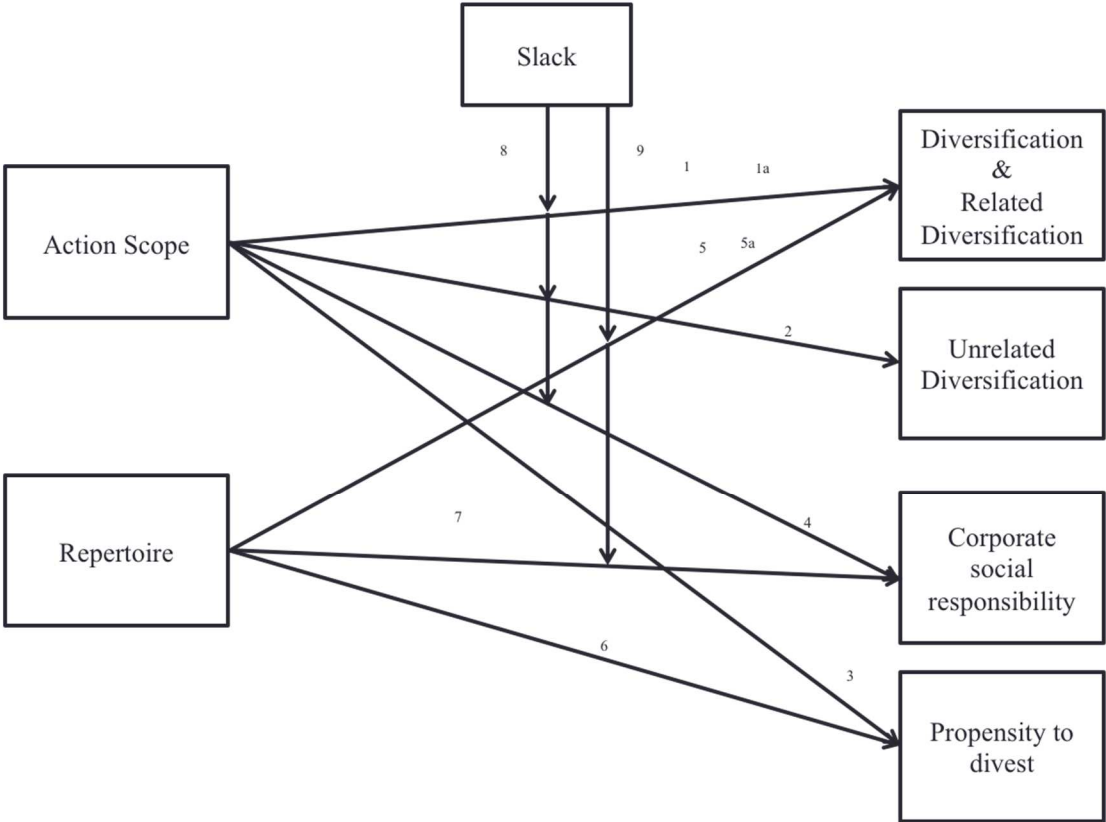
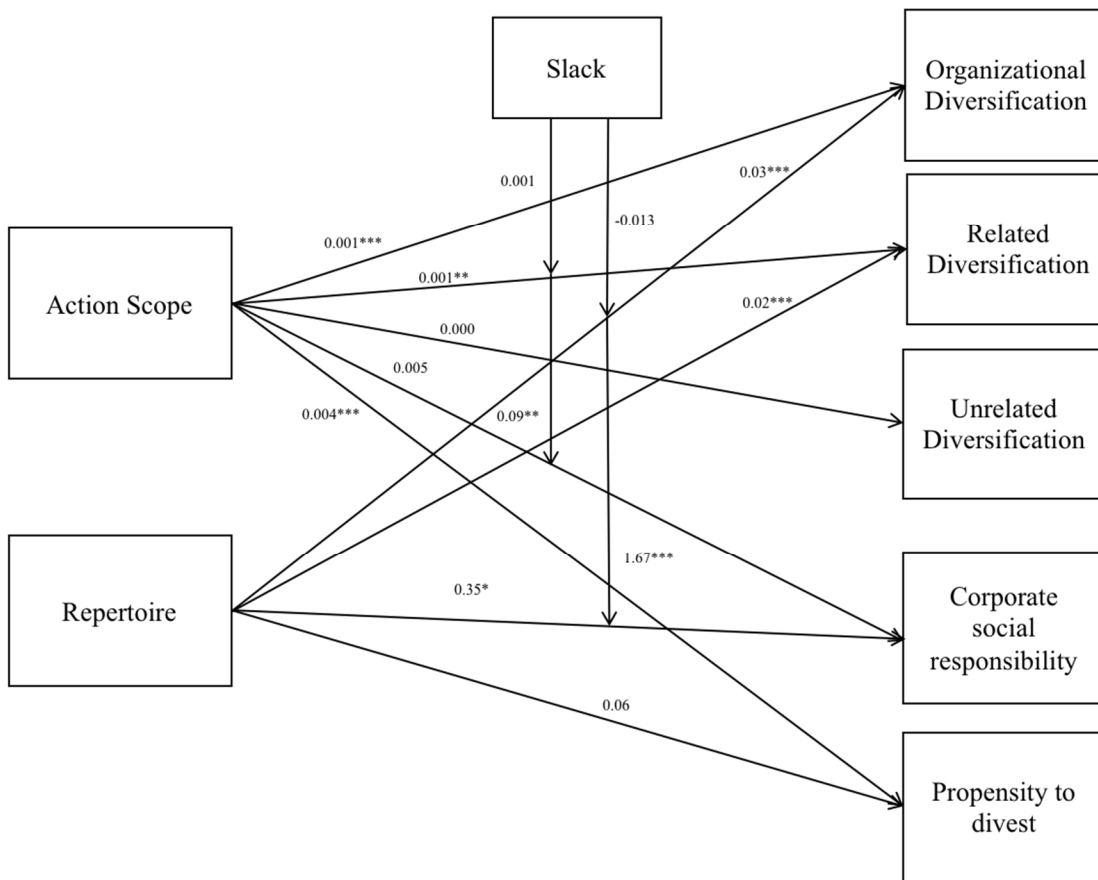


Figure 2. General Model and Results



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